

# JESSICA

JOINT EUROPEAN  
SUPPORT FOR  
SUSTAINABLE  
INVESTMENT IN  
CITY AREAS

**Evaluation Study for Slovenia**  
Final Report

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# Glossary

<b>Bank Warranty</b>	A guarantee from a lending institution ensuring that the liabilities of a debtor will be met. In other words, if the debtor fails to settle a debt, the bank will cover it.
<b>CF</b>	Cohesion Fund
<b>COCOF Note 3</b>	Refers to European Commission (Directorate-General Regional Policy) Guidance Note on Financial Engineering Instruments under Article 44 of Council Regulation (EC) No 1083/2006 (ref: COCOF_10-0014-05-EN) as revised.
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EC</b>	European Commission
<b>EIB</b>	European Investment Bank
<b>EIF</b>	European Investment Fund
<b>ERDF</b>	European Regional Development Fund
<b>EU</b>	European Union
<b>Factoring</b>	Factoring is a financial transaction whereby a business sells its accounts receivable to a third party at a discount
<b>Financial Institution</b>	An organisation that provides financial services for its clients or members. Broadly speaking financial institutions are deposit taking institutions that accept and manage deposits and make loans, including banks, building societies, credit unions, trust companies, and mortgage loan companies.
<b>Financial Leasing</b>	Financing the purchase of tangible assets. The leasing company is the legal owner of the goods, but ownership is effectively conveyed to the lessee, who incurs all benefits, costs, and risks associated with ownership of the assets
<b>Funding Agreement</b>	<p>When FEIs are organised through HFs, this is either a written agreement concluded between (i) the duly mandated representative of a Member State or Managing Authority and an HF, or (ii) between the HF and a UDF.</p> <p>When FEIs are not organised through HFs, then this is a written agreement concluded by a duly mandated representative of a Member State or Managing Authority and a UDF.</p> <p>The Funding Agreement should include the terms and conditions governing contributions to be made from Operational Programmes to the UDF or HF.</p> <p>(See also “Level I Funding Agreement” and “Level II Funding Agreement”)</p>
<b>GDP</b>	Gross Domestic Product
<b>Grant Agreement</b>	<p>An agreement made between a direct user of state budget (the MA) and a public institution as the outcome of a (direct) grant award procedure is a grant agreement an agreement between a JESSICA HF and a MA setting out HF tasks and related parameters. For the sake of clarity, where Articles 43 (3) and 44 of the European Regulation 1828/2006 provide for the conclusion of funding agreements at two levels:</p> <ul style="list-style-type: none"> <li>• Level I between the Member State or the Managing Authority and the Holding Fund, where financial engineering instruments are organised through Holding Funds;</li> </ul> <p>and Level II between the Member State or the Managing Authority (or the Holding Fund where applicable) and the individual financial engineering instruments, a funding agreement in the context of this document is a level I agreement</p>

<b>HF</b>	Holding Fund
<b>Intermediate Body</b>	Performs the tasks transferred to it by the Managing Authority that issued a decision.
<b>Investment Bank</b>	An investment bank is a financial institution that assists individuals, corporations and governments in raising capital by underwriting and/or acting as the client's agent in the issuance of securities
<b>Investment Board</b>	A governing body, established in accordance with a Level I Funding Agreement, entrusted with the responsibility of supervising and guiding the investment operations managed by the Holding Fund.
<b>Investment Committee</b>	A committee, normally established in accordance with the provisions of a Level II Funding Agreement, entrusted with responsibilities including supervision, guidance and approval of the investment activities managed by the UDF.
<b>IPSUD</b>	Integrated Plan for Sustainable Urban Development
<b>JESSICA</b>	Joint European Support for Sustainable Investment in City Areas
<b>JESSICA FIs</b>	JESSICA financial instruments
<b>Level I Funding Agreement</b>	Funding Agreement between a Member State or a Managing Authority and the Holding Fund, where UDFs are organised through Holding Funds
<b>Level II Funding Agreement</b>	Funding Agreement between a Member State or a Managing Authority (or the Holding Fund where applicable) and a UDF. Currently, the terminology for Level II Funding Agreements most widely used in the market is 'Operational Agreements'. This is particularly the case when the EIB acts as the Holding Fund.
<b>MA</b>	Managing Authority
<b>MEDT</b>	Ministry of Economic Development and Technology
<b>Monitoring Committee</b>	Is supervising the implementation of the programme
<b>OP</b>	Operational Programme
<b>OP DETI</b>	Operational Programme for the Development of Environmental and Transport Infrastructure
<b>OP SRDP</b>	Operational Programme for Strengthening Regional Development Potentials
<b>OPPN</b>	A detailed municipal spatial plan is a spatial plan with which spatial arrangements in the areas from paragraph 5 of Article 39 of the Spatial Planning Act are planned in more detail, and also in other areas if so required after the adoption of a municipal spatial plan. A detailed municipal spatial plan is a basis for the drafting of a project for the acquisition of a building permit.
<b>Operation</b>	Article 2 (3) of the General Regulation defines an Operation as "a project or group of projects selected by a Managing Authority ... allowing achievement of the goals of the priority axis to which it (the project/s) relates." Section 1.2 a) of COCOF Note 3 clarifies further the definition of the term 'Operation' stating that "...in respect of assistance implemented through financial engineering instruments, the operation is constituted by the financial contributions from an Operational Programme to financial engineering instruments (including holding funds) and the subsequent investments made by the financial engineering instruments, which ultimately constitute eligible expenditure in accordance with Article 78(6) of the General Regulation."
<b>Operational Agreement</b>	See Level II Funding Agreement.

<b>PA</b>	Priority axis
<b>POSAM Regulation</b>	Regulation on the Procedure of Standards and Manners to Allocate Means for the Promotion of the Evolutional Programme and Preferential Tasks
<b>PPP</b>	Public Private Partnership
<b>Regional Development Programme</b>	Regional Development Programme allignes the development objectives of a Region and defines the instruments and sources for their realisation. The programme consists of two parts: strategic and programme. The strategic part includes the analysis of the regional development potentials, key development hurdles, regions advantages, development goals and regions priorities in the programming period. The programme part includes the programmes for the promotion of the development in the region with the financial evaluations, implementation timeline and monitoring system of the Regional Development Programme execution.
<b>Retail Bank</b>	A financial institution and financial intermediary that accepts deposits and channels those deposits into lending activities, either directly or through capital markets. In Slovenia, Retail Banks are private-sector organisations that provide financial services to individual customers, small to medium sized businesses and large organisations.
<b>SF</b>	Structural Fund
<b>Slovene Public Fund</b>	A Slovene public legal entity established by the state, a region or a municipality for implementation of their policy in a particular area, such as sustainable development with regard to a particular area.
<b>Spatial Planning Act</b>	<p>(1) This Act regulates spatial planning as part of physical planning so that it lays down types of spatial planning documents, their content and mutual relations, and procedures for their drafting and adoption.</p> <p>(2) This Act also regulates the provision of utility services to building sites and the setting-up and functioning of a spatial information system.</p> <p>(3) This Act also transposes into the legislation of the Republic of Slovenia the requirements of Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (OJ L, no. 197 of 21. 7. 2001, page 30) which relate to the obligation to ensure that environmental reports are of a sufficient quality.</p>
<b>UDF</b>	Urban Development Fund
<b>Urban Project</b>	Is any project or action carried out by the Final Recipients and supported by Urban Development Funds

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# EXECUTIVE SUMMARY

The objective of this study is to assess the feasibility of implementing financial instruments established under Article 44 b (first paragraph) of EU regulation 1083/2006 (hereafter 'JESSICA FIs') in Slovenia.

The results of the study show that:

- The current economic crisis has had a negative impact on the development of Slovenia. The implementation of JESSICA FIs would provide long term sustainable and strategically directed financial support which would benefit the Slovene economy at large. Through the provision of long-term financial support, JESSICA FIs could promote urban development and help restore economic growth.
- The analysis shows that Slovenia has more than sufficient demand for the establishment of JESSICA FIs. This is based on the quantum of urban development projects identified across the country which both meet the requirements for support from JESSICA FIs and are eligible under one of the relevant OPs (SRDP and DETI). Through our analysis of urban development projects in Slovenia, total demand in terms of overall project cost amounting to almost 4 billion EUR has been identified. From this potential pipeline, it is estimated that projects sufficiently mature for investment (either immediately or in the very near future) represent a total project cost of EUR 150 to 200 million. The estimated project investment needed from a UDF, based on the financing structure of these projects, would be between 50-60% of the total project costs.
- Due to constrained municipal fiscal revenues and current (capped) levels of debt financing taken on by municipalities, financial support from municipalities will most likely be inadequate to satisfy the identified demand from Urban Projects in Slovenia.
- Although a large number of commercial projects such as residential housing, office and retail developments have been completed over recent years, partnerships for the redevelopment of brownfield sites are still relatively difficult to establish, with Public Private Partnerships being unable to provide realistic solutions despite the appropriate legal framework already being in place. The majority of state/public financing has been directed into basic infrastructure with road networks taking up the largest share. Other parts of state/public/EU funds have supported areas which were perhaps not sufficiently integrated into an overall urban development strategy and did not bring synergic benefits. For example, there are now a number of areas in Slovenia where too many business zones or too many hotels have been built relative to actual demand. Going forward, it will therefore be very important to ensure that the financing of urban regeneration projects in Slovenia is provided in a highly focused and integrated way, in line with adopted strategies seeking to ensure polycentric development across the territory.
- Financing and other support for Urban Projects in Slovenia is usually provided via municipalities or directly via project developers or via public or private financial institutions. Our research shows, however, that the availability of such financing in the current economic climate is very limited.

- As for existing instruments in Slovenia, their development into financial instruments, such as UDFs targeting sustainable urban transformation, could be envisaged under different institutional scenarios.
- The Managing Authority of the OPs could either entrust to a HF the task of selecting and setting up one or more UDFs or could enter into a contract with a UDF directly. Experience across the EU so far is that Managing Authorities are mainly implementing JESSICA FIs with support (including technical support) from a Holding Fund. Under the current regulations, up to a maximum of 2% of the OP resources committed to the JESSICA Operation may be used to pay for Holding Fund support. This amount would be in addition to a maximum of 3% of the committed OP resources that would be available to pay for UDF fund management.
- Expected timelines differ based on different possible JESSICA FI implementation scenarios for Slovenia: EIB as HF, non-EIB HF or UDF selection using public procurement. Depending on the selected scenario and necessary steps for implementation, the introduction of JESSICA FIs, including the establishment of UDFs, can for example be expected to take between 8 to 12 months if using the EIB as a Holding Fund or an estimated 11 to 14 months if using a non-EIB HF. The establishment of an EIB Holding Fund can be expected to take between one and two months.
- Implementation of JESSICA FIs in Slovenia will be regulated by EU regulations including 1083/2006 and 1828/2006, as amended, both directly applicable in Slovene legislation. The regulations are the proper legal basis for the implementation of JESSICA FIs and prevail in this sense over Slovene regulation in case of conflicts between the EU and national sets of regulations. In particular, in case of conflict between Union law and national law, all Slovene state bodies that implement or rule on the law must interpret national law in line with Union law (judgment of 10 April 1984, in Case 14/83 *Von Colson and Kamann*).

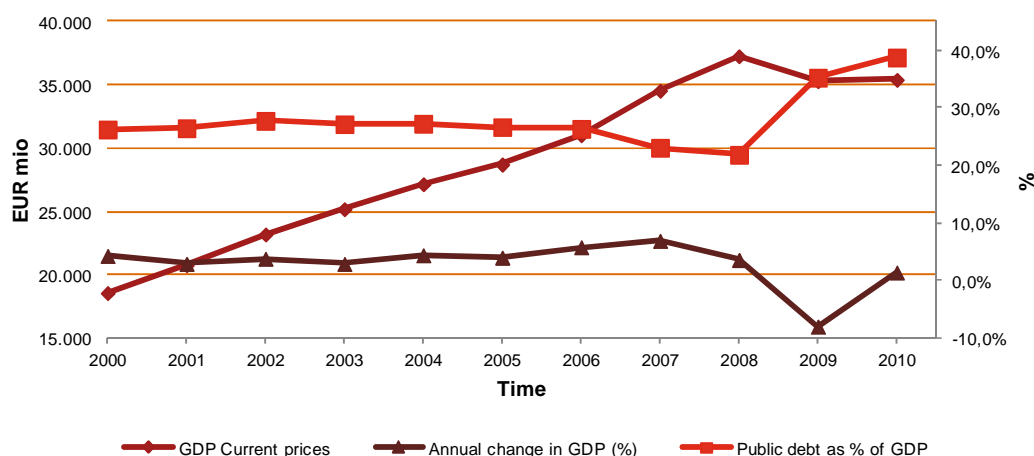
# 1. RATIONALE AND OPTIONS FOR IMPLEMENTING JESSICA

## 1.1. Overview of the market for sustainable urban regeneration including institutional and regulatory framework

### 1.1.1. Economic background and trends in Slovenia

The latest estimate of Slovene GDP from the Institute of Macroeconomic Analysis and Development of the Republic of Slovenia predicts a modest growth of 1.5% in 2011 (compared to 1.4% in 2010 and a negative growth of 5.3% in 2009) and 2% GDP growth in 2012. The financial crisis has had a visible impact on all industries, but especially on the real estate and construction sector, hindering development both in the short and long term. The credit crunch has restricted the availability of financing for all real estate and urban regeneration projects. The effect of tighter credit conditions could prolong the recovery of the Slovenian economy in general, but even more so in the real estate sector. Due to the uncontrolled and excessive expansion of the real estate sector in the years 2003-2008, it is expected that Retail Banks will be extremely selective in supporting real estate projects in the future. Therefore, despite a moderate growth of overall GDP in Slovenia, the real estate and construction industry will most likely not show signs of recovery in the coming years.

**GDP and public debt development in Slovenia 2000 - 2010**



Source: Statistical office of the Republic of Slovenia

Slovenian public debt as a percentage of GDP, which was 37.2% in 2010, is expected to increase to 43.3% in 2011. There are a number of negative factors affecting the nation's finances, with some of the major ones being: the decision of the Slovenian government to contribute EUR 387.8 million to

the Greek bailout package, recapitalization of the biggest national bank (NLB d.d.) of 243 million Euros, support of the public railway company Slovenske železnice d.d. in the amount of 134 million Euros. In response, the Slovenian government has been introducing public spending cuts (with mixed success) in an attempt to reduce the country's debt to GDP ratio.

As a result, public and private financing for urban development projects is not readily available. Many sustainable urban development projects have low profitability or are indeed loss-making, generate a lower cash flow than private sector Urban Projects, but have greater socio-economic impact. Owing to their higher risk profile and a lower sense of urgency, these more sustainable urban development projects are being pushed into the future and it would appear that public and private resources to fund these projects over the coming years will be scarce.

The Slovenian construction market underwent the most severe contraction of all industries and some industry sources have estimated that the market plummeted by almost 50% in the span of the past three years. The following figure shows construction as a percentage of GDP (in 2010 total Slovenian GDP was EUR 35,415 million), which underwent a significant decline from 2009 to 2010 and will need a significant improvement in order to reach pre-crisis levels. The chart below shows construction output over the past five years, recorded on a monthly basis. The recession in Slovenia has also had a lasting effect on the transport infrastructure market, which contracted by 13.6% in 2009.

Figure 1: Construction industry as a percentage of GDP

Year	2008	2009	2010	2011 estimate	2012 estimate
Construction industry as a percentage of GDP	7.35%	6.86%	5.72%	5.76%	5.84%

Figure 2: Index of real value of built construction in Slovenia, July 2007 - July 2011 (Ø 2005=100), Source: Statistical Office of the Republic of Slovenia



An important indicator of economic activity and urban development is also the housing sector, which has experienced the same trends as the economy in general. In the following two figures, we can see a drop in the number of completed dwellings and the third chart below summarizes yearly trends in floor areas of residential and non-residential buildings completed, again revealing the same negative trend.

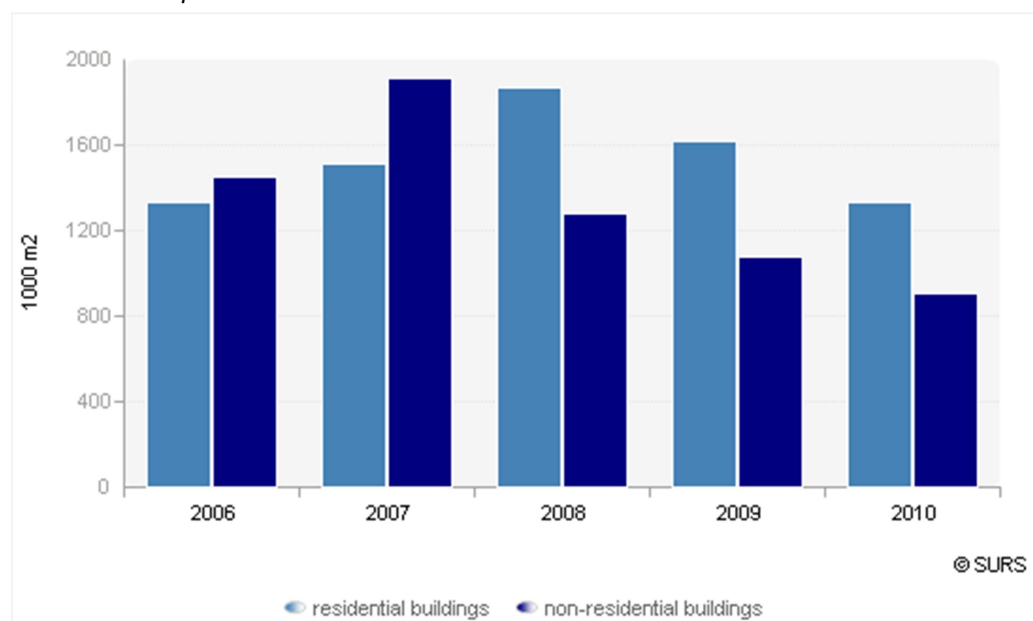
Figure 3: Completed dwellings by type of investor in Slovenia, Source: Statistical Office of the Republic of Slovenia

	Total		Investor is a legal person		Investor
	number	m <sup>2</sup>	number	m <sup>2</sup>	number
<b>2006</b>	7,538	860,537	2,914	230,191	4,000
<b>2007</b>	8,357	928,941	3,869	315,588	4,000
<b>2008</b>	9,971	1,100,436	5,845	481,984	4,000
<b>2009</b>	8,561	980,980	4,400	334,825	4,000
<b>2010</b>	6,352	821,760	2,499	205,124	3,000

Figure 4: Dwellings in Slovenia under construction at year-end, Source: Statistical Office of the Republic of Slovenia

	Total		Investor is a legal person		Investor
	number	m <sup>2</sup>	number	m <sup>2</sup>	number
<b>2006</b>	13,677	1,946,325	3,540	294,699	10,100
<b>2007</b>	16,203	2,221,614	5,500	439,495	10,700
<b>2008</b>	13,679	1,941,289	4,147	324,407	9,500
<b>2009</b>	11,137	1,698,703	2,420	198,389	8,700
<b>2010</b>	9,616	1,475,216	1,973	151,069	7,600

Figure 5: Floor area of buildings completed in Slovenia, Source: Statistical Office of the Republic of Slovenia



It should also be stressed that the economic crisis in the Republic of Slovenia has revealed some structural weaknesses and imbalances in the Slovenian economy related to productivity, competition and management. As a result, the Government of Slovenia has also approved the Slovene Recovery Strategy 2010-2013 and the National Reform Programme.

Slovenia is facing disinflation confirming weak recovery in domestic demand conditions. Private consumption remains weak with 1.2% y-o-y growth in Q1 2011 down from 2.0% in Q3 2010. It is crucial for the country to rebalance its

economy, restore competitiveness, and improve financial indicators. Many institutions (both public and private) doubt that demand for construction will be raised over the next years without state intervention.

Long-term financial support for sustainable investment in city areas will benefit the Slovene economy at large. Given the current state of financial markets in Slovenia, and Slovenia's declining ratings, the state has issues obtaining long term financing as do the predominantly state-owned banks which represent more than 50% of the Slovenian banking market. JESSICA FIs, providing long-term funds, could both promote urban development and help restore the growth of the economy.

### **1.1.2. Overview of the market for urban regeneration/sustainable urban development projects**

Slovenia is geographically situated between Austria, Italy, Hungary and Croatia. It includes part of the Alps, a short strip of Mediterranean coast and most western parts of the Pannonian plain. It is mainly mountainous and forested land with agricultural plains and valleys. It has a dense and well-developed settlement pattern.

Slovenia is smaller than Switzerland and has an area of 20,273 sq km and total population in June 2011 of only 2,051,277 inhabitants. However, the number of its towns and cities is over 200. Only two of them have a population over 100,000: the capital Ljubljana (approx. 300,000) and Maribor (approx. 130,000). Most of the towns have between 5,000 and 10,000 inhabitants.

The recent history of urban development in Slovenia has been marked by the secession of the country from the former Yugoslavia in 1991 with ensuing political, economic and institutional reforms, local government reforms, completion of motorways, private investment, transition to a free market economy and European integration in 2004. Some of the developments have been similar to those in other new EU member states. Slovenia has had an orderly approach to urban development and has taken up a number of nation-wide initiatives, including those responding to demographic trends, regional development trends, trends in urban and construction planning and implementing spatial planning regulation, land-use policy, and local self-government reorganisation plans. The responsibilities of various levels of government are also taken into account when implementing new nation-wide development policies. Thus Slovenia has in place state and municipal spatial plans, which are both sustainable and integrated; these plans are discussed in chapter 1.5.

Slovenian cities are, nevertheless, facing some negative trends like suburban sprawl and the decay of inner-city areas. Urban sprawl negatively affects the quality of life in Slovenia and has an impact on the environment (e.g. surface sealing, transportation emissions, ecosystem fragmentation, etc.), social structure (e.g. segregation, lifestyle changes, decline of city centres due to growth of the periphery, etc.) and the Slovene economy (e.g. distribution of areas of production and employment, land prices, infrastructure costs, etc.).

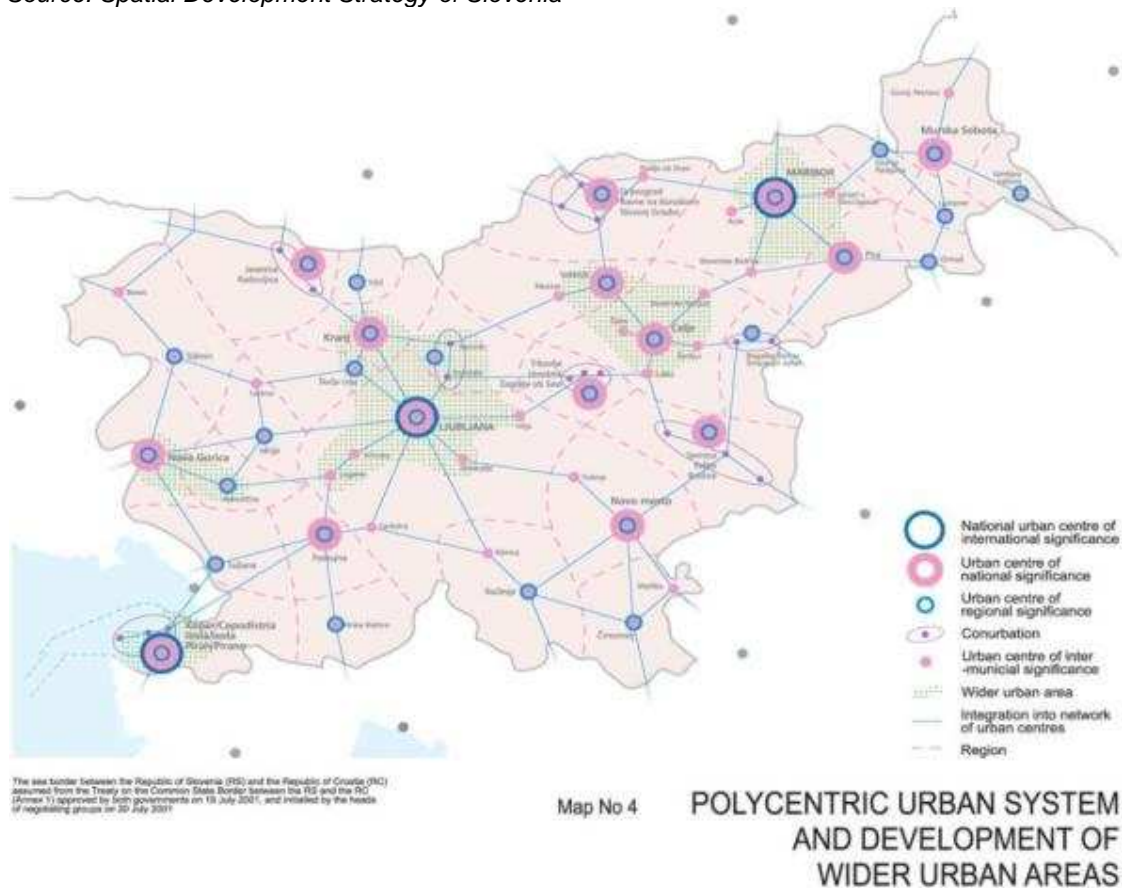
The overall goal of the national policy in Slovenia has been to strengthen economic and social cohesion and to balance a development of municipalities and local communities in less developed areas within the paradigm of balanced and sustainable regional development. Urban policy at

the national level in Slovenia comprises a set of spatial planning policies configured around a “polycentric development concept” and the implementation of different sectorial policies. The overall goal of this urban policy has been to strengthen in a polycentric manner the development of a diverse set of urban centres of “(inter)national, regional and inter-municipal importance”. The policy also seeks to reinforce partnerships between urban and rural areas.

The polycentric development concept and the distribution of jobs, services and financial subsidies has been an instrument (or rather strategy) for the balanced economic and regional development of Slovenia for decades. This setup was (partly) modified by the local development (communal/municipal) policy in the 1970s and by market reforms in the 1990s.

During the 1990s, the polycentric development framework lay in the shadow of more centralising tendencies and Slovenia’s macro-economic strategy as a newly independent European country. Slovenia thus split 62 former (large) communes to new smaller “NUTS 5” municipalities. This resulted in a change from 147 municipalities to 211 municipalities in 2011, eleven of which have the status of city municipalities<sup>1</sup>.

Figure 6: Settlement concept of polycentric development in Slovenia, Source: Spatial Development Strategy of Slovenia



The polycentric development concept has, however, resurfaced since 2000 in many of the more significant new strategic development documents such as those covering economic policy, regional policy and spatial development

<sup>1</sup> The remaining 200 municipalities have urban components

policy. These new policy documents have, in general, been complementary to the goals of EU policy, seeing polycentrism as the main principle that guarantees effective, moderate and balanced spatial development.

The urban hierarchy in the Spatial Development Strategy of Slovenia (SPRS 2004) defines centres of (inter)national, regional, and inter-municipal importance. In total, Slovenia has 51 “urban centres” or 64 towns and other urban settlements, if we include also urban conurbations (city clusters) at all levels. JESSICA FIs should be able to take into consideration the specific requirements of different cities and towns and should be able to support them with a balanced approach that supports their diverse strategic objectives.

The funding of urban regeneration and the move towards a polycentric urban system in Slovenia is still underdeveloped. Partnerships for the redevelopment of Brownfield sites are still relatively difficult to establish, with Public Private Partnerships (explained in Chapter 1.3.6.) being unable to provide realistic solutions, although the appropriate legal framework is already in place. Commercial projects which have been able to obtain sufficient funding have been completed mainly in the areas of commercial housing, offices and production facilities. The majority of state/public financing has gone into basic infrastructure, with road networks taking up largest share. Other parts of state/public/EU funds have gone to specific areas, which were perhaps not sufficiently integrated into an overall urban development strategy and did not bring synergic benefits (for example, there are areas where too many business zones or too many hotels have been built relative to actual demand).

There are, however, also some examples of commercial initiatives which have combined commercially viable projects with regeneration of run-down areas. One such example is the company BTC from Ljubljana which has transformed a part of Ljubljana (former public warehouses) into a business, shopping and entertainment area. This former degraded urban-fringe area has been developed into an activity hub known locally as “BTC City”. After more than a decade of restructuring its activities, the company has shifted its focus to managing the commercial area, in which it takes care of the balanced offer of business, commercial, recreational, entertaining and cultural events in one place. The development started in 1991 and is still growing. The majority of the construction was completed 5 to 15 years ago, but the company, nevertheless, has invested a further 15 million EUR over the past 3 years.

### **1.1.3. Overview of the regulatory framework**

The purpose of this section is to represent the legal context within which JESSICA FIs can be implemented in Slovenia.

Implementation of JESSICA FIs in Slovenia would be regulated by EU Regulations, including 1083/2006, 1828/2006 and 1080/2006, as amended, EU rules of public procurement, as well as relevant provisions of the EU Treaty such as that on State aid, all directly applicable in Slovene legislation. The regulations are the proper legal basis for the implementation of JESSICA FIs and prevail in this sense over Slovene regulation in case of conflicts between the EU and national sets of regulations. In particular, in case of conflict between Union law and national law, all Slovene state bodies that implement or rule on the law must interpret national law in line with Union law (judgment of 10 April 1984, in Case 14/83 *Von Colson and Kamann*).

In the case of the EIB acting as an HF, EIB procurement rules will apply.

Depending on the selected implementation option for JESSICA FIs, the above mentioned rules will be relied upon in conjunction with Slovene public procurement rules and Slovene rules on the use of financial instruments.

### **1.1.3.1. European legislation regulating the implementation of JESSICA FIs**

The European Regulations 1083/2006 and 1828/2006, as amended define the structure and options for implementation of JESSICA FIs in Slovenia.

Article 44 of Regulation 1083/2006, as amended by Regulations 284/2009 and 539/2010 stipulates:

*“As part of an operational programme, the Structural Funds may finance expenditure in respect of an operation comprising contributions to support any of the following:*

- (a) financial engineering instruments for enterprises, primarily small and medium-sized ones, such as venture capital funds, guarantee funds and loan funds;*
- (b) urban development funds, that is, funds investing in public-private partnerships and other projects included in an integrated plan for sustainable urban development;*
- (c) funds or other incentive schemes providing loans, guarantees for repayable investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing.*

*Where such operations are organised through holding funds, that is, funds set up to invest in several venture capital funds, guarantee funds, loan funds, urban development funds, funds or other incentive schemes providing loans, guarantees for repayable investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing, the Member State or the managing authority shall implement them through one or more of the following forms:*

- (a) the award of a public contract in accordance with applicable public procurement law;*
- (b) when the agreement is not a public service contract within the meaning of applicable public procurement law, the award of a grant, defined for this purpose as a direct financial contribution by way of donation to a financial institution without a call for proposals, if this is in accordance with a national law compatible with the Treaty;*
- (c) the award of a contract directly to the EIB or the EIF.”*

Articles 43 to 46 of Regulation 1828/2006, as amended, implementing and defining Article 44 of Regulation 1083/2006, regulate financial instruments and in this context, urban development funds.

Article 43, paragraph 1, of Regulation 1828/2006, as amended, stipulates:

*“1. Articles 43 to 46 shall apply to financial engineering instruments in the form of actions which make repayable investments, or provide guarantees for repayable investments, or both, in the following:*

- (a) enterprises, primarily small and medium-sized enterprises (SMEs), including micro-enterprises, as defined in Commission Recommendation 2003/361/EC [OJ L 124, 20.5.2003, p. 36] as of 1 January 2005;*
- (b) public-private partnerships or other Urban Projects included in integrated plans for sustainable urban development, in the case of urban development funds;*

*(c) funds or other incentive schemes for energy efficiency and use of renewable energy in buildings, including in existing housing.”*

In accordance with Article 43, paragraph 2, of Regulation 1828/2006, as amended, “[f]inancial engineering instruments, including holding funds, shall be independent legal entities governed by agreements between the co-financing partners or shareholders or as a separate block of finance within a financial institution. Where the financial engineering instrument is within a financial institution, it shall be set up as a separate block of finance, subject to specific implementation rules within the financial institution, stipulating, in particular, that separate accounts are kept which distinguish the new resources invested in the financial engineering instrument, including those contributed by the operational programme, from those initially available in the institution. The Commission may not become a co-financing partner or shareholder in financial engineering instruments.”

In accordance with Article 43, paragraph 3, of Regulation 1828/2006, as amended:

*“When managing authorities or holding funds select financial engineering instruments, the financial engineering instruments shall submit a business plan or other appropriate document.*

*The terms and conditions for contributions from operational programmes to financial engineering instruments shall be set out in a funding agreement, to be concluded between the duly mandated representative of the financial engineering instrument and the Member State or the managing authority, or the holding fund where applicable.*

*The funding agreement shall include at least the following elements:*

- (a) the investment strategy and planning;*
- (b) provisions for monitoring of implementation;*
- (c) an exit policy for the contribution from the operational programme out of the financial engineering instrument;*
- (d) provisions for the winding-up of the financial engineering instrument, including the reutilisation of resources returned to the financial engineering instrument from investments or left over after all guarantees have been honoured that are attributable to the contribution from the operational programme.”*

As stipulated in Article 43, paragraph 4, of Regulation 1828/2006, as amended:

*“Management costs may not exceed, on a yearly average, for the duration of the assistance any of the following thresholds, unless a higher percentage proves necessary following a competitive tender, in accordance with applicable rules:*

- (a) 2% of the capital contributed from the operational programme to holding funds or of the capital contributed from the operational programme or holding fund to the guarantee funds;*
- (b) 3% of the capital contributed from the operational programme or the holding fund to the financial engineering instrument in all other cases, with the exception of micro-credit instruments directed at micro-enterprises;*
- (c) 4% of the capital contributed from the operational programme or the holding fund to micro-credit instruments directed at micro-enterprises.”*

Returns from equity, loans and other repayable investments, and from guarantees for repayable investments are regulated by Article 43, paragraph 5, of Regulation 1828/2006, as amended.

As stipulated in Article 43, paragraph 6, of Regulation 1828/2006, as amended, “[e]nterprises, public private partnerships and other projects included in an integrated plan for sustainable urban development, as well as operations for energy efficiency and use of renewable energy in buildings, including in existing housing which are supported by financial engineering instruments, may also receive a grant or other assistance from an operational programme”.

As per Article 43, paragraph 7, of Regulation 1828/2006, as amended, “[m]anaging authorities shall take precautions to minimise distortion of competition in the venture capital or lending markets and the private guarantee market.”

Article 44 of the Regulation 1828/2006, as amended, sets out a detailed regime for holding funds and thus stipulates:

“1. Where the Structural Funds finance financial engineering instruments organised through holding funds, the Member State or managing authority shall conclude a funding agreement with the holding fund, setting out the funding arrangements and objectives.

The funding agreement shall, where appropriate, take account of the following:

- a) as regards financial engineering instruments supporting enterprises, primarily SMEs, including micro-enterprises, the conclusions of an evaluation of gaps between supply of such instruments, and demand for such instruments;
- (b) as regards urban development funds, urban development studies or evaluations and integrated urban development plans included in operational programmes;
- (c) as regards funds or other incentive schemes for energy efficiency and use of renewable energy in buildings, including in existing housing the relevant Union and national regulatory frameworks and the relevant national strategies.

2. The funding agreement referred to in paragraph 1 shall, in particular, make provision for:

- (a) the terms and conditions for contributions from the operational programme to the holding fund;
- (b) calls for expression of interest addressed to financial engineering instruments in accordance with applicable rules;
- (c) the appraisal and selection of financial engineering instruments by the holding fund;
- (d) the setting up and monitoring of the investment policy or the targeted urban development plans and actions;
- (e) reporting by the holding fund to Member States or managing authorities;
- (f) monitoring of the implementation of investments;
- (g) audit requirements;
- (h) an exit policy for the holding fund out of the financial engineering instruments;
- (i) the provisions for the winding-up of the holding fund, including the reutilisation of resources returned from investments made or left over after all guarantees have been honoured which are attributable to the contribution from the operational programme.

In the case of financial engineering instruments supporting enterprises, the provisions on the setting up and monitoring of the investment policy referred to in point (d) of the first subparagraph shall comprise at least an indication

of the targeted enterprises and the financial engineering products to be supported.”

In accordance with Article 45 of the Regulation 1828/2006:

“Financial engineering instruments for enterprises referred to in Article 43(1)(a) shall invest only at the establishment, in the early stages, including seed capital, or on expansion of those enterprises, and only in activities which the managers of the financial engineering instruments judge potentially economically viable. [...]”.

Under Article 46 of the Regulation 1828/2006, as amended:

“1. Where Structural Funds finance urban development funds, those funds shall invest in public-private partnerships or other projects included in an integrated plan for sustainable urban development. Such public-private partnerships or other projects shall not include the creation and development of financial engineering instruments such as venture capital, loan and guarantee funds for enterprises.

2. For the purposes of paragraph 1, urban development funds shall invest by means of loans and guarantees, or equivalent instruments and by means of equity.

3. Where Structural Funds finance urban development funds, the funds concerned shall not re-finance acquisitions or participations in projects already completed.”

### 1.1.3.2 Procurement options for JESSICA FIs and final recipients

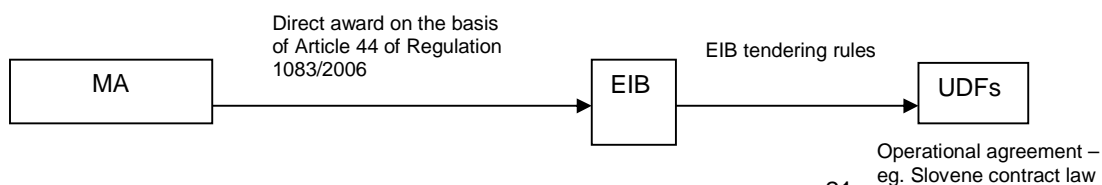
In view of the above European regime, the Slovene MA may implement JESSICA FIs under the following options:

- (a) JESSICA FIs may be implemented by way of an HF; or
- (b) JESSICA FIs may be implemented by way of direct management of UDFs by the MA (i.e. without an HF).

Under either of the options above, the implementation of JESSICA FIs must be assessed in light of EU State aid rules and monitored for elements of State aid. This is necessary since, in the case of violation of State aid rules or a lack of notification of a scheme involving State aid elements, quantifiable advantage of illegal State aid must be returned either by the entities entrusted with a position of an HF manager and/or a UDF or projects benefiting from JESSICA funds.

#### JESSICA FIs implemented using an HF

Under option a), the MA may, as per Article 44 of Regulation 1083/2006, award a contract directly to the EIB, acting as an HF Manager. Under this option, the EIB will launch a Call for Expression of Interest and select UDFs, whereby EIB procurement guidelines shall apply. The EIB and selected UDFs will sign an Operational Agreement and select the governing law of the Operational Agreement. This may be Slovene or other law.



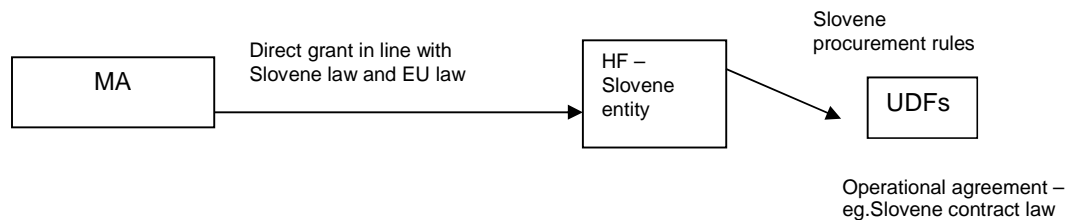
Alternatively, also under option a) above, the MA may also select an HF manager other than the EIB as per Article 44, paragraph 2b) of Regulation 1083/2006, in which case Article 106j of Slovene Public Finance Act may apply. According to Article 106j, paragraph 2, the HF could be implemented by award of a grant without a call for proposals to a Slovene public financial institution.

A direct grant of public monies is also possible in the case of certain projects/operations specified in Article 106 j, paragraph 1, of the Public Finance Act (see also chapter 1.1.3.4. below). This includes, by explicit wording of Article 106j, paragraph 1, of the Public Finance Act, public monies for development projects which may be awarded by a direct grant to:

- projects that are co-financed by EU budget (funds) which have been selected by public tender held outside of the Republic of Slovenia, and conducted by a direct user of EU budget, or
- projects, co-financed by European Cohesion Policy and implemented with immediate confirmation of the project, or
- where procedure for allocation of funds is defined by a special law<sup>2</sup>

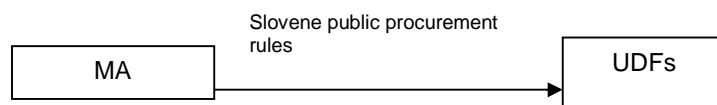
In case the HF is a private financial institution, Slovene public procurement rules will apply.

Under this scenario, the EIB may provide technical assistance services at the HF/MA level if needed.



### JESSICA FIs implemented without using a HF

Under option b) above, the MA may select, manage, monitor and report on the UDFs directly (ie. without an HF). In this situation, Article 106i of Slovene Public Finance Act applies unless the same act specifies otherwise. In this case, the EIB may similarly provide technical assistance services to the MA if needed.



If JESSICA FIs are implemented by application of Slovene public procurement law, it must be based on procurement rules that secure a clear and transparent selection process.

<sup>2</sup> A direct translation of Article 106j, paragraph 1, of the Public Finance Act

### 1.1.3.3 Slovene regulation

EU law has supremacy over Slovene law. However, when JESSICA FIs are implemented by way of an HF manager which is a financial institution subject to Slovene law or when the MA directly appoints a UDF (ie. without an HF), the MA may award a grant to the HF or to the UDF in line with the Slovene Public Finance Act or carry out a public procurement in line with the Slovene Public Procurement Act, providing that this is compatible with EU law. In this case, if Slovene Public Funding is also involved, then Slovene rules on the use of financial instruments will also apply.

In view of this, the Slovene regulatory framework may be relevant for the implementation of JESSICA FIs when:

- *Slovene public entities are involved in establishing JESSICA FIs by the award of a grant under option “a” above (and potentially also option “b” above providing the selection procedure is compatible with EU law).* This may involve SID Bank and Slovene Public Funds as per Article 106j, paragraph 2 of the Public Finance Act:
  - In this context, SID Bank is the only state-owned bank which is considered a public entity for the purposes of the Slovene Public Finance Act (in addition to the Bank of Slovenia, regulated by a special act). All other state-owned banks are considered commercially operating Retail Banks.
  - Slovene Public Funds act as financial institutions and provide for certain financial and banking services (in line with their statutes and the purpose for which they were established) and, as per the Slovene Public Finance Act, may be awarded a direct grant.
- *The selection of (non-public body) an HF is conducted via public procurement/tender in line with Slovene public procurement rules*
- *The selection of UDFs is conducted directly (i.e. without an HF) by the MA, which may include Slovene Public Funds, private equity funds, Retail Banks and SID Bank.*

In this sense, relevant Slovene regulation includes:

- Slovene public procurement rules and
- Slovene regulation on financial engineering instruments, the latter applicable in case urban development projects are *co-financed* by Slovene public monies and have a strong technological development component. In view of the possibilities for JESSICA FIs implementation as detailed by Regulation 1083/2006, this is the case where Slovene public bodies serve as an HF or as a UDF.

In addition, Slovene rules on certain types of public entities and relevant provisions of Slovene banking laws are discussed below, since they have an important bearing on potential limitations of the participation of public and Retail Banking entities in JESSICA FIs.

#### **Public procurement rules**

Slovene public procurement rules, defined by the Slovene Public Finance Act and Slovene Public Procurement Act, are applicable in situations where:

- development projects are financed through state or municipal resources. Under the Slovene Public Finance Act, Slovene state or municipal resources may be deployed in the form of a loan,

guarantee, capital investments, reservation of committed assets or subsidies, and;

- in case of services ordered by Slovene public entities, where a public tender must be used (including a tender for banking services<sup>3</sup>) except in situations stipulated in Article 106j, paragraph 1, of the Public Finance Act (please see below) or where a direct grant is possible as per Article 106j, paragraph 2 of the Public Finance Act (described above).

Thus, in the situations listed above and provided the value of services is such as to require public procurement, a public procurement, announced in the Official Journal of the European Union as well as on the internet portal of public procurement, must be held. As provided in Article 106g, under 3, and Article 106h of the Public Finance Act, the public procurement should be supervised by a direct budget user's committee.

In case of financial engineering instruments, the exception to the obligation of holding a public tender defined by Article 106 j, paragraph 2, of the Public Finance Act, is a direct grant to a Slovene public financial institution.

As referred to above, the exceptions to the obligation of holding a public tender defined by Article 106 j, paragraph 1, of the Public Finance Act, for granting public monies for development projects are the following cases where a direct grant is possible:

- Projects co-financed by EU budget (funds) which have been selected by public tender held outside of the Republic of Slovenia, and conducted by a direct user of EU budget, or
- Projects, co-financed by the European Cohesion Policy and implemented with immediate confirmation of the project, or
- Where procedure for allocation of funds is defined by a special law.

### **Selection of Slovene public entity as an HF**

JESSICA FIs are not directly regulated by Slovene rules. However, it is assumed that a direct grant may be awarded to SID Bank or a Slovene Public Fund by application, *mutatis mutandis*, of Slovene rules on financial engineering instruments and Slovene public procurement rules.

In accordance to Article 106j, paragraph 2, of the Slovene Public Finance Act, a direct award by way of a grant may be made to SID Bank or a Slovene Public Fund for the implementation of Slovene financial engineering instruments involving solely Slovene public monies, whereby the grant funding conditions must include, inter alia:

- Investment strategy and planning, including a demonstration of the multiplier effect expected on the assets committed;
- Provisions for monitoring implementation and reporting;
- A program for the use of funds allocated;
- Defined purpose for the funds allocated;
- Defined period of use of the funds allocated
- Defined use of returns on investments (made by financial engineering instruments) that remain after all liabilities are honoured;
- Interest rate to be applied on returnable assets;

<sup>3</sup> In this sense, while public funds may perform roles for which they were established by means of specialized laws, under the Slovene Banking Act, credit and loan intermediation is considered to be an ancillary banking service that may be provided exclusively by banks.

- Basis for conducting an audit;

### **Selection of UDFs**

Selection by the MA of UDFs directly (i.e. without an HF) should be organised in line with Slovene public procurement rules. This should include:

- a public announcement of the tender;
- establishment of a committee for supervision of the tender; the committee must verify whether the tender documentation is orderly and whether requirements would reasonably result in a successful tender as per Article 106g, under 3, and Article 106h of the Public Finance Act;
- a definition of clear, transparent and objectively justified requirements and criteria for selection;
- meeting formal requirements of a public tender, which include determining, as per Article 106i of Public Finance Act, in tender documentation, inter alia (specifics depend on the type of the public tender):
  - the legal basis for the tender,
  - the subject matter of the tender,
  - available funding,
  - selection criteria and criteria for distinction between candidates,
  - means of financing,
  - minimum multiplication factor of public means and/or expected effect of public means,
  - the presumed dates of the beginning and the end of the financing.

A successful tender would normally be concluded by an Operational Agreement(s) made between the MA and successful candidate UDF fund managers. It is assumed that criteria imposed on such candidates in the Operational Agreement(s) may include an obligation to enable control of the use of funds and committed assets by the direct budget user and to report on the use of resources and results of such use when implementing the programme or project or at least upon its conclusion.

### **Slovene rules on financial engineering**

JESSICA FIs are regulated neither by Slovene rules on public finance nor those on financial engineering.

In accordance with the Slovene Public Finance Act and POSAM Regulation, financial engineering instruments should be used for the purposes of supporting *technological development projects*, a part of the financing being dedicated in particular to the technological development projects of SMEs. Financial engineering instruments are implemented by deploying state and municipality resources, combined with other public and private resources in the form of returnable assets.

If JESSICA FIs are implemented via the scheme regulated by Article 16 of POSAM Regulation, and are further used for the financing of technological development projects in the context of urban development, the financing scheme will need to be organised under the POSAM Regulation. This is provided that the POSAM Regulation is not in conflict with European Regulations 1083/2006 and 1828/2006 (in case of any conflict, the European Regulations will prevail).

The POSAM Regulation sets out procedure and manners to allocate funds for encouraging development programmes and preferential tasks of the state or municipalities. Article 16 of the POSAM Regulation stipulates that measures of financial support are implemented in the following manner:

- either as individual instruments of financial engineering in the form of a loan fund, a guarantee fund or a venture capital fund or in other form, or
- as a fund of funds, established by direct users of state budget for the purpose of implementing several individual instruments of financial engineering.

Further, in accordance with the POSAM Regulation, *an individual instrument of financial engineering* may be established:

- either as a legal entity within which rights and obligations of the founders are defined by an agreement, and in which the state ownership does not surpass 49% of the capital, or
- as a sub-account, without legal personality, with an existing financial institution. Accounting records of such a sub-account must be maintained separately for the other activities of the financial institution so that there is a clear separation between state or municipal budget funds and funds financed from other sources. As per the POSAM Regulation, financial institutions eligible to open such a sub-account are Retail Banks eligible to perform activities in Slovenia, SID Bank and Slovene Public Funds, acting in accordance with the Slovene Public Funds Act.

In line with the above, the POSAM Regulation will be applicable to JESSICA FIs if the latter is implemented via the structure set out in Article 16 of the same Regulation.

The above-mentioned Article 16 will therefore apply in case the JESSICA FIs are channelled via a Slovene legal entity within which rights and obligations of the founders are defined by an agreement, and in which the state ownership does not surpass 49% of the capital; or is organised as a sub-account, without legal personality, opened either with a Retail bank eligible to provide banking services in Slovenia, SID bank or a Slovene Public Fund; and which *deploys*, Slovene public or municipal resources for the purposes of financial engineering instruments supporting technological development projects. This signifies that the Public Finance Act and or the POSAM regulation should not apply to financial engineering instruments in case a UDF is established for investing in projects that do not concern technological development.

In such a case, the Slovene rules on grant funding agreement made upon a direct grant (Grant Agreement) or agreement made upon a selection by means of a public procurement procedure (Financing Contract) will also apply.

As underlined above, Article 106j, paragraph 2, of Slovene Public Finance Act stipulates that a direct grant for the co-financing of financial engineering instruments as defined by the same act, may be awarded to SID Bank or a Slovene Public Fund (the two categories specifically underlined by this act), and by signing a Grant Agreement, the relevant provisions of which are defined by the same act (please see above).

Under Article 17 of the POSAM Regulation, the direct user of the state budget (the MA) setting up an instrument or a holding fund for the purposes

of financial engineering must define, in the Financing Contract or the Grant Agreement, inter alia:

- measures for the implementation of sound financial management;
- measures for ensuring internal controls;
- measures for the timely provision of accurate, complete and reliable information;
- measures for assuring compliance with State aid rules and rules of public procurement;
- methods of monitoring and reporting on financial engineering;
- the policy of exit from investments of the financial engineering;
- the use of revenue from idle resources (idle resources of a holding fund or of another instrument of financial engineering may be used for bank deposits with the Slovene central bank, securities of EEA countries, an EEA central bank of the ECB, or bonds issued by the EIB, the EBRD or certain other bank identified by the ECB);
- the range of management costs in the Financing Contract. This does not include staffing, technical or organisational costs unless explicitly agreed, in which case the cost covered does not, on a yearly basis, surpass 2% of resources available for program implementation. The direct user of the state budget agrees to cover costs only when end recipients do not pay for the management and processing of transactions concerned;
- criteria for eligible expenditure to be incurred by a beneficiary of the resources;
- conditions for the allocation of resources to end recipient;
- envisaged timeline for the financial engineering instrument;
- the method and duration of storage of documents;
- measures for ensuring equal treatment of end beneficiaries, and
- consequences of breaches of the provisions of the financing agreement.

In any event, the Slovene Public Finance Act and POSAM Regulation will need to follow the spirit of European Regulations 1083/2006 and 1828/2006 when regulating JESSICA FIs.

Further, as this structure would involve Slovene public resources (e.g. public monies), it should clearly be communicated to the EU Commission and monitored for elements of State aid.

### **Specific rules on Slovene public and retail banking entities, and private equity funds in view of their possible role as UDFs**

- *SID Bank as a UDF*

SID Bank, the only Slovene public bank (in addition to the Slovene Central Bank, regulated by a separate set of rules) subject to the Public Finance Act, in taking the role of a UDF, would need to respect criteria as determined by the JESSICA HF manager or MA in selecting projects eligible for funding.

In accordance with Article 5 of the Slovene Development and Export Bank Act, the projects financed or co-financed by SID Bank must be economically viable. In line with the same law, all projects, investments and other forms of financial activities of SID Bank must be assessed in terms of their economic, environmental and social quality where international criteria are used and considered. Projects are selected upon a preliminary appraisal of their economic and financial viability and their effects on the development of the Republic of Slovenia.

This is explained by the fact that SID Bank is an institution involved in specific activities in the public interest and may therefore be excluded from

the scope of application of Directive 2006/48/EC relating to the taking up and pursuit of the business of credit institutions pursuant to Article 2 of the Directive.

As a public institution channelling public resources, SID Bank must respect rules on State aid.

In terms of maximum exposure, the SID Bank's liabilities must not, as per law, exceed 50 times its total capital.

- *Public Funds as UDFs*

As a UDF, a Slovene Public Fund must operate in line with its general business conditions, which are published on its website. In operating as a JESSICA FI, a Slovene Public Fund will be able to provide only those services for which it has been established. This may be, for example, the provision of incentives such as subsidies, venture capital funds investments, beneficial loans, guarantees or financial leasing.

The terms and conditions guiding the Operations of a Slovene Public Fund providing financial support must include at least:

- Criteria for identifying beneficiaries of either corporate incentives or assistance for individuals;
- Conditions for incentives or assistance to be provided by a Slovene Public Fund and the volume of incentives that can be received by each beneficiary;
- Mutual rights and obligations of the Slovene Public Fund and the beneficiary after the granting of incentives and assistance;
- Procedures for selecting beneficiaries and the granting of incentives and assistance to the public.

In assessing credit worthiness of potential beneficiaries of loans, the rules of the Bank of Slovenia apply *mutatis mutandis* to the evaluation of credit worthiness as performed by Slovene Public Funds.

When providing loans using state or municipal resources, Slovene Public Funds must comply with rules governing State aid.

Notwithstanding the actual amount of monies that may be channelled to a Slovene Public Fund acting as a UDF, the total value of any financial advantage provided may not exceed 10% of the value of the assets dedicated to the Slovene Public Fund.

In addition, the total value of financial incentives that are potential liabilities of a Slovene Public Fund must not exceed three times the value of the dedicated property of the Public Fund. If OP Resources are channelled via Public Funds, this measure against public (state or municipal) monies is likely to be maintained, given that OP resources would not be the only source of financing within such Public Funds. This means that a Slovene Public Fund may not provide financing in as many projects involving JESSICA FIs as other types of institutions eligible for the role of UDF.

By the letter of the law, Slovene Public Funds may not provide financial support from state resources unless its claim is secured by a lien or a mortgage. Given that OP Resources are not only state resources, this requirement is not likely to limit the activity of Public Funds within the use of financial instruments such as UDF and HFs. This means that it may potentially be more burdensome for eligible projects to obtain financing by a Slovene Public Fund acting as an UDF than in case of other types of institutions eligible for the role of UDF.

- *Private funds as UDFs*

EU-based private equity funds may act as UDFs, provided they are registered for services to be performed by UDFs. As UDF activities concerning financial engineering may include the provision of equity, loan and/or guarantees, private equity funds may be eligible for the UDF role provided that they are authorized to provide such services. However, private equity funds are usually not registered for the provision of all such services, which means they may play a limited role as a UDF.

- *Retail banks as UDFs*

In acting as UDFs, commercially operating Retail Banks will need to implement transparent rules for the selection of projects eligible for support from UDFs as defined in the Operational Agreement between the selected commercial Retail Bank and the JESSICA HF or MA (in the case that there is no JESSICA HF).

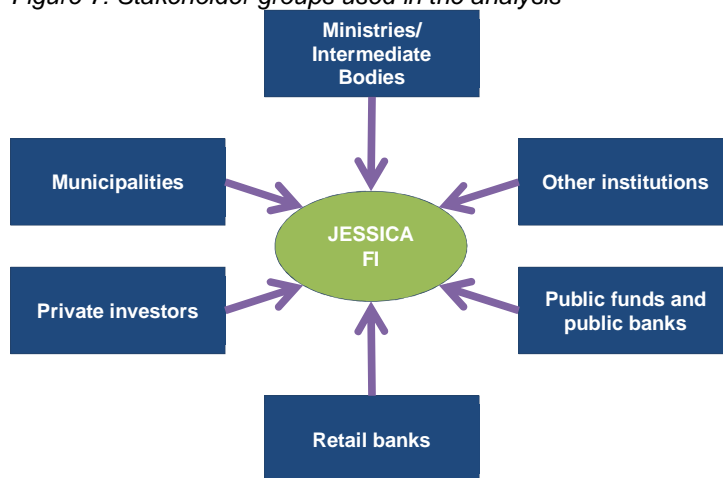
The ratio of Co-Investment to OP Resources to be applied by the UDFs will similarly be defined in the Operational Agreement.

As for all other types of institution acting as UDF, commercially operating Retail Banks must comply with State aid rules.

### 1.1.4. Key stakeholders

The stakeholders involved in this study are divided in six groups and are outlined in the chart, each with their own objectives.

Figure 7: Stakeholder groups used in the analysis



#### Ministries

A Ministry in Slovenia is the highest organ of the Government responsible for a sector of government public administration, led by a minister. Ministers are responsible for the formulation of Government positions and decisions, as well as for the implementation of these decisions.

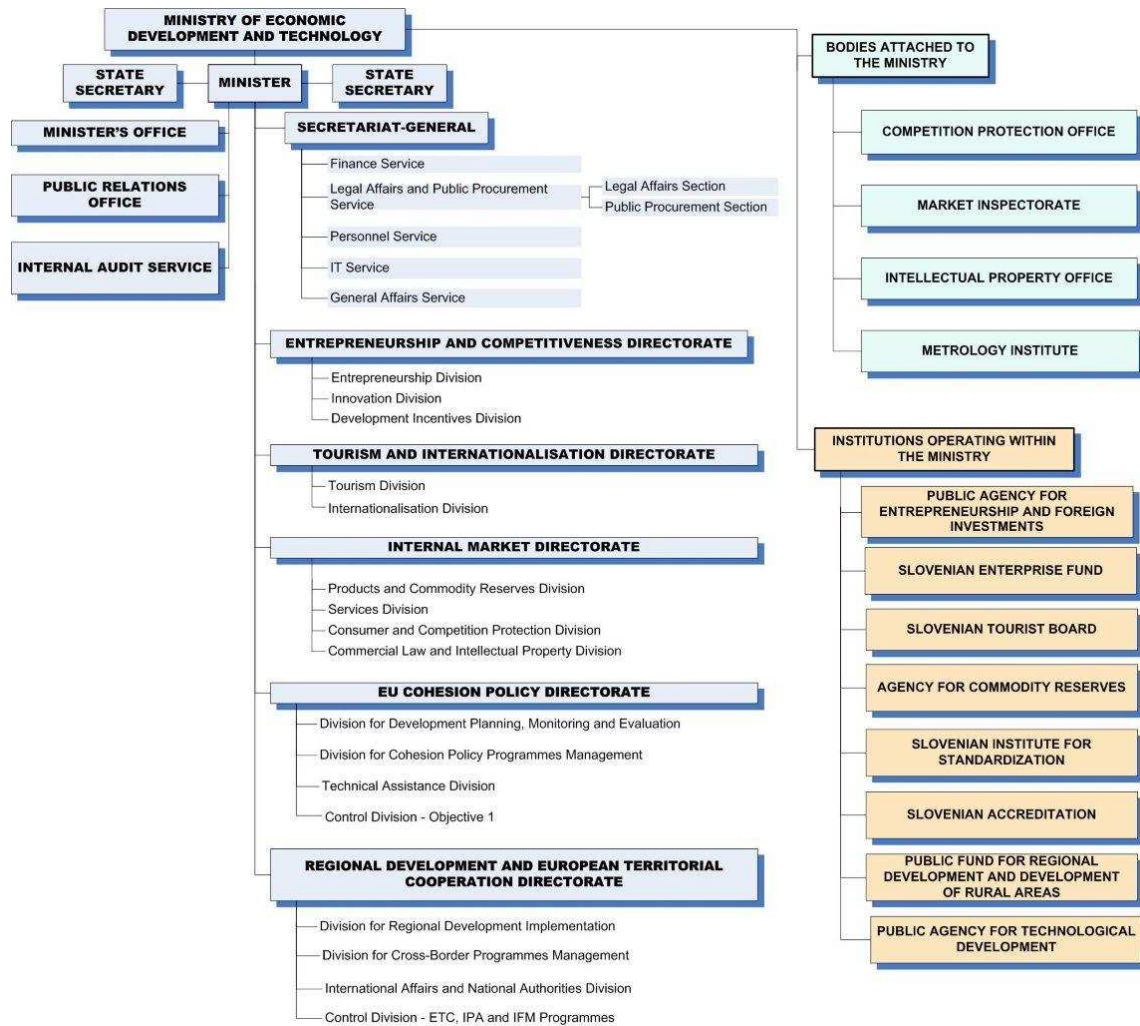
The following Ministries would be strongly connected to the implementation of JESSICA FIs in Slovenia. They are Intermediate Bodies that are responsible for the preparation of EU instruments and project grant approval:

- Ministry of Economic Development and Technology (MEDT) as the MA;
- Ministry of Education, Science, Culture and Sport.

The most important role related to EU funds management within the Slovene government is dedicated to the Managing Authority (MA) represented in Slovenia by the Ministry of Economic Development and Technology (MEDT). The MA performs tasks associated with EU funds management under two directorates:

- Directorate for EU cohesion policy, and
- Directorate for Regional Development and Territorial Cooperation

Figure 8: MA organisation



The Directorate for EU cohesion policy has two objectives. The first objective is connected to the implementation of the cohesion policy in Slovenia. The MA's goal is to ensure that the EU funds are being drawn effectively through a transparent and user-friendly system which will enable Slovenia to use to the widest extent possible the given developmental potentials and opportunities in the public, private and non-governmental sectors as well as on the individual level. The second objective is tied to the development planning and programming of strategic documents and their implementation which includes the following documents:

- Slovenia's Development Strategy 2014–2020, Programme of Development Priorities and Investments (PDPI) 2014–2017 and
- Programming of documents or the preparation of Operational Programmes for drawing on EU funds in the period 2014–2020 and cooperating in the negotiations for the new multiannual financial framework.

The objective of the Directorate for Regional Development and Territorial Cooperation is to reduce the development gap between different regions in Slovenia. The MA's mission is the promotion of sustainable development which activates the potentials of the Slovenian regions without reducing the resources and development potentials for future generations. Regional policy strives for omnipresence in the Republic of Slovenia, especially in the priority areas of:

- the least developed regions
- municipalities with individual development problems
- the border areas
- the areas inhabited by the Hungarian and Italian national minorities and the Roma ethnic community.

The MA has special regional policy measures in the priority areas and coordinates the activities of ministries and other bodies and offices in the direction of their regional initiatives in the key regional projects from the regional development programmes. They coordinate the work of the Public fund of the Republic of Slovenia for regional development and rural development and coordinate the work of 12 regional development agencies in the Slovenian regions. The MA is also responsible for the system and legislation in the field of harmonious regional development, preparation of the national development programme and the coordination of the 12 regional development programmes.

#### *Municipalities*

Slovenia has 212 municipalities which act as local administrations. They are defined as basic local self-government units. The territory of a municipality is generally determined as the area where people are united by common needs and interests. The Local Self-Government Act stipulates that every municipality provides to its inhabitants public infrastructure and public services for quality living conditions.

Municipalities are the key source for the establishment of a suitable project pipeline for JESSICA FIs, and are usually the key investors for urban development projects in Slovenia. They manage the process of creating and approving municipal spatial plans, possess knowledge of the demand for investment in their territory stemming from the private sector, and are central in decision making and approvals of building permits. Most of the financing of projects is realised within their own fiscal budget, while municipalities are increasingly applying for commercial loans and increasing their debt in order to cope with an ever increasing demand for all manners of investment, of which urban development projects represent a major part.

Slovenia is split into 12 regions: Osrednjeslovenska, Notranjsko-kraška, Obalno-kraška, Jugovzhodna Slovenija, Goriška, Gorenjska, Spodnjeposavska, Zasavska, Savinjska, Koroška, Podravska, Pomurska.

Figure 9: Slovenian regions



Presently, regions are used more for statistical purposes and have neither legal responsibilities nor a legal status. Consequently, an analysis based on a regional split was not performed as part of this study. Our efforts have instead focused on the urban development projects of individual municipalities, ministries and private developers and investors.

#### *Private Investors*

Financing from the private sector for urban development projects is limited. There are, however, some developers and investors, who have been or are now active in urban development projects including: BTC, KID, BŠP, Konstruktor, IMOS, Energoplan, DEOS, Sava, Trigranit, Triglav Nekretnosti and a number of retail companies<sup>4</sup> (e.g. Mercator, Spar, Tuš, Hofer, Lidl). The majority of them have been focused on shopping or housing projects where the overarching aim was/is to invest in projects used for commercial purposes where the financial rate of return more than compensates for the cost of capital. If they had to develop non-profit making parts of the area, it was non-voluntary and based on a binding agreement having been established by the municipality promoting the spatial development of a particular area. Compared with municipalities or other public sources of financing, our analysis shows that private investors will represent a minor financing share (around 20%) in the coming 3-5 years.

<sup>4</sup> The rapid retail expansion in Slovenia has slowed down partly as a result of the crisis and partly due to the high saturation of retail centers in urban areas.

## Retail Banks

There are 18 Retail Banks in Slovenia which would be likely sources to provide financial leverage for any urban investment projects. Bank ownership by the central government amounted to 22.7% in 2010 which, compared to other CEE countries, is relatively low. The ownership structure as seen in the table below is relatively mixed and provides a normal operating environment for commercial activity. The banking sector in Slovenia is well developed. Banks operate under Slovene banking law and in a market of open competition.

Figure 10: Ownership structure of the banking sector in terms of equity, Source: Bank Financial Stability Review, May 2012, Bank of Slovenia

Ownership structure in terms of equity in %	2007	2008	2009	2010	2011
Banks with over 50% non-resident ownership	26.8	27.6	26.8	27.9	29.8
Banks with less than 50% non-resident ownership	11.0	10.6	9.8	9.2	9.3
Banks owned 100% by central government	15.1	17.7	20.5	20.1	22.7
Other domestic entities	47.2	44.1	43.0	42.9	38.2

Figure 12: Total assets of banks, Source: Bank Association of Slovenia

Bank assets	2007	2008	2009	2010
Total assets of banks in EUR million	42,343	47,628	51,612	50,319

Figure 13: Total assets of Public Funds, Source: annual reports

Public Fund	Total Assets in Million EUR in 2010
Housing Fund of the Republic of Slovenia	410
Eco fund	181
Financial Fund for decommissioning of the Nuclear Power Plant Krško <sup>5</sup>	151
Real Estate Fund of Pension and Disability Insurance	102
Slovenian Regional Development Fund <sup>6</sup>	73
Slovene Enterprise Fund	68
<b>TOTAL</b>	<b>985</b>

<sup>5</sup> Financial data not available for 2010, so the figure represents 2009.

Figure 11: Ownership structure of Slovenian banks, Source: Ajpes

Banks with a state ownership above 51%			Private banks				
Bank	Owner	Share	Bank	Owner	Share		
<b>BANKA CELJE d.d.</b>	NLB D.D.	49,55%	<b>ABANKA VIPA d.d.</b>	ZAVAROVALNICA TRIGLAV, D.D.	25,61%		
	NFD 1 DELNŠKI INVESTIJSKI SKLAD D.D.	9,68%		SAVA, D.D.	23,84%		
	SLOVENSKA ODŠKODNINSKA DRUŽBA, D.D.	6,71%		GB D.D., KRANJ	9,99%		
	UNIOR D.D.	4,85%		TRIGLAV VZAJEMNI SKLADI - DELNŠKI TRIGLAV STEBER	7,32%		
	ABANKA D.D.	3,37%		HIT D.D. NOVA GORICA	6,15%		
	ZAVAROVALNICA TRIGLAV, D.D.	2,69%		BPT D.O.O.	4,75%		
	JUTEKS, D.D.	2,50%		VIPA HOLDING D.D.	3,71%		
	POLZELA, D.D.	1,66%		DIAMOND D.D.	3,56%		
	NOVA KBM D.D.	1,46%		ZVONENA HOLDING, D.D. - V STEČAJU	2,42%		
	ČNKARNA CELJE D.D.	1,23%		SLOVENSKA ODŠKODNINSKA DRUŽBA, D.D.	2,24%		
	FACTOR-IND.O.O.	0,99%		NFD 1 DELNŠKI INVESTIJSKI SKLAD D.D.	1,47%		
	Other	15,31%		RAFFEISEN BANK INTERNATIONAL AG (RBI) - FIDUCIARN	1,33%		
				Other	7,61%		
	<b>NOVA KREDITNA BANKA MARIBOR d.</b>	REPUBLIKA SLOVENIJA		41,50%	<b>BANKA KOPER d.d.</b>	INTESA SANPAOLO S.P.A.	97,48%
SLOVENSKA ODŠKODNINSKA DRUŽBA, D.D.		4,80%	ELEKTRO PRIMORSKA D.D.	0,66%			
KAPITALSKA DRUŽBA, D.D.		4,80%	KRAŠKI VODOVOD SEŽANA D.O.O.	0,30%			
NFD 1 DELNŠKI INVESTIJSKI SKLAD D.D.		2,11%	GRZETIČ OSKAR	0,20%			
EAST CAPITAL BALKAN FUND		1,71%	PETROVIČ DANILLO	0,19%			
EAST CAPITAL EASTERN EUROPEAN FUND		1,30%	BANKA KOPER D.D.	0,18%			
TRIGLAV VZAJEMNI SKLADI - DELNŠKI TRIGLAV STEBER		1,23%	Other	0,99%			
FACTOR BANKA D.D.		1,10%					
POM-INVEST, D.D. - V STEČAJU		1,01%	<b>BANKA SPARKASSE d.d.</b>	KAERTNER SPARKASSE AKTIENGESELLSCHAFT		70,00%	
UNICREDIT BANK AUSTRIA AG - FIDUCIARNI RAČUN		1,01%		STEBERMARKISCHE BANK UND SPARKASSEN AG.		26,00%	
Other	39,43%	ERSTE GROUP BANK AG - FIDUCIARNI RAČUN		4,00%			
<b>NOVA LJUBLJANSKA BANKA d.d.</b>	REPUBLIKA SLOVENIJA	33,10%	<b>BANKA VOLKS BANK d.d.</b>	VOLKS BANK INTERNATIONAL AG	95,90%		
	KBC BANK NV	30,57%		EMRO POPOLARE S.P.A.	3,00%		
	POTEZA NALOŽBE D.O.O. - V STEČAJU	5,80%		BANCA POPOLARE DI VICENZA	1,05%		
	SLOVENSKA ODŠKODNINSKA DRUŽBA, D.D.	5,05%		Other	0,05%		
	KAPITALSKA DRUŽBA, D.D.	5,01%					
	ZAVAROVALNICA TRIGLAV, D.D.	3,15%		<b>BAWAG BANKA d.d.</b>	BAWAG P.S.K. BANK FUER ARBEIT UND WIRTSCHAFT UND O	100,00%	
	UCTAM D.O.O.	1,72%					
	NFD 1 DELNŠKI INVESTIJSKI SKLAD D.D.	1,48%			<b>DEŽELNA BANKA SLOVENIJE d.d.</b>	KAPITALSKA ZADRUGA, Z.B.O.	45,96%
	TRIGLAV VZAJEMNI SKLADI - DELNŠKI TRIGLAV STEBER	1,22%		KD GROUP D.D.		20,91%	
	Other	12,90%		KD KAPITAL D.O.O.		10,00%	
<b>POŠTNA BANKA SLOVENIJE, d.d.</b>	NOVA KBM D.D.	55,00%	BANCA DI CIVIDALE S.P.A.	5,58%			
	POŠTA SLOVENIJE D.O.O.	45,00%	ZADRUŽNA ZVEZA SLOVENIJE, Z.O.O.	3,48%			
<b>SLOVENSKA INVESTIJSKA BANKA,</b>	NLB D.D.	80,78%	ADRIATIC SLOVENIA D.D. KOPER, KRITNO PREMOŽENJE	2,33%			
	KAPITALSKA DRUŽBA D.D. - PPS	11,32%	ZVEZA BANK REG.Z.Z.O.J.BANK UND REVISIONS	2,17%			
	BT INVEST D.O.O. - V LKVIDACIJI	2,68%	ČZD KMEČKI GLAS, D.O.O.	1,44%			
	Other	5,22%	KZ PTUJ Z.O.O.	1,04%			
<b>SID - SLOVENSKA IZVOZNA IN RAZV</b>	REPUBLIKA SLOVENIJA	99,41%	<b>FACTOR BANKA d.d.</b>	ACH, D.D., LJUBLJANA	40,75%		
	SID BANKA, D.D., LJUBLJANA	0,59%		CG INVEST, D.D.	10,00%		
<b>ENTRIES WITH MAJORITY STATE OWNERSHIP</b>			<b>GORENSKA BANKA d.d.</b>	NOVA KBM D.D.	9,90%		
				VRTNARJUA LADA, D.O.O.	6,99%		
				PUBLIKUM POU D.O.O.	4,22%		
				PROMOS HOLDING AKTIENGESELLSCHAFT	4,19%		
				HIRAM HOLDING & FINANZ AG	4,14%		
				BSD NEPREMIČNINE D.O.O., LJUBLJANA	3,92%		
				SKAPIN GREGOR	3,43%		
				Other	12,46%		
				<b>HYPO ALPE-ADRIA-BANK d.d.</b>	SAVA, D.D.	39,40%	
					MERKUR, D.D.	13,00%	
					GB D.D., KRANJ	7,76%	
					ABANKA D.D.	6,50%	
					ZAVAROVALNICA TRIGLAV, D.D.	3,99%	
					ISKRA ISD D.O.O.	2,67%	
		TELEKOM SLOVENIJE, D.D.	1,62%				
		DOMEL, D.O.O.	1,61%				
		AERODROM LJUBLJANA, D.D.	1,55%				
		ISKRATEL, D.O.O., KRANJ	1,46%				
		TURISTIČNO DRUŠTVO LESCE	1,43%				
		PROBANKA, D.D.	1,31%				
		G SKUPINA D.D.	1,07%				
		Other	16,63%				
		<b>KID BANKA, d.d.</b>	HYPO ALPE-ADRIA-BANK INTERNATIONAL AG	100,00%			
			<b>PROBANKA, d.d.</b>	KD GROUP D.D.	100,00%		
				MEDALION D.D.	19,99%		
				PERUTNINA PTUJ D.D.	13,54%		
				AVTOTEHNA D.D.	9,92%		
				TRIMO, D.D.	7,86%		
				PIVOVARNA LAŠKO, D.D.	6,27%		
				GORENJE, D.D.	5,75%		
				JUTEKS, D.D.	4,42%		
				SGP KOGRA D-IGEM DRAVOGRAD D.D.	3,54%		
		LOTERIJA SLOVENIJE, D.D.		3,43%			
		ISKRA TELEKOM HOLDING, D.D. KRANJ	2,66%				
		CETS D.D.	2,36%				
		ISKRATEL, D.O.O., KRANJ	2,33%				
		FRAKTAL-CONSULTING D.O.O.	2,26%				
		ACH, D.D., LJUBLJANA	2,05%				
		H & R D.D.	1,46%				
		NOVA KBM D.D.	1,07%				
		ZAVAROVALNICA MARIBOR D.D.	1,03%				
		Other	10,06%				
		<b>RAIFFEISEN BANKA d.d.</b>	RAIFFEISEN BANK INTERNATIONAL AG (RBI)	86,31%			
			RAIFFEISEN - LANDESBANK STEIERMARKT AG	9,90%			
			RAIFFEISEN LANDESBANK BURGENLAND UND REVISIONSVBI	3,00%			
			Other	0,79%			
		<b>SKB BANKA d.d. LJUBLJANA</b>	SOCIETE GENERALE	97,58%			
			GENEFINANCE S.A.	2,15%			
			Other	0,27%			
		<b>UNICREDIT BANKA SLOVENIJA D.D.</b>	UNICREDIT BANK AUSTRIA AG	100,00%			

The total assets of Slovene banks have grown significantly in the past years: from EUR 42.3 billion in 2007 to EUR 50.3 billion in 2010. This intense growth was negatively affected by a shrinking economy and a rising number of defaulting companies. Consequently, banks have had to write off troubled credit and have suffered major losses, reducing the average return on equity from 16.3% in 2007 to -2.4% in 2010 (Source: Bank of Slovenia: Stability of the Slovenian Banking System report). Higher asset levels and pressure on equity have also led to deterioration of their Basel II equity ratios.

Adding to the hesitancy of the banking sector were also the complex financing structures of projects. These projects were led by non-transparent financing that included real-estate development projects and financing of financial holding structures. This has been followed more recently by banks deleveraging such financing structures.

Banks today are therefore less capable of providing additional financing to risky (less commercially viable) projects due to the impact to their already weak capital adequacy ratios. In addition, Slovene banks are avoiding complex financing structures which have proven to be unstable or risky. This is a combination of several factors: tightening of lending terms, increased collateral requirements, low capital position and difficulties in accessing funding by the banks.

It should be noted that, contrary to the banking sector at large, SID Bank's assets have doubled from 2.0 billion EUR in 2008 to almost 3.9 billion EUR in 2010.

#### *Public Funds*

Slovenia has established a number of vibrant, yet small, Public Funds which satisfy niche financing demand in the eco/environmental fields, rural developmental housing, housing projects, and other areas. These include, amongst others: the Eco fund, Slovenian Regional Development fund, Housing Fund of the Republic of Slovenia, Real Estate Fund of Pension and Disability Insurance, Financial Fund for decommissioning of the Nuclear Power Plant Krško the Farmland, Forest Fund of the Republic of Slovenia and the Enterprise Fund.

These financial institutions complement financing from Retail Banks and EU funds, but possess very little relative financing power (2% compared to the balance sheet of the total banking sector). The following table summarizes the balance sheet sizes of some of the funds.

#### *Other Institutions*

Integrated and sustainable urban development requires consensus among a variety of stakeholders ultimately overseeing cultural, environmental, social and other non-commercial criteria. Therefore, the study should also consider institutions which are providing expert guidance and are limiting, where appropriate, excessive commercial exploitation of the land.

The Urban Planning Institute, as one of these stakeholders, is an independent body with experts carrying out studies and analysis for urban related projects. The Institute is partially financed from public finances and partially from its own sources and is engaged by the Ministry of Infrastructure and Spatial Planning and the Ministry of Education, Science, Culture and Sport to conduct analysis and research. Its activities include research and expert development work in the fields of urban and regional planning and related disciplines.

The Urban Planning Institute has the following duties: to participate in the elaboration of the spatial planning and regional development strategy, to monitor its implementation and to encourage its evaluation. The institute should further provide support in the elaboration of urban policy. In particular, this could be through the preparation, coordination and management of technical and financial cooperation programs to guarantee the appropriate implementation and execution of instruments of environmental and spatial planning.

Other such stakeholders include: the Institute for Public-Private Partnership Slovenia, the Institute for the Protection of Cultural Heritage, the Slovenian Environment Agency, the Association of Town Planners and Spatial Planning in Slovenia, the Chamber of Commerce and Industry of Slovenia as well as a number of other governmental and non-governmental organisations.

## **1.2. Analysis of the demand side**

### **1.2.1. Pipeline of running projects**

In order to assess the size, type and quality of potential urban development projects in Slovenia, a complete investor survey was conducted as part of this study in the following manner:

- First, we prepared descriptions of criteria for support from Operational Programmes and JESSICA FIs in order to brief potential investors;
- Then, we interviewed the 6 biggest municipalities (Ljubljana, Maribor, Celje, Koper, Novo Mesto, Kranj);
  - We emailed questionnaires to all 205 other municipalities;
  - We conducted a limited survey with ministries.
  - We interviewed some of the biggest private investors.

The investor survey gave us comprehensive project-specific knowledge on the type of current urban development projects that may be suitable for support from JESSICA FIs including the status of the project (phase of Operations), the estimated budgeted size of the investment, the planned sources of financing and the location of the investment as well as a general description of the projects. All projects had to be eligible under OP DETI or OP SRDP and had to be suitable for support from JESSICA FIs.<sup>7</sup> In addition, projects had to be operationally developed to such stages that financing from a potential UDF could be drawn down within the period 2012-2015. Feedback that we have received was of a high quality, enabling us to draw country-wide conclusions.

The investor survey provided us with data on JESSICA project type and total project cost and expected timeline. As we could not determine if parts of the project were non-eligible for JESSICA FI support, the approach taken by PWC was to nevertheless include the project in the pipeline so as to have a more complete picture of projects in Slovenia.

It is perhaps also worth noting that the investor survey did have some limitations due to the fact that only a minority of the municipalities presented their project list to us, only some ministries provided us with indicative lists of

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<sup>7</sup> The projects in the pipeline had to meet the following criteria for JESSICA FIs eligibility:  
- project costs which are (co)financed through JESSICA FIs have to be eligible to receive funds from one of the two Slovenian OP's (DETI or SRDP),  
- the projects must have a revenue generating component,  
- the projects have to be sustainable.

projects (and then with only limited detail) and that the market of private-sector led urban development projects is too fragmented to allow us to carry out a complete survey. Despite these challenges, we received feedback from 45 municipalities (21% of the total) which represent a population of 966,000 Slovene inhabitants (47% of the total population). We believe that statistically this sample represents a sufficiently large representation of the whole country to allow for the figures (number and size of the projects) from a sample of municipalities to be extrapolated to the national level of all 211 municipalities. In addition, we have also included in the assessment projects promoted by both private investors and ministries where data was made available.

As a result, the table below shows the total potential of urban development projects in Slovenia expected over the next couple of years to be almost EUR 4 billion in aggregate. Based on the information on project maturity collected from the three different investor types, the value of projects which could be started immediately is estimated as being between EUR 150 and 250 million.

*Figure 14: Aggregate level of the project pipeline in urban development, Source: investor survey*

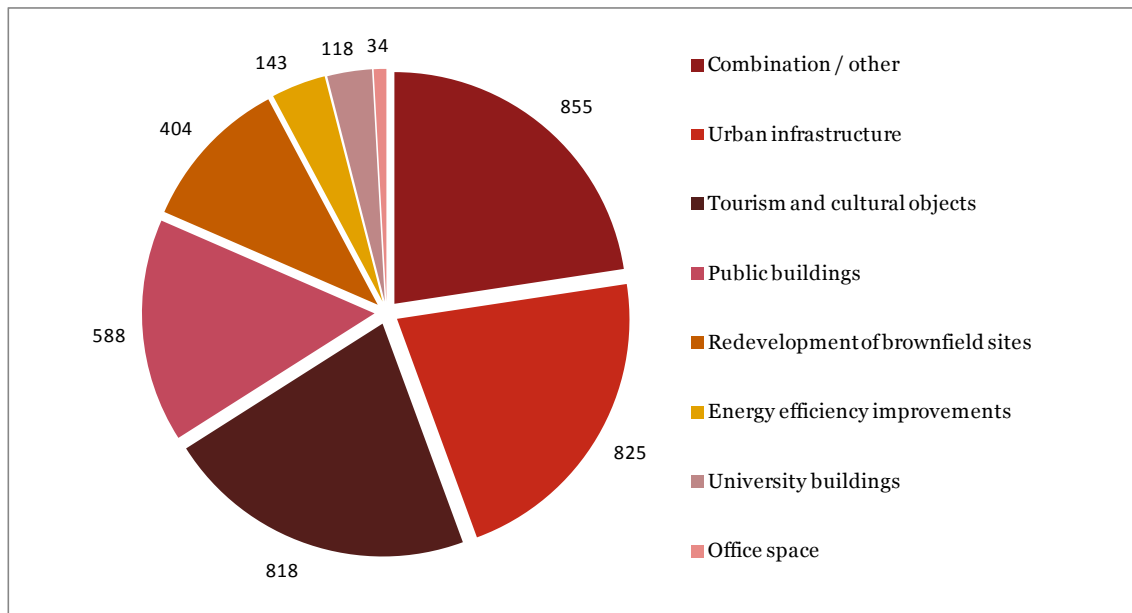
Investor type	Number of projects	Size of projects in million EUR	Average project size in million EUR
Municipalities	670	2,600	3.9
Private investors	15	900	60.0
Ministries	60	240	4.0
<b>TOTAL</b>	<b>745</b>	<b>3,740</b>	<b>5.0</b>

Such a high level of financing cannot easily be secured in today's economic environment. As has been the case in the past, we may increasingly find in the future that urban projects in Slovenia will be delayed in the hope of obtaining easier access to financing.

Based on the analysis from the investor survey, the following pie chart gives a breakdown of project type. The biggest share of EUR 855 million comes from private investor led projects which combine many aspects of urban development and could not be broken down into discrete types.

Basic urban infrastructure (e.g. roads, transport solutions, water systems) represents one of the highest sources of demand, estimated at EUR 825 million, coming in particular from municipalities. Many of these types of projects receive grants from SF today and investors will most likely also apply for grants in coming years. An important aspect of urban development concerns the preservation of cultural heritage and renovation of old buildings as well as building new tourist infrastructure, renewal of historic city centres, etc. Also significant, with an estimated value of EUR 588 million, is the category of Public buildings, with sports facilities representing the largest type of public building. Other segments show less demand.

Figure 15: Project typology in million EUR of the aggregate demand



The earlier part of the study has already shown that Slovenia is following a polycentric development approach with a high number of municipalities. Our demand analysis has confirmed this situation, since demand is spread fairly evenly across Slovenia with one notable exception, the capital city of Ljubljana. Private investors are focusing heavily on Ljubljana and some other important cities. Ministries are also showing a greater focus on Ljubljana (with many buildings of national importance located in Ljubljana), while demand appears to exist across virtually all municipalities.

JESSICA FIs may therefore provide an opportunity to direct EU Structural Funds resources to territories (eg. small and medium-sized cities) which are currently underserved by the private sector.

In the investor survey, there were 8 municipalities (out of 45 where feedback was received) which expressed the view that they do not possess (or don't have interest in) urban development projects that may seek support from JESSICA FIs. We have also received comments from a number of municipalities to the effect that their first priority is to absorb funds via existing grant mechanisms. Many municipalities are also very close to the 8% limit of indebtedness, so they have limited possibility to take new loans.

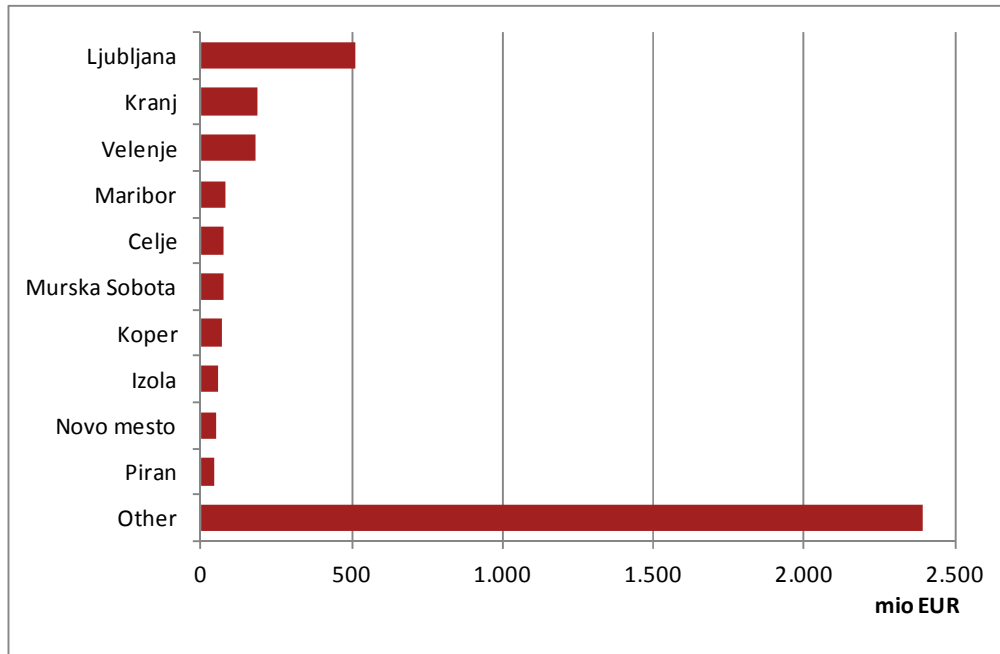
Municipalities, which have solid finances and are realistic in terms of their future financial perspective, have expressed an active interest in investing in urban development projects in sizes proportionate to their population and budget. As seen from the chart below, Ljubljana has the potential to invest over 500 million in urban development projects – and this figure is representative of the total Slovene demand of 14% (corresponding to Ljubljana's share of the nation's population).

The other 9 biggest municipalities show a demand in the range between EUR 45 and 190 million. At least 80% of the remaining municipalities have a combined demand for projects of EUR 2.4 billion<sup>8</sup>. We can conclude therefore that demand is highly geographically dispersed. We should add

<sup>8</sup> These are revenue generating projects which have a positive ROI

that each municipality in the investor survey presented a minimum of EUR 2 million of projects.

Figure 16: Geographical representation of project demand on municipality level in million EUR



In terms of indicative sources of financing for projects, in the majority of cases private investors have difficulty in leveraging their equity with commercial loans from banks, so they are delaying the start of projects. Municipalities are relying mostly on their own budgets (with some of them close to their borrowing limits) and are to a lesser extent relying on applications for EU and Slovene grants or other types of additional public financing. Public-private-partnerships are seldom mentioned as possible financing structures<sup>9</sup>. However, it is widely accepted in Slovenia that PPP will have to be promoted and supported more extensively in the future in order to secure sufficient funding for urban development projects.

Municipalities, which have provided detailed feedback, are in good shape considering the development stages of their projects. Almost all of the projects that form the basis of the demand analysis can be realised within the next 1 to 4 years. If there are no financing obstacles, the majority of the projects should therefore be viable and could be fully implemented within the required time frame for investments to be made by UDFs before the end of 2015.

Most of the projects are in the planning phase. The planning phase can in turn be subdivided into three phases:

- A small proportion of the total project portfolio (in terms of project cost) comprises projects where construction could commence immediately as building permits have already been issued;
- Approximately 50% (in terms of project cost) are in the middle of the planning phase. In other words, we estimate that it may take approximately 1 year (ranging from 6 months to 2 years) to receive development approval, so these projects are likely to be realised;

<sup>9</sup> Project Šmartinska is an exception

- Around 40% (in terms of project cost) are in the early stages of design development and document preparation. We estimate that it may take at least 2 years (and at most 4 years) for the realisation of such projects. That said, these projects have gone beyond the initial ideas stage and so it was concluded that the majority of them could be realised within the required time frame.

Slovenia has a sizeable pipeline of urban development projects that are eligible under both OPs, suitable for support from JESSICA FIs, and advanced in their stage of implementation. From this perspective, support of any size from a JESSICA FI would introduce long-term stability in the Slovene business environment for sustainable urban development, speed up project implementation and generate more synergies between the various partners.

Below is a sample of the types of projects that are currently being planned for implementation in Slovenia and their geographical location:

### 1. Infrastructure

- Štanjel – Plans for developing municipal infrastructure and public space;
- Celje – Bus station enabling the development of a Celto-Roman Temple in Celje as a tourist venue;

### 2. Tourism and culture

- Snežnik – Completion of the reconstruction and renovation of the Snežnik castle complex;
- Negova – Renovation of old castle and park areas and old town walls;
- Pišece – Completion of renovation of the Pišece castle and revitalisation
- Dornava – Restoration of the Dornava castle and Baroque Park for the purposes of a multicultural centre;
- Dolane – Renovation of the Borl castle for hotel and tourist purposes
- Gradac – Restoration of the Gradac castle complex for a hotel and tourist destination
- Turjak – Completion of the reconstruction and revitalization of the castle palace with tourist, cultural and gastronomic activities
- Ljubljana – New Building of Museum of Natural History
- Bistra – Renovation of Technical Museum of Slovenia
- Vrhnika – Reconstruction of wet wood from archaeological sites
- Brestanica, Rajhenburg equipment for museum and cultural activities
- Štanjel – Castle reconstruction completion
- Ptuj - Dominican monastery and the organisation of the Archaeological Museum and the archaeological park
- Pivka – Completion of the reconstruction and revitalization of the Park of military history
- Piran – Renovation of the palace gallery Trevisini Coastal museums galleries

### 3. Rehabilitation

- Idrija – Rehabilitation and revitalization of the technical heritage of the former mercury mine
- Kidričevo – Revitalisation of Kidričevo settlement
- Ljubljana - Renovation of the Kolinska factory area
- Ljubljana - Revitalization of the Cukrarna area in Ljubljana

#### 4. Universities

- Koper – Renovation of the Kreljeva 6 palace and former Servite Monastery for the University of Primorska
- Vipava – The renovation of the Lanthieri mansion and park for the University of Nova Gorica - II. Phase
- Nova Gorica – Renovation of the Rafut villa for the University of Nova Gorica

#### 5. Energy

- Kobilarna Lipica – Integrated energy rehabilitation of buildings
- Ljubljana – Building of a National Museum of Natural History
- Ljubljana - Museum of Contemporary History of Slovenia
- Bistra – Technical Museum of Slovenia

#### 6. Public buildings

- Ljubljana - New building for the Archives of the Republic of Slovenia
- Ljubljana - New building for the Historical Archives of Ljubljana
- Novo mesto - A comprehensive renovation of the Grm castle complex for the needs of the Institute for the protection of Cultural Heritage of Slovenia, Regional Unit Novo Mesto, the unit of Historical Archives of Ljubljana and Institute for the protection of Natural Heritage, Regional Unit Novo mesto
- Maribor – New construction for the Regional Archives Maribor
- Ljubljana – Continued recovery of Cankarjev dom
- Ljubljana – Restoration of Drama theatre
- Maribor – Renovation of SNG Maribor theatre
- Ljubljana – New construction of NUK II library
- Mozirje – Construction of new library
- Maribor – Library Renovation
- Metlika – Construction of new library
- Radovljica – Construction of new library
- Vrhnika – Extension of the existing library

Figure 17: The locations of the projects planned for implementation from the six project types



### 1.2.2. Examples of projects with JESSICAble attributes

In order to illustrate the wide variety of possible final recipients for support from JESSICA FIs, three sample urban projects are illustrated in detail below including an indication of the socio-economic benefits that may be attained.

#### Musica Tivoli

The project “Musica Tivoli” is situated on a 10,010m<sup>2</sup> site in central Ljubljana representing one of the largest and most ambitious projects in the city. It is conceived as a multifunctional building complex focused around a modern concert and opera hall and luxury hotel. The project will be an important generator of cultural and supporting activities which should elevate Ljubljana to a higher level of visibility and appeal.



The multi-functional building complex will be comprised of five parts:

1. **Luxury Grand Hotel Opera** - net area 16,358 m<sup>2</sup>, gross area 20,531 m<sup>2</sup> on which the Hotel will be constructed, 160 rooms/suites, category: 5 stars.
2. **Villa Opera** - net area 3,205 m<sup>2</sup>, gross area 5,252 m<sup>2</sup> on which the villa will be constructed, 15 apartments, 32 parking places.
3. **Office building** - net area 36,031 m<sup>2</sup>, gross area 7,525 m<sup>2</sup> on which the office building will be constructed.
4. **Underground garage** - net area 18,143 m<sup>2</sup>, gross area 18.782 m<sup>2</sup> on which the garage will be constructed, 468 parking places, 4 underground floors.
5. **Concert and opera hall** - net area 16,099 m<sup>2</sup>, gross area 20,633 m<sup>2</sup> on which the concert and opera hall will be constructed, 1.671 seats for concerts and 1,565 seats for opera events. Project construction could begin in 2013. Overall project cost is EUR 142.5 million, of which EUR 60 million for the concert and opera hall will be financed under a PPP.

#### ***Construction of an elderly home in Žalec***



The purpose of this investment is to provide institutional care for the elderly in the Žalec municipality. In providing this accommodation, the municipality contributes to the implementation of the national programme for social security for the period 2006-2010. The current municipal capacity for the housing of the elderly is insufficient and the current existing demand is high. An area of land is already available for construction.

The main objectives of the investment are:

- To ensure an additional 90 beds with the construction of an elderly home of 3,555 m<sup>2</sup>.
- To assure basic living conditions under which the elderly can stay as long as possible in the local environment where they have spent most of their lives.
- To provide services which will enable a quality of life that is comparable to that of others in the same environment.

- To involve volunteers and other organisations in the provision of services such as assistance for the elderly, food transport and other forms of aid
- To employ new staff thereby decreasing the unemployment rate in the area.

The total investment value is estimated at EUR 5,922,617.

### ***Construction of a bus stop and public parking facilities in the Semič municipality***

The Semič municipality encompasses a total area of 147 km<sup>2</sup> and has a population of 3,782 inhabitants in 47 settlements. In the second half of 2010, the town of Semič had 1,990 inhabitants. The number of residents aged 29 or younger is 591, which represents almost 30% of the settlement's population. In the Semič municipality, residents aged 29 or younger represent 33 % of the population.

With its natural and cultural heritage, the municipality of Semič is becoming an increasingly attractive tourist destination for people who enjoy nature and ethnological customs. Even in the past, the central settlement Semič was an important commercial and cultural centre as evident from the architecturally rich buildings in Semič's centre. Throughout the year numerous cultural and tourist events take place, e. g. Semiška ohceta (traditional wedding ritual), Martinovanje (celebration of St. Martin's Day) and various events are held in Semič's new cultural centre building, elementary school and nursery school, all of which attract people from all over Slovenia and abroad. There are 54 active associations in Semič. The Semič municipality centre is becoming an important local centre and the town of Semič is strengthening and emerging as the municipality's administrative, cultural and economic centre.

Currently, the town of Semič has no public parking facilities for cars. Organised events are very well attended, so the lack of organised parking is a considerable problem. Inadequate transport surfaces and parking facilities represent a major obstacle for Semič in terms of rural development. In the immediate vicinity of the intended investment, the foreseen construction of a convalescent home and commercial business centre will result in an even greater need for additional parking spaces in the settlement. The forecasted number of vehicles for business and manufacturing in the area further attests to the need to build public parking facilities.

The proposed construction of public parking facilities and a bus station is envisaged to deliver the following:

#### Development effects:

- 163 new parking spaces for passenger cars and 5 parking spaces reserved for disabled persons,
- 1 new bus station,
- Improved access to public amenities;
- Improvement of living conditions in the urban centre as well as the surrounding rural communities,
- Completion of development programmes in accordance with which the investment is planned:
  - Strengthening the appeal of an urban centre situated in a rural area,
  - Reinforcement and promotion of public transportation and sustainable forms of mobility,

- Improving overall attractiveness of the settlement.

Social impacts:

- Public parking will be available to residents as well as visitors,
- Accessibility for disabled persons will improve,
- Bus transportation will be more accessible for all residents,
- Increased accessibility for all members of the public, especially for students and senior citizens,
- Improved safety for passengers entering and exiting the bus.
- Increased safety for all passengers, especially for disabled persons, students and senior citizens.
- Overall improvement of living conditions in the settlement.

Environmental effects:

The transport policy of the Republic of Slovenia encourages the development of public passenger transport and requires adequate safety precautions to be in place within the bus station. The construction of the new bus station will increase both the safety and accessibility of the bus service resulting in both increased use of public transportation as well as decreased emissions.

Total estimated investment costs would amount to EUR 600,000 with the financing being provided by the municipality itself, the Ministry of Agriculture, Forestry and Food and other areas of the state budget.

### 1.3. Analysis of the supply side

The Slovene business landscape offers a number of financing sources. However, we find that these institutions are currently hesitant to take on the risks associated with the type of urban development projects that have been identified as part of the study.

The most important suppliers of financing are Retail Banks, which tend to have the highest total assets in their balance sheets. However, their ability to finance new projects has declined in recent years due to the degradation of BASEL II ratios to critical levels. The following table summarises some of the key drivers concerning “supply side” stakeholders.

Figure 18: Overview of the existing sources of financing in Slovenia<sup>10</sup>

	Size of balance sheet, annual investments	Current capacity to provide loan finance to Urban Projects	Commercial or non-commercial focus	Planned activity	Possible market gap
<b>Retail Banks not including SID Bank)</b>	EUR46billion assets, net decrease of financing Slovene market in 2010	LIMITED ability	commercial focus	Squeezing of funds in the future	✓
<b>Public bank (SID Bank)</b>	EUR4billion assets, high net increase of investments in 2010	HIGH ability	commercial & non-commercial	Increasing role	
<b>Public Funds</b>	EUR1billion assets, regular annual investments according to their policies	MEDIUM ability	non-commercial	Maintaining their position	
<b>Private investors</b>	Hard to estimate total equity and financing leverage	LIMITED ability	Commercial	Faced with shortage of equity	✓
<b>Municipalities</b>	Total borrowing potential of only EUR0.7billion and fiscal budget of EUR2billion	LIMITED ability (in most cases)	non-commercial	Further (but limited) boost of investments due to municipal debt limits	✓
<b>Support from ministries</b>	Less than EUR0.5billion support provided	LIMITED ability	non-commercial	Maintaining their position	✓

It should also be mentioned that Slovenia has passed a Resolution on National Development Projects for 2007-2023, which outlines a set of key

<sup>10</sup> The ability to finance projects in this context is defined as the lending capacity/commitments which can be potentially used to finance urban development projects

national development and investments targets. In order to meet these targets, a number of development initiatives are being launched at a nationwide level in relation to the following key areas.<sup>11</sup>

Key areas:

- Development Network of Slovenia (Projects: economic centers, knowledge, and information highway)
- Integration of natural and cultural potentials (sports and tourism infrastructure)
- Effective environmental management (sustainable mobility, sustainable energy)
- Mobility to support economic development (road and rail transport infrastructure)
- Institutional and administrative capacity (modernization of health care and jurisdiction)

The total value of the projects planned as part of the Resolution on National Development Projects is EUR23.3billion, out of which the Slovenian budget provides for EUR 7.2 billion, EUR224million should come from municipal budgets, EUR 1.8 billion is planned from Europe's financial resources, and EUR 14.7 billion is expected from private sources through PPP structures.

### **1.3.1. Financing from the public sector**

#### **1.3.1.1. Public Funds**

In Slovenia there is at the moment a variety of tools focused on the support of development. An overview of the existing funds is presented below.

##### *Eco Fund*

The Eco Fund promotes development in the area of environmental protection. It provides loans for projects as well as advice on economical, financial and technical issues for tackling air and water pollution reduction and waste management. The fund works closely with the Ministry of the Environment and Spatial Planning.

According to the situation on the market, the Eco Fund opened 4 public official invitations for tenders totalling EUR 44 million for:

- Loan financing of environmental investments for legal entities, private entrepreneurs and private individuals in the amount of EUR 20 million.
- Soft loan financing to residents for investments that will be carried out in Slovenia for the installation of modern equipment and systems for heating or preparation of sanitary hot water in the amount of EUR 12 million.
- Non-repayable financial incentives to residents for investments in renewable energy and improved energy efficiency of residential buildings in the amount of EUR 10 million.
- Non-repayable financial incentives for new investments in renewable energy and improved energy efficiency of residential buildings in the amount of EUR 2 million.

##### *Public Fund of Entrepreneurship of the Republic of Slovenia*

The primary aim is to make funds more readily available for small and medium-sized enterprises. It cooperates closely with SID Bank and the EIF,

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<sup>11</sup> Source: Government office for growth

and provides funding in the form of loans, provision of guarantees on loans, grants, and equity financing.

According to the situation on the market, the Fund of Entrepreneurship opened 3 public official invitations for tenders totaling EUR 39.5 million:

- Fund guarantees for bank loans for technology projects with a lower interest rate, representing 80% of the fund value. The tender is intended primarily for SMEs, which fetch knowledge from educational and scientific institutions in the real world of business. The total amount of the tender is EUR 34.5 million.
- After-guarantees for regional guarantee scheme for EUR 1 million – promoting SMS investments at the regional level, where the companies filed for guarantee with “after-guarantee” from the Fund for the participating institutions implementing regional guarantee schemes.
- Grants for start-up companies in technology parks and incubators for EUR 4.1 million (the highest subsidy per company for 3 years is EUR 70,000).

#### *Slovenian regional development fund*

The fund aims to achieve public goals in the areas of business, regional and local infrastructure and farming. It provides loan and capital investments to municipalities, businesses, regional development agencies, and farms. The scope for funded projects ranges from business to farming and agricultural development. Projects include the construction of roads, plumbing projects, utilities, energy projects, etc.

The latest public official invitation for a tender totalling EUR 15.3 million included:

- Soft loans to enterprises and to agricultural processing projects, marketing and complementary activities. Long term loans offering favorable interest rates which are below market rates and a moratorium on the repayment of loan principal. The value of the tender is EUR 6.3 million.
- Soft loans for a total value of EUR 9 million to municipalities for funding projects of local and regional public infrastructure that are majority public owned or will be immediately transferred to the municipality after the completion of the project.

#### *Housing Fund of the Republic of Slovenia*

It promotes the construction of not-for-profit rental apartments and the sale of apartments. Currently the fund is engaged in the sale of apartments in the Brdo area.

According to the situation on the market, the Housing Fund opened 3 public official invitations for tenders totalling EUR 28.4 million for:

- The funding of construction projects and energy renovation of apartment buildings for a total amount of EUR 8 million.
- The program for funding the acquisition of sheltered housing for the elderly, retirement homes and student housing for a total amount of EUR 12 million.
- Co-financing the reconstruction of existing apartment buildings in the old town centres of urban settlements of 3,000 or more inhabitants for a total amount of EUR 8.4 million.

### *Real estate fund for retirement and disability insurance*

The fund owns 2,917 apartments for retired people, 170 serviced apartments for the elderly, 40 areas used by pensioners' societies and clubs, 3 business units, a unit from a retirement home as well as parking areas. The main purpose of this fund is to provide apartments to the elderly for rent and to acquire and sell such property

The last public invitation to tender was for rental housing for retirees and other elderly people in the municipalities of Ljubljana and Medvode.

### *The Farmland and Forest Fund of the Republic of Slovenia*

Its aim is the development of Slovenia's agricultural areas and forests. The fund engages in the purchase and sale of farmland and forests.

### *The Financial Fund for decommissioning of the Nuclear Power Plant Krško*

The aim of this fund is to collect funds needed for the secure storage of nuclear waste and the decommissioning of the Krško nuclear power station. It collects contributions and uses funding to finance the building of centres for the decommissioning of nuclear waste.

## **1.3.1.2. Retail Banks under private ownership (over 51% private ownership)**

The privately owned banks in Slovenia are either owned by large Slovenian companies (Gorenjska banka, Factor banka, KD banka, Probanka etc.) or are subsidiaries of international banking groups (Banka Koper – Intesa Sanpaolo, Hypo Alpe-Adria, Sparkasse, Volksbank, Unicredit, etc.)

The financing of urban development projects is offered through project financing. All of the privately owned Retail Banks offer some type of project financing. They define this as a special form of financing where the future project cash flows represent the only source for debt repayment and the only debt insurance is the project itself. All costs of capital (e.g. interest) are covered by the future cash flows which the project will generate.

The interest rate is dependent on project type and assessment of project attractiveness and feasibility, insurance outside of the project and the share of the investor's own assets committed to the project. An SPV is often created for project execution.

Besides this standard type of project financing, private Retail Banks in Slovenia also offer access to special types of project financing, some of which are described below.

Unicredit offers financing for projects which have urban development characteristics in Slovenia:

- Financing from the EIB  
Project types include industrial investments, infrastructural improvements, environmental protection, efficient use of energy and services including tourism. The loan amount cannot exceed 50% of total project costs and is limited to between EUR 20,000 and EUR 12,500,000. Project duration is limited from 4 to 12 years, but can be extended up to 15 years for special projects.
- Renewable energy source projects

Project financing for solar power plants, wind turbines and biogas plants for investment values above EUR 150,000.

- Infrastructure projects  
Project financing intended for infrastructure construction (sewage, roads, gas pipeline network, public lighting, heating, etc.) and social infrastructure (schools, kindergardens).
- Real estate projects  
Long-term or short-term project financing intended for the development of housing, industrial areas and office locations for investors use or for sale on the market.

Hypo Alpe-Adria bank offers, in addition to project financing, financing in cooperation with other financial institutions including:

- Financing from EIB sources
- Financing of infrastructural projects and financing of SME investments. Financing from SID Bank sources  
Financing of economic growth projects, international expansion, working capital investments, environmental preservation and energy efficiency, urban development
- Financing with guarantees from the Slovenian entrepreneurial fund and Guarantees from the fund with interest rate subsidies and fund guarantees for technological projects. The purpose is to encourage Operations which enable competitive market positioning, market growth and better working capital financing under difficult market conditions

Another bank which offers special purpose financing for urban development project with EIB cooperation is Factor Banka. They offer three different types of financing:

- Financing of environmental investments
- Financing of infrastructural projects
- SME financing

### ***1.3.1.3. Retail Banks under state ownership (over 51% state ownership)***

Similar to the Retail Banks under private ownership, the banks in which the state has a controlling stake (NLB, NKBM, Banka Celje and Pošta Slovenije), offer financing from cooperations with other financial institutions. All of them offer financing in cooperation with SID Bank for the same type of projects as the private Retail Banks. Only Nova Ljubljanska Banka (NLB) additionally offers financing from EIB sources.

NLB offers financing from EIB sources for focusing mainly on SMEs and the following investment types:

- Purchase of assets, land
- Purchase of intangible assets (e.g. costs which are associated with planning and development) directly linked to the investment. If projects are intended for the development of society in general, then labor costs can also be included in the project
- Purchase of working capital assets (materials, semi-products and products, raw materials etc.) which result in business expansion

The value of these projects is capped at EUR 1 million and the credit at EUR 250,000 (up to 50% of eligible costs).

## SID Bank

SID, Slovenska Izvozna in Razvojna Banka, d.d., Slovene Bank for Export and Development (hereinafter: “SID Bank”) was established in 1992 as the Slovene Export Corporation (Slovenska izvozna družba, d.d., Ljubljana) in order to provide insurance and financing of export for Slovene companies. In 2006, SID Bank was transformed into a specialised bank for the promotion of export and development. The bank is wholly owned by the Slovenian State.

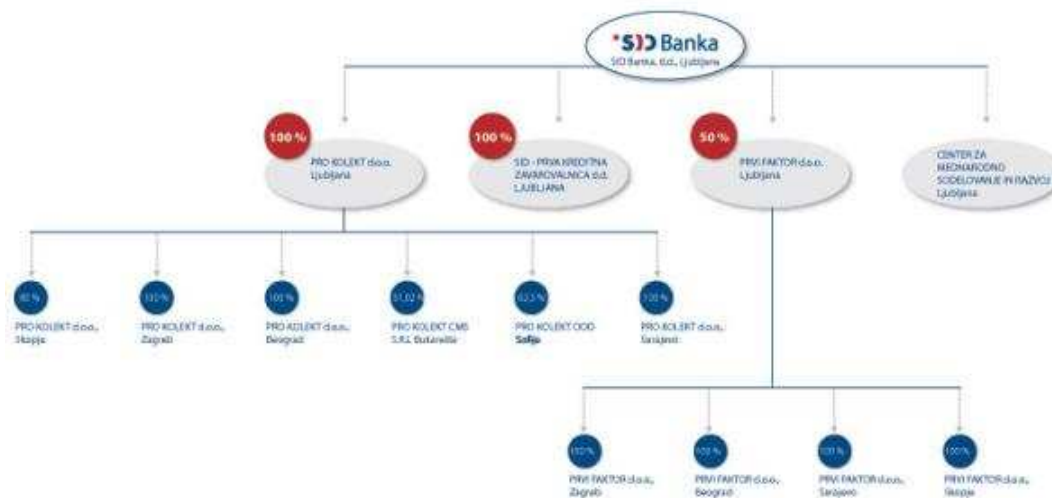
SID Bank deals with the private and public sectors and is meant to complement private sector lending. SID Bank thus provides for financing and insurance of projects, which financial institutions and the private reinsurance market are not willing to cover or have limited capacity to cover. The bank’s range of services includes the provision of Loans, Guarantees, Warranties, Factoring, Financial Leasing, concessionary credits and other forms of financing including grants, subsidies and equity investments. The projects financed or co-financed by SID Bank must be economically viable in accordance with Article 5 of the Slovene Development and Export Bank Act.

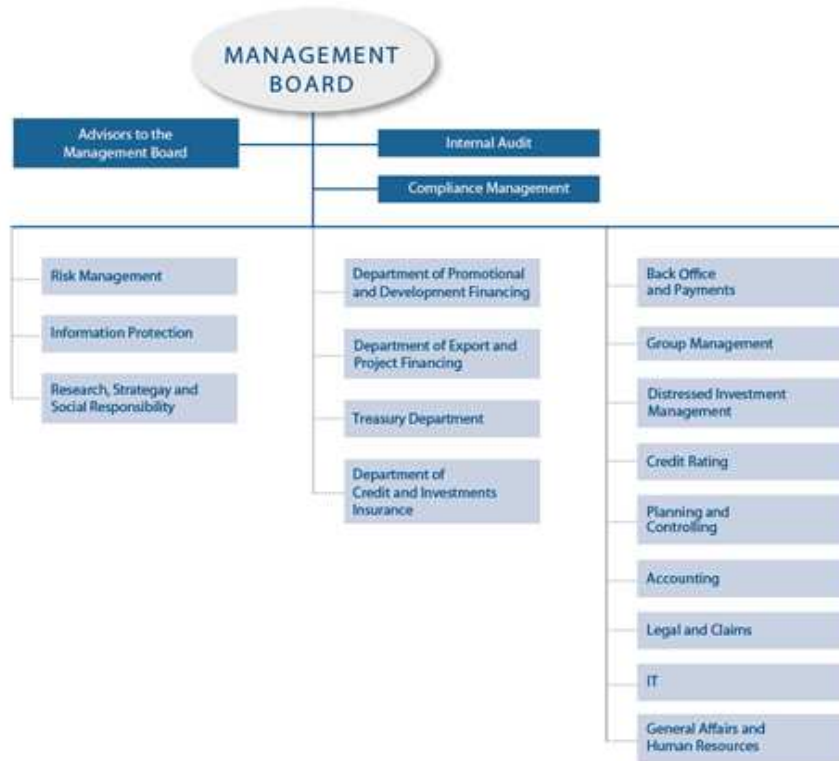
All projects, investments and other forms of financial activities of SID Bank are assessed in terms of their economic, environmental and social quality where international criteria are used and are considered upon a preliminary appraisal of their economic and financial justifiability and their effects on the development of the Republic of Slovenia.

SID Bank is also established, as per Slovene law, for the use and channelling of EU funds for acting in this regard as an agent or an administrator, and for cooperation, in this context, in international incentive programmes and with EU financial institutions.

As per Slovene law, SID Bank’s liabilities must not exceed 50 times its total capital (as at 31 December 2009, the bank’s share capital was EUR 300 million and equity of EUR 322 million).

Figure 19: SID Bank organisation





SID Bank aims to support development on the country, regional and local levels. SID Bank's financing priorities include the development of sustainable communities, regional development, sustainable housing projects, reduction of differences in economic development, development of commercial and public infrastructure, particularly with the aim of improving traffic, municipal and other infrastructures. SID Bank also finances environmental protection projects, waste disposal projects, projects in the field of power supply and renewable energy production as well as international business transactions (as long as the project in question is connected with pre-shipment or post-shipment of international business transactions). SID Bank has also developed a special product for financing environmental investments made by small and medium size enterprises.<sup>12</sup>

SID Bank may either directly finance projects, refinance credits of banks and other financial institutions, or co-finance transactions and investments. SID Bank finances these projects through Retail Banks. Within the framework of SID Bank's supply of additional financing for the economy, companies can

<sup>12</sup> SID Bank's organisation includes a Ljubljana-based wholly-owned subsidiary (SID – Prva kreditna zavarovalnica d.d. a specialized credit insurance company), Pro Kolekt, d.o.o. Ljubljana, a debt collection company in which SID Bank holds a 100% ownership share and which has six affiliated companies (Pro Kolekt d.o.o. Zagreb, Croatia, Pro Kolekt d.o.o. Skopje, Macedonia, Pro Kolekt d.o.o. Belgrade, Serbia, Pro Kolekt CMSB S.R.L., Bucharest, Romania, Pro Kolekt SOFIA EOOD, Sofia, Bulgaria and Pro Kolekt d.o.o., Sarajevo, Bosnia and Herzegovina); a joint venture with PRVI FAKTOR, faktoring družba, d.o.o., Ljubljana, Slovenia, a factoring company in which SID Bank holds a 50% ownership share and which has four affiliated companies (Prvi faktor d.o.o., Zagreb, Croatia, Prvi faktor d.o.o., Belgrade, Serbia, Prvi faktor d.o.o., Sarajevo, Bosnia and Herzegovina, and Prvi Faktor d.o.o. Skopje, Macedonia), and the Centre for International Cooperation and Development, Ljubljana, public institute for business and entrepreneurial consulting.

thus acquire bridge financing and supplementary financing from Retail Banks included in the scheme.

Since the resources are available under market conditions through Retail Banks, the scheme does not raise State aid risks, provided that Retail Banks included in the scheme are selected upon a transparent public procurement procedure. The final users may be companies, entrepreneurs and public entities with headquarters in the Republic of Slovenia. Resources can be used for financing up to 80% of the investment and/or required current assets of the final user.

SID Bank has currently implemented a program for the co-financing of infrastructure and environmental projects of municipalities (Sofinanciranje infrastrukturnih in okoljevarstvenih projektov občin - RSP-O-EIB/CEB/SID 1111). The program is aimed at providing additional instruments which are tailor made to the special requirements of municipalities in the field of urban development. The program will be implemented in cooperation with Retail Banks (co-financing), the EIB and CEB to a total amount of up to EUR 100 million.

The key elements of the program are:

- Financing of infrastructure and environmental projects of municipalities
- Co-financing of municipalities from SID Bank and the Retail Banks in the form of long term special purpose loans
- The finance of projects where the total costs are in the range of EUR 250.000 and EUR 25 million
- The loan maturity is between 5 to 25 years
- The interest rate is formed as a weighted interest rate of the loan from SID Bank and the Retail Bank
- The financing will be made available until the end of 2013 or until all means have been exhausted
- The application form is submitted separately by the municipality and the Retail Bank.

In SID Bank's opinion, the program is not a substitute for JESSICA FIs in Slovenia but instead could create synergies between the two programs in the financing possibilities of infrastructural and environmental projects for municipalities.

### **1.3.2. Role of government support**

The Slovenian government supports the financing of regional development through various Ministries.

#### *Ministry of Infrastructure and Spatial Planning*

Its aim is to promote and coordinate efforts towards sustainable development, taking care of social welfare based on the wise and efficient use of natural resources. The Ministry also seeks to increase corporate concern for preserving the natural balance and biodiversity in the country in the belief that biodiversity is an important heritage for future generations. The Ministry oversees the spatial development of cities, villages and markets in order to maintain and develop the quality of the architectural and urban heritage and cultural landscapes and contribute to the area's economic, social and cultural development.

Recent examples of projects which received support from the Ministry of the Environment totalling EUR 250.2 million include:

- The implementation of environmental projects in waste collection and the treatment of wastewater and drinking water in conjunction with the implementation of municipal and state utilities for EUR 50 million.
- Co-financing of environmental NGOs for the years 2010 and 2011 in the amount of EUR 280.000.
- Construction and maintenance of water infrastructure to prevent water damage, modernization and improvement of legislation on flood defenses, measures to adapt the climate change and water regime. Total amount of the tender was EUR 15 million.
- Implementation of measures to provide security against floods, and increase flood safety in particular urban areas; implementation of the OP DETI - an area of water management. The total amount of the tender was EUR 185 million.

#### *Ministry of Education, Science, Culture and Sport*

The Ministry of Education, Science, Culture and Sport governs the areas of pre-school education and primary, secondary, and higher education, science, research, sport, and creativity, art, culture, cultural heritage, media, the information society, electronic communications, the Slovenian language and religious communities.

Recent examples of projects which received from the Ministry in the amount of EUR 51 million include:

- Co-financing the R&D projects of R&D organisations to gain new knowledge and to develop new, modified and improved products, processes or services by co-financing the costs of industrial research for companies and R&D organisations. The total project value was EUR 2.5 million.
- Co-financing the Slovenian part of international research and development projects for projects that are approved by the international evaluation of Eurostars for EUR 0.5 million.
- Incentives to companies in international consortia for research and development. The aim is to encourage Slovenian companies to actively cooperate with international companies and institutions in the fields of research, technology development and innovation in order to transfer leading-edge knowledge. The project also aims to support at least 20 new research and development projects and to increase the number of new jobs in the company. The total value of the project was EUR 3 million.
- A public tender for the co-implementation of comprehensive programs of competent centers which include: the management and development of competence centres and execution of joint research and development projects, and industrial research and experimental development aimed at developing new technological solutions and new products, services and processes for a total amount of EUR 5 million.

#### *Ministry of Foreign Affairs*

The Ministry of Foreign Affairs represents the Republic of Slovenia in other countries and international organisations. The Ministry monitors international political and economic relations and develops Slovenia's relations with other countries and international organisations. In accordance with the Law on Foreign Affairs, the Ministry participates in procedures for concluding international treaties and promotes and coordinates international cooperation in the political, economic, educational, cultural, scientific/technical and other

areas. It also protects the interests of the Republic of Slovenia and its citizens and legal entities abroad.

Recent examples of activities which received support from the Ministry in the amount of EUR 100,000, include:

- The co-financing of activities for Slovenian NGOs using European Commission instruments to fund external assistance. NGO projects that received Co-financing were in 2010 included the implementation of the following instruments:
  - DCI - Non State Actors and Local Authorities
  - DCI - Food Security
  - DCI - Investing in People
  - DCI - Environment and Sustainable Management of Natural Resources
  - DCI - Asylum and Migration
  - European Instrument for Democracy and Human Rights (EIDHR)
  - European Neighborhood and Partnership Instrument (ENPI)
  - Instrument for Humanitarian Aid.

### **1.3.3. Municipalities own financial resources – fiscal budget**

Since municipalities can be seen to provide the majority of investments in urban development projects, we need to take a closer look at both the potential and limitations of municipalities' own fiscal and financial resources. As at 2010, the 211 municipalities had a total of EUR 733 million of debt which represented 44% of their annual budget. The law stipulates that each individual municipality has a limit on the amount of debt it can normally carry in its books and this debt level is set at 8% of the total budget. Since support from JESSICA FIs could potentially be provided by way of a loan to a municipality with prospective projects, this legal financing ceiling for municipalities means that municipalities approaching the debt threshold could be limited in the number of investment projects they could carry out.

We calculated the loan potential in accordance with the methodology of the Ministry of Finance (based on the law of financing municipalities Art. 123/66; 10b) which sets their maximum indebtedness ratio at 8%.

*Indebtedness ratio = Annual debt obligation / Total revenues - (grants + transfers + EU Assets)*

When calculating loan potential, we assumed that revenues will remain unchanged and the loan would be amortized over 15 years. We estimated that there is a possibility of borrowing an additional EUR 674 million for JESSICA projects. However, this figure represents the optimum scenario where every municipality borrows up to the 8% ceiling which in practice will never occur. Some municipalities do not have any debt, while some already have a debt level close to the borrowing limit. The analysis made municipality by municipality revealed further limitations to providing loan financing to municipalities such as Celje, Koper, etc. Unfortunately, these municipalities also have a strong pipeline of projects both in terms of size and quantity which could lead to delays in some urban development projects as their current debt levels do not allow them to take on new loans for the financing of these projects.

Figure 20: An estimate of aggregate new loan potential from municipalities within the 8% financing limit

Parameter	Amount in EUR
Debt liabilities from municipalities	555,825,908
Debt liabilities from legal entities owned by municipalities	177,688,054
Municipalities' total debt	733,513,962
Adjusted Revenue of municipalities in 2009	1,648,598,508
Debt/revenue ratio	44%
Annual debt obligation in 2010	45,313,383
Long-term interest payments in 2010	7,642,885
Other obligations (guarantees, leases, etc.) in 2010	23,782,920
Annual total obligation	76,739,187
Indebtedness Ratio	4.65%
MF maximum indebtedness	8.00%
Difference between indebtedness ratio and maximum limit	3.35%
Unused maximum loan limit	58,486,343
<b>Loan potential (duration of 15 years)</b>	<b>674,842,421</b>

Figure 21: Indebtedness by municipality

Municipality	Municipal Revenue (€) 2010	Total debt in 2010 (€)	Annual debt obligation (€)	MF indebtedness ratio in %	unused max loan limit (€)	Loan potential (15 years) (€)
OBČINA AJDOVŠČINA	15.490.962,63	1.278.318,87	325.310,22	2,10	913.966,80	13.709.501,93
OBČINA BOHINJ	6.352.754,80	1.163.894,77	113.714,31	1,79	394.506,07	5.917.591,10
OBČINA BOVEC	4.698.696,68	518.083,39	165.863,99	3,53	210.031,74	3.150.476,12
OBČINA BRDA	4.851.125,83	1.177.296,93	144.563,55	2,98	243.526,52	3.652.897,75
OBČINA BREZOVICA	7.476.197,13	2.000.000,00	499.409,97	6,68	98.685,80	1.480.287,03
OBČINA BREŽICE	21.131.098,53	4.223.833,49	777.624,43	3,68	912.863,46	13.692.951,85
MESTNA OBČINA CELJE	43.913.092,00	16.740.283,65	3.495.482,12	7,96	17.565,24	263.478,55
OBČINA CERKNO	5.024.109,52	928.983,71	149.718,46	2,98	252.210,30	3.783.154,47
OBČINA ČRNA NA KOROŠKEM	3.523.327,00	2.145.606,83	260.373,87	7,39	21.492,29	322.384,42
OBČINA DESTRIK	2.004.925,36	598.220,27	137.938,86	6,88	22.455,16	336.827,46
OBČINA DIVAČA	4.049.647,67	1.647.822,00	126.349,01	3,12	197.622,81	2.964.342,09
OBČINA DOBRNA	3.055.462,84	1.261.419,73	118.246,41	3,87	126.190,62	1.892.859,23
OBČINA DOBROVA-POLHOV GRAD	5.610.367,05	2.500.000,00	264.809,32	4,72	184.020,04	2.760.300,59
OBČINA DOMŽALE	25.830.761,64	2.755.970,36	433.956,80	1,68	1.632.504,14	24.487.562,03
OBČINA DUPLEK	4.454.190,10	2.763.618,55	285.513,59	6,41	70.821,62	1.062.324,34
OBČINA GROSUPLJE	14.091.734,00	4.900.197,70	787.727,93	5,59	339.610,79	5.094.161,84
OBČINA HAJDINA	3.179.165,72	1.816.766,53	229.853,68	7,23	24.479,58	367.193,64
OBČINA HOČE-SLIVNICA	7.505.160,00	4.000.000,00	487.084,88	6,49	113.327,92	1.699.918,74
OBČINA IG	5.230.246,92	774.523,85	256.282,10	4,90	162.137,65	2.432.064,82
OBČINA ILIRSKA BISTRICA	10.800.314,97	4.048.676,26	707.420,63	6,55	156.604,57	2.349.068,51
OBČINA IZOLA	14.074.931,00	7.318.934,13	458.842,75	3,26	667.151,73	10.007.275,94
OBČINA KIDRIČEVO	5.637.718,70	2.180.023,30	333.752,95	5,92	117.264,55	1.758.968,23
OBČINA KOMEN	3.266.787,70	2.500.004,00	191.433,76	5,86	69.909,26	1.048.638,85
OBČINA KOMENDA	6.279.358,47	2.654.175,00	237.987,69	3,79	264.360,99	3.965.414,87
MESTNA OBČINA KOPER	54.301.741,54	38.750.000,00	3.877.144,35	7,14	466.994,98	7.004.924,66
OBČINA KOSTEL	963.550,00	842.687,96	76.698,58	7,96	385,42	5.781,30
OBČINA KRŠKO	30.488.745,03	17.058.363,89	1.911.644,31	6,27	527.455,29	7.911.829,34
OBČINA KUZMA	1.521.955,84	733.115,91	121.452,08	7,98	304,39	4.565,87
OBČINA LAŠKO	12.033.545,49	3.448.076,51	930.193,07	7,73	32.490,57	487.358,59
OBČINA LENART	8.021.405,22	6.512.868,20	580.749,74	7,24	60.962,68	914.440,20
OBČINA LITUA	11.720.467,79	3.233.333,40	658.690,29	5,62	278.947,13	4.184.207,00
MESTNA OBČINA LJUBLJANA	357.462.596,18	127.788.365,38	21.269.024,47	5,95	7.327.983,22	109.919.748,33
OBČINA MAKOLE	1.767.948,15	674.280,56	104.308,94	5,90	37.126,91	556.903,67
MESTNA OBČINA MARIBOR	89.220.239,17	26.808.911,67	3.836.470,28	4,30	3.301.148,85	49.517.232,74
OBČINA MENGES	5.277.443,25	600.000,00	80.744,88	1,53	341.450,58	5.121.758,67
OBČINA MEŽICA	2.480.275,00	648.580,83	146.832,28	5,92	51.589,72	773.845,80
OBČINA MOKRONOG-TREBELNO	3.240.722,32	800.000,00	110.184,56	3,40	149.073,23	2.236.098,40
MESTNA OBČINA MURSKA SOBOTA	14.974.441,35	5.047.024,81	627.429,09	4,19	570.526,22	8.557.893,23
OBČINA MUTA	2.956.888,90	944.020,27	180.074,53	6,09	56.476,58	847.148,67
MESTNA OBČINA NOVO MESTO	29.804.514,55	7.545.530,61	1.320.339,99	4,43	1.064.021,17	15.960.317,54
OBČINA OPLOTNICA	2.796.133,98	1.420.691,55	210.828,50	7,54	12.862,22	192.933,24
OBČINA PIVKA	6.604.771,46	2.793.882,52	394.304,86	5,97	134.076,86	2.011.152,91
OBČINA PODČETRTEK	3.652.209,00	2.181.385,82	191.740,97	5,25	100.435,75	1.506.536,21
OBČINA POLZELA	4.472.570,35	1.339.702,14	213.341,61	4,77	144.464,02	2.166.960,33
OBČINA POSTOJNA	13.334.185,51	7.037.666,98	638.707,49	4,79	428.027,35	6.420.410,32
OBČINA PREVALJE	5.134.283,99	636.962,51	287.006,48	5,59	123.736,24	1.856.043,66
MESTNA OBČINA PTUJ	22.430.545,43	10.893.780,39	1.045.263,42	4,66	749.180,22	11.237.703,26
OBČINA PUČONCI	5.361.626,08	1.410.863,23	123.317,40	2,30	305.612,69	4.584.190,30
OBČINA RADLJE OB DRAVI	5.368.267,72	1.880.813,37	267.339,73	4,98	162.121,69	2.431.825,28
OBČINA RADOVLJICA	16.012.887,32	3.156.499,33	1.167.339,49	7,29	113.691,50	1.705.372,50
OBČINA RAVNE NA KOROŠKEM	9.537.568,13	2.622.826,03	605.635,58	6,35	157.369,87	2.360.548,11
OBČINA REČICA OB SAVINJI	1.688.862,71	352.965,28	41.883,80	2,48	93.225,22	1.398.378,32
OBČINA RIBNICA NA POHORJU	1.060.087,54	660.194,48	68.163,63	6,43	16.643,37	249.650,62
OBČINA RUŠE	5.788.560,97	2.597.605,51	241.382,99	4,17	221.701,89	3.325.528,28
OBČINA SELNICA OB DRAVI	3.580.204,79	200.000,00	44.752,56	1,25	241.663,82	3.624.957,35
OBČINA SEVNICA	14.841.140,65	6.388.744,40	1.087.855,61	7,33	99.435,64	1.491.534,64
MESTNA OBČINA SLOVENJ GRAD	27.644.804,37	4.323.037,09	1.849.437,41	6,69	362.146,94	5.432.204,06

The total demand of all urban development projects is almost EUR 4 billion, so it follows that the municipalities' own fiscal resources and loan financing will most likely not suffice. However, JESSICA FIs could take equity stakes or provide loan financing to PPPs or directly to project promoters.

## **1.4. Context of Operational Programmes SRDP and DETI**

### **1.4.1. Overview of the institutional framework for the implementation of the SF allocation to Slovenia**

For the EU Cohesion Fund and both EU Structural funds, the institutional structure in Slovenia currently in place consists of a Managing Authority, a Certifying Authority, Intermediate Bodies, bodies for tender implementation, and bodies for project implementation.

The function of the Managing Authority of Cohesion and Structural Funds for Slovenia, in the sense of the first paragraph of Article 59 of Council Regulation (EC) No 1083/2006<sup>13</sup>, is performed by the MEDT.

The Certifying Authority in Slovenia is the Ministry of Finance and National Fund, while the Audit Authority is the Budget Supervision Office of the Slovene Ministry of Finance.

The Managing Authority is responsible for managing and implementing the relevant Operational Programme for Slovenia in accordance with the principle of sound financial management. This entity is obliged to establish a system of implementation as defined in the provisions of Regulation 1083/2006 and of the implementing ordinance. Within this framework, the Managing Authority (or the intermediary body into which the authority was vested by the Managing Authority) is responsible for:

1. Compliance of EU co-financed activities with provisions of the applicable Operational Programme and other relevant EU and Slovenian regulations;
2. Establishing a system for both administrative and on-site control along with reporting of irregularities;
3. Setting up a system for monitoring and evaluation and for reporting to other institutions involved in the implementation, especially to the Certifying and Audit Authorities;
4. Setting up a system of information and publicity, as indicated in Article 69 of Regulation 1083/2006;
5. Setting up and managing a Monitoring Committee, which can be involved with more than one Operational Programme, and providing for its administrative and technical support
6. Ensuring that the control system has been set up and is functioning, that the expenditure declared has actually been incurred, that the products and services have been delivered in line with the approval decision, that the applications for beneficiary reimbursement are correct and that the Operations and expenditures are consistent with both EU and national regulations<sup>14</sup>.

<sup>13</sup> Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999, OJ L 210 of 31 July 2006, p. 25.

<sup>14</sup> Operational Programme of Environmental and Transport Infrastructure Development for the period 2007 – 2013, pp. 133 – 137; Operational Programme for Strengthening Regional Development Potentials for Period 2007 – 2013, pp. 122 – 125.

According to article 13 of the Commission Regulation (EC) 1828/2006/EC<sup>15</sup>, supervision of the implementation of the scheme for using EU resources in Slovenia is exercised by either the Managing Authority or, in case the Managing Authority entrust such bodies with powers of control, an Intermediate Body.

The Intermediate Bodies, in accordance with Article 42 of the Regulation 1083/2006 and in the context of the **Operational Programme for Strengthening Regional Development Potentials for the Period 2007 – 2013** (which forms part of the Slovene national Strategic Reference Framework), are the Managing Authority and the Ministry of Education, Science, Culture and Sport. The role of the Intermediate Bodies depends on their respective development priority. The Operational Programme is the basis for the allocation of funds and is consistent with the National Strategic Reference Framework (NSRF), and coordinated with other funds, with the European Investment Bank funds and other existing financial instruments.

The Intermediate Bodies, in accordance with Article 42 of the Regulation 1083/2006 and in the context of **the Operational Programme of Environmental and Transport Infrastructure Development for the period 2007 – 2013** (which forms part of the Slovene national Strategic Reference Framework), are the Managing Authority and Ministry of Infrastructure and Spatial Planning. The role of the Intermediate Bodies depends on the respective development priority. The Operational Programme is the basis for the allocation of funds, and is consistent with the National Strategic Reference Framework (NSRF), and coordinated with other funds, with the European Investment Bank funds and other existing financial instruments.

The bodies responsible for carrying out public tenders are ministries, government agencies or funds under whose domain the tender that is to be implemented falls. The bodies implementing and executing projects are beneficiaries of the tenders which includes companies, municipalities, non-governmental organisations and ministries.

#### *Co-financing*

Slovenia is contributing 15% of co-financing while the remaining 85% comes from EU funds. This is based on Contribution from the Funds, Article 53 of the COUNCIL REGULATION (EC) No 1083/2006 of 11 July 2006, laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999 which states:

*1. The contribution from the Funds, at the level of Operational Programmes, shall be calculated with reference to:*

*(a) either the total eligible expenditure including public and private expenditure;*

*(b) or the public eligible expenditure.*

*2. The contribution from the Funds at the level of Operational Programmes under the Convergence and Regional competitiveness and employment objectives shall be subject to the ceilings set out in Annex III.*

*3. For Operational Programmes under the European territorial cooperation objective in which at least one participant belongs to a Member State whose average GDP per capita for the period 2001 to 2003 was below 85 % of the EU-25 average during the same period, the contribution from the ERDF shall*

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<sup>15</sup> Commission Regulation (EC) No 1828/2006 of 8 December 2006 setting out rules for the implementation of Council Regulation (EC) No 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and of Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund, OJ L 45 of 15 February 2007.

not be higher than 85 % of the eligible expenditure. For all other Operational Programmes, the contribution from the ERDF shall not be higher than 75 % of the eligible expenditure co-financed by the ERDF.

ANNEX III

**Ceilings applicable to co-financing rates**  
(referred to in Article 53)

Criteria	Member States	ERDF and ESF Percentage of eligible expenditure	Cohesion Fund Percentage of eligible expenditure
(1) Member States whose average GDP per capita for the period 2001 to 2003 was below 85 % of the EU-25 average during the same period.	Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Slovenia, Slovakia	85 % for the Convergence and Regional competitiveness and employment objectives	85 %

### 1.4.2. Two Operational Programmes

Slovenia has three Operational Programmes, but only two of these were considered particularly relevant for eligibility of JESSICA FIs and were selected for more detailed analysis<sup>16</sup>:

#### **Operational Programme of Environmental and Transport Infrastructure Development (OP DETI)**

Operational Programme of Environmental and Transport Infrastructure Development represents the implementation document for drawing on the resources mainly from the Cohesion Fund but also from the European Fund for Regional Development.

In the framework of the Operational Programme Slovenia has negotiated over 1.6 billion Euros which is almost 40 percent of all the negotiated funds of Slovenia for the period 2007–2013. These funds will finance the environmental projects in waste management, collection and treatment of urban waste water, drinking water supply reducing water damages, in sustainable use of energy and renewable energy sources and transport infrastructure projects, railway infrastructure, road and maritime infrastructure and airport infrastructure.

The main goal of the OP is to improve the infrastructure in the Republic of Slovenia. This goal will be accomplished by providing conditions for growth and sustainable mobility, improving the quality of the environment and constructing suitable and sustainable infrastructure. At the same time the programme will help to attain one of the core objectives defined in the NSRF, namely ensuring balanced regional development over the whole country.

The Operational Programme is divided into 7 priority axes: 3 focusing on transport, 3 on the environment and 1 for Technical Assistance. One half of Cohesion Fund assets will be allocated to the transport sector and the other half to the environmental sector and the area of sustainable use of energy.

<sup>16</sup> Third OP for Human Resource Development draws funds from Cohesion Fund in full and does not deal with urban development at all, so it is excluded from the analysis.

The financial allocation of EU assets and the national participation for the OP DETI is shown in the table below.

Figure 22: OP DETI sources of financing by development priorities in EUR

PRIORITY	EU ASSETS	NATIONAL PARTICIPATION	TOTAL	UNUSED FUNDS
1. Railway infrastructure (CF-public)	449.567.581	79.335.456	528.903.037	
2. Road and port infrastructure (CF-public)	220.930.911	39.987.808	259.918.719	
3. Transport infrastructure (ERDF-public)	165.529.886	29.211.158	194.741.044	
4. Management of municipal waste (CF-public)	155.568.426	27.453.252	183.021.678	
5. Environment protection-water sector (CF-public)	392.923.166	69.339.383	462.262.549	
6. Sustainable use of energy (CF-public)	159.886.553	28.215.275	188.101.828	
7. Technical assistance (CF-public)	32.693.221	5.769.392	38.462.613	
<b>TOTAL</b>	<b>1.577.099.744</b>	<b>279.311.724</b>	<b>1.855.411.468</b>	<b>TBD</b>

Source: Operational Programme of Environmental and Transport Infrastructure Development of Slovenia, 2007-2013

### Operational Programme for Strengthening Regional Development Potentials (OP SRDP)

Operational Programme for Strengthening Regional Development Potentials (SRDP) represents the implementation document for drawing on the funds from the European Regional Development Fund (ERDF) which is primarily focused on strengthening development opportunities with the objective of promoting competitiveness of the entire economy and reducing development differences between the Slovenian regions. Slovenia has 1.7 million Euros at its disposal in the framework of the OP which is about 40 percent of all the available funds for the period 2007–2013.

Development initiatives are focused on the projects of general infrastructure, innovations and investments the emphasis being on competitiveness, creation and preservation of sustainable jobs and insurance of sustainable development.

The priority axes are competitiveness and research excellence, economic development infrastructure, integration of natural and cultural potentials, development of regions and technical assistance. The framework of the implementation of the Operational Programme foresees the principle of sustainable development, emphasis being on the environmental dimension, and the principle of equal opportunities.

The financial allocation of EU assets and the national participation for the OP SRDP is shown in the table below.

Figure 23: OP SRDP sources of financing by development priorities in EUR

PRIORITY	NATIONAL		TOTAL	UNUSED FUNDS
	EU ASSETS	PARTICIPATION		
1. Competitiveness and research excellence (ERDF-public)	598.116.998	105.550.059	703.667.057	
2. Economic/development infrastructure (ERDF-public)	269.451.040	47.550.184	317.001.224	
3. Integration of natural and cultural potentials (ERDF-public)	253.235.116	44.688.552	297.923.668	
4. Development of regions (ERDF-public)	619.442.634	109.313.408	728.756.042	
5. Technical assistance (ERDF-public)	28.003.734	4.941.836	32.945.570	
<b>TOTAL</b>	<b>1.768.249.522</b>	<b>312.044.039</b>	<b>2.080.293.561</b>	<b>TBD</b>

Source: Operational Programme for Strengthening Regional Development Potentials, 2007-2013

### 1.4.3. JESSICA FI & Operational Programmes fit

The National Strategic Reference Framework 2007-2013 (NSRF), the Operational Programme “Strengthening Regional Development Potentials” 2007-2013 (“OP SRDP”) and the Operational Programme “Development of Environment and Transport Infrastructure” 2007-2013 (“OP DETI”) include several measures relevant to sustainable urban development which are compliant with the Spatial Development Strategy of Slovenia (“SDSS”). The use of financial engineering instruments for urban development is not specified in the OPs except for a small allowance for the use of investment fund type vehicles, loans, guarantees, etc. The MA is advised to consult the European Commission on this issue as soon as possible if considering the use of JESSICA FIs during the current period. In the same way that it has been successfully undertaken in other regions of Europe, a change of the OPs may therefore be required in order to better support the establishment of JESSICA FIs in the current Programming Period. In addition, the Slovene Decree on the implementation of procedures for the use of the EU Cohesion Policy funds in the Republic of Slovenia in the programming period 2007-2013 refers, with regard to financial engineering instruments, to EU Regulations 1083/2006 and 1828/2006.

JESSICA, Joint European Support for Sustainable Investment in City Areas, has been developed by the European Commission and the European Investment Bank (EIB), in collaboration with the Council of Europe Development Bank (CEB). Member States are being given the option of using some of their EU grant funding, so-called Structural Funds, to make repayable investments in projects forming part of an integrated plan for sustainable urban development. These investments, which may take the form of equity, loans and/or guarantees, are delivered to projects via Urban Development Funds and, if required, Holding Funds.

JESSICA FIs can support urban development projects which are eligible under OP SRDP and OP DETI. In order to assess the scope (amount and EUR size) of projects which have already been covered by grants and in which areas there is the highest demand for financing, we have analyzed OPs in relation to JESSICA FIs selection. This analysis resulted in a cross-sectional matrix which was also used in communication with potential investors to obtain concrete feedback on the type of projects planned.

The matrices illustrate the areas of eligible projects that may be supported by JESSICA FIs under the two Operational Programmes. All development

priorities and priority guidelines of OP SRDP contain elements of urban development which correspond with criteria for support from JESSICA FIs. Within OP DETI only two development priorities are feasible for use via JESSICA FIs as is shown in the table below. Project types to be supported by JESSICA FIs are defined in 7 groups which are described in more detail below and are given as examples of existing projects with best match of OPs to JESSICA FIs.

Area of OP's			Area of Jessica							
OP	Development priority	Preferred orientation	1 Infrastructure	2 Tourism and culture	3 Rehabilitatio	4 Office spaces	5 Universities	6 Energy	7 Public building	
SRDP	1.	1.1.								
		1.2.								
	2.	2.1.								
		2.2.								
		2.3.								
		2.4.								
	3.	3.1.								
		3.2.								
		3.3.								
	4.	4.1.								
		4.2.								
	DETI	3.	3.1.							
			3.2.							
		6.	6.1.							
			6.2.							
			6.3.							

**Legend:**

	No overlap; not eligible for Jessica
	High cross-section between OP and Jessica criteria; many elements of integrated sustainable urban development

SRDP	1	<b>Competitiveness of companies and research excellence</b>
		1.1. Encouraging competitive potential of enterprises and research excellence
	1.2. Encouraging entrepreneurship	
	2	<b>Economic development infrastructure</b>
		2.1. Economic-development-logistic centres
		2.2. Information society
		2.3. Educational-research infrastructure
	2.4. Network of emergency medical	
	3	<b>Integration of natural and cultural potentials</b>
		3.1. Increasing of tourism competitiveness
		3.2. Networking of cultural potentials
	3.3. Sports-recreational infrastructure	
	4	<b>Development of regions</b>
		4.1. Regional development programmes
	4.2. Development of border areas with Croatia	
	DETI	3
3.1. Road sector		
3.2. Aviation and airport infrastructure sector		
6		<b>Sustainable use of energy</b>
		6.1. Energy restoration and sustainable construction of buildings
		6.2. Efficient use of electrical energy
	6.3. Innovative measures for local energy supply	

There is considerable demand in Slovenia for urban development projects, primarily in urban infrastructure and also in tourism infrastructure. The key investors in these projects are all municipalities, with the private sector covering around 20% of the total project scope. There is a good fit between existing OPs and JESSICA criteria, so there is already a foundation for JESSICA within existing OPs.

The following section describes project types that may be suitable for support from JESSICA FIs in Slovenia using examples of existing projects which were confirmed for EU grants. Most of these projects were confirmed during the years 2007-2011.

**1. Urban infrastructure (transport, water/waste water, energy, etc):**

Infrastructure projects in urban areas (transport, water supply, sewerage, telecommunications, energy ...).

Examples of existing projects:

- OP SRDP 1.1. System for management, logistic and automation of public transport
- OP SRDP 2.2. Construction, Operation and maintenance of open broadband network of electronic communications within municipality Krško.
- OP SRDP 4.1. Arrangement of streets and public spaces in the old town of Lendava
- OP SRDP 4.2. Arrangements for local roads Podčetrtek – Sodna vas
- OP DETI 3.1. Cycling connection Jesenice-Lesce-Bled
- OP DETI 3.2. Modernization of airport infrastructure at the Maribor airport

## **2. Tourism and cultural objects**

Buildings of heritage or cultural facilities are important for tourism and other sustainable uses. Meeting these criteria are: construction and renovation of tourism infrastructure, development of management structures, reconstruction and rehabilitation, comprehensive revitalization and modernization of public monuments and cultural infrastructure.

Examples of existing projects:

- OP SRDP 3.1. Reconstruction, renovation and expansion of hotel capacities
- OP SRDP 3.2. Maribor castle - the renovation and refurbishing of the museum
- OP SRDP 4.1. Tourism and cultural infrastructure in Odranci

## **3. Redevelopment of Brownfield sites**

Remediation of problem areas, including cleaning and decontamination ("Brownfield" projects).

Example of existing project:

- OP SRDP 4.1 Renovation of city centre in an urban area of degraded mining in Trbovlje

## **4. Office space**

Office spaces for small and medium-sized companies and enterprises in the field of computer science and/or research and development. Business, industrial and logistics and development areas of national importance, technological parks, business incubators, university (higher education) and technology transfer offices.

Examples of existing projects:

- OP SRDP 1.1. Technology centre for automation, robotics and computerization of production
- OP SRDP 1.2. There is no case of project yet, but content of OP allows for "Help to SMEs with debt resources."
- OP SRDP 2.1. Building a business-education centre in Škofja Loka
- OP SRDP 4.1. Economic Development – business incubator

## **5. University buildings**

Investments in essentially "not-for-profit" infrastructures, including the renovation and equipment of higher education and research institutions of national importance and specialised facilities including medical, biotech facilities and others.

Examples of existing projects:

- OP SRDP 2.3. New construction of Faculty of Medicine, University of Maribor
- OP SRDP 4.1. Incubator of the University in Nova Gorica

## 6. Energy efficiency improvements

Energy renovation of buildings, efficient use of electricity, innovative measures for local energy supply.

### Examples of existing projects:

- OP SRDP 1.1. Information system for effective energy management in buildings
- OP DETI 6.1. Energy restoration of facilities in the Maribor University Medical Centre
- OP DETI 6.2. The introduction of contemporary and environmentally acceptable electrical devices for the reduction of electricity consumption
- OP DETI 6.3. Expansion of district heating on wood biomass in Železniki

## 7. Public buildings

Public buildings (kindergartens, schools, health centres, sports and recreational facilities, community centres)

### Examples of existing projects:

- OP SRDP 2.4. There is no case of project yet, but content of OP allows for “Investments in health infrastructure, i.e. build a network of emergency medical facilities”
- OP SRDP 3.1. Youth cultural center and hotel in Radlje)
- OP SRDP 3.3. Construction of a gymnasium, in Češča vas
- OP SRDP 4.1. Construction of a kindergarten in Ribnica

Investments potentially undertaken through JESSICA FIs revolving instruments for urban development do not necessarily need to be geographically prioritized because of the polycentric approach to economic and spatial development in Slovenia, even development of regions, nationwide support of sustainable use of energy, transport infrastructure, and the balanced approach within the Operating Programmes.

## **1.5. Integrated Plans for Sustainable Urban Development (IPSUD)**

Point 3.3.3 of COCOF Note 3 states that:

*“The Structural Funds’ regulations do not include a definition of, or specific requirement for, an integrated plan for sustainable urban development. Consequently, such plans or strategies, and conditions for inclusion of projects in such plans or strategies, should be defined by the competent authorities in the Member States and/or managing authorities, taking account of Article 8 of the ERDF Regulation and the specific urban, administrative and legal context of each region.”*

The spatial planning system in Slovenia is similar to others in Europe. The main feature that allows this comparison is the strong hierarchy of planning documents in most European countries with the exception of the UK planning system which is closer to that of the US. The top to bottom system in most of Europe, and in Slovenia, always demands that strategic (and other) decisions made on the national level are strictly transferred to the Regional and Municipal level of spatial planning documents. Also, spatial strategies should follow general (economic) strategies and find balanced solutions to fulfill the spatial interests of different stakeholders. Article 5 of the Balanced Regional Development Act states that a regional policy shall be planned with the following mutually harmonised documents:

- Slovenia’s development strategy;
- The national strategic spatial-planning document;
- The programme of national development priorities and investments;
- Programming documents at the international and national levels;
- Regional and area programmes; and
- Regional agreements for development.

Since the adoption of new spatial planning legislation in 2003, which was revised in 2007, the sustainable aspects of spatial development have been the key elements of the new generation of planning documents on the national and municipal levels. In particular, article 4 of the Spatial Planning Act explicitly requires issues of sustainable development to be reflected in planning documents while article 7 clearly states that the public interest should prevail over private interests. It is also important to highlight article 9 which requires the protection of cultural heritage.

### *Levels of planning documentation*

Slovene spatial planning legislation covers different level of planning acts. They can be on the national level, municipal level and inter-municipal level. Until the regionalization of Slovenia is adopted by the national assembly, the inter-municipal planning documents are considered as regional. All these documents also have to pass the evaluation of their environmental impact according to the Spatial and Environment protection act.

*The municipal spatial plan (Občinski prostorski načrt – OPN) and the process of adapting spatial development plans:*

The description of the preparation and acceptance of the spatial planning documents is important to illustrate the complexity of the whole process and the ability to incorporate the different development plans of various stakeholders. The description is based on the preparation of the Municipal spatial plan, the document that is most likely to fit into the IPSUD

requirement for the use of JESSICA FIs. A municipal spatial plan contains the strategic and Operational part.

The strategic part of a municipal spatial plan determines:

1. Bases, objectives and the concept for the spatial development of a municipality;
2. Guidelines for the development of human settlement and comprehensive renewal, guidelines for development in a landscape, determination of the eligible use of lands and spatial implementation conditions, as well as the concept of commercial public infrastructure of local importance;
3. Areas of settlement, including areas of dispersed construction spatially related to them;
4. Areas of dispersed settlement.

The Operational part of a municipal spatial plan by individual spatial planning units determines:

1. Areas of eligible use of space;
2. Spatial implementation conditions;
3. Areas for which a municipal detailed spatial plan is drafted.

A municipal spatial plan serves as the basis for the preparation of a project for the acquisition of a building permit under construction regulations« (spatial planning act, article 39, Official Gazette of RS, no. 33/2007). Here we can see that the Operational part of the municipal plan defines areas that need to be planned in a more detailed way as only the basic parameters are set in Municipal plan. From this point on we can talk about urban design and a document called the Municipal detailed spatial plan (občinski podrobni prostorski načrt - OPPN).

The process of the preparation of spatial planning documents (for example OPPN) begins with the decision adopted by a mayor and published in the official publication and on the Internet, and sent to the ministry and neighboring municipalities. The decision also contains the reference of institutions performing spatial planning which provide guidelines for the planned spatial arrangements within their competence.

A typical detailed spatial planning document in the City of Ljubljana needs to follow guidelines and acquire approval from a minimum of 18 reference institutions like:

1. Ministry of Infrastructure and Spatial Planning, Environmental agency, department for water management (Republika Slovenija, Ministrstvo za infrastrukturo in prostor, Agencija RS za okolje, Urad za upravljanje z vodami)
2. Ministry of Defence, Administration for Civil protection and Disaster (Republika Slovenija, Ministrstvo za obrambo, Uprava RS za zaščito in reševanje)
3. Ministry of Infrastructure and Spatial Planning, Roads directorate (Republika Slovenija, Ministrstvo za infrastrukturo in prostor, Direkcija RS za ceste)
4. Ministry of Education, Science, Culture and Sport (Republika Slovenija, Ministrstvo za izobraževanje, znanost, kulturo in šport)
5. Institute of the Republic of Slovenia for Nature Conservation, Regional Unit of Ljubljana (Zavod Republike Slovenije za varstvo narave, Območna enota Ljubljana)
6. Institute of the Republic Slovenia for Cultural Heritage protection, Regional Unit of Ljubljana (Zavod Republike Slovenije za varstvo kulturne dediščine, Območna enota Ljubljana)

7. City of Ljubljana, department of economic affairs and transport – mostly for traffic. (Mestna občina Ljubljana, Mestna uprava, Oddelek za gospodarske dejavnosti in promet)
8. Public street lighting company, (Javna razsvetljava d.d.)
9. Waste management public company, (SNAGA Javno podjetje d.o.o.)
10. Telecommunication company – state owned (Telekom Slovenije, d.d., PE Ljubljana)
11. Private Telecommunication company- optics if available (T2 d.o.o.)
12. Private Telecommunication Company – (UPC Telemach d.o.o.)
13. Public company Water – Sewage, department for water (Javno podjetje Vodovod - Kanalizacija, d.o.o., Področje oskrbe z vodo)
14. Public company Water – Sewage, department for sewage (Javno podjetje Vodovod - Kanalizacija, d.o.o., Področje odvajanja odpadnih voda)
15. Electric grid operator (Elektro Ljubljana d.d., DE Ljubljana mesto)
16. Public Energy supply company in Ljubljana – gas supply (Javno podjetje Energetika Ljubljana d.o.o., Oskrba s plinom)
17. Public Energy supply company in Ljubljana – hot water heating (Javno podjetje Energetika Ljubljana d.o.o., Daljinska oskrba s toplotno energijo)
18. Gas grid operator, national level, (Geoplin plinovodi d.o.o.)

If the proposed Municipal detailed spatial plan is located close to some important infrastructure or other objects of national (or municipal) interest, additional institutions must be involved including:

- Slovenian railway company, (Slovenske železnice d.d.)
- Ministry of Defence, real estate department, (Republika Slovenija, Ministrstvo za obrambo, Direktorat za logistiko, Sektor za gospodarjenje z nepremičninami)
- Motorway Company in the Republic of Slovenia, (DARS d.d.)
- Institute of Forestry (Zavod za gozdove)

This shows that a wide spectrum of different stakeholders is involved in the process. In the latter stage there are obligatory phases of public participation (covered by article 50 of the Spatial Planning Act). The document has to be checked for its environmental impact and approved by the Ministry of Spatial planning. After all the approvals of all the referenced institutions are collected, the document is adopted by the municipal council with a decree (or national parliament for the state level spatial planning documents) which is published in the official publication.

#### *Documents that can serve as Integrated Urban Development plans*

An IPSUD generally consists of a document, or series of documents, prepared by, on behalf of, or endorsed by the public sector, which identifies the medium to long-term social and economic needs of the urban area in which the proposed scheme is located. It will also clearly indicate how those needs would be addressed in order to secure the long-term future of the area. The document(s) must include an analysis of the socio-economic situation, identify strategic objectives and set out particular actions for an integrated approach to the regeneration of the area.

The IPSUD requirements are consistent with the objectives of the Slovenian Spatial Planning Act. Under Article 3, the Spatial Planning Act lists the objectives of spatial planning in Slovenia as the enablement of coherent spatial development through the consideration and harmonisation of different development needs and interests with public benefits in the areas of environmental protection, conservation of nature and cultural heritage,

protection of natural resources, defence and protection against natural and other disasters. Specifically these objectives have to enable:

- sustainable development of space and the efficient and economic use of land,
- quality living conditions,
- spatially coordinated and mutually complementary location of activities,
- renewal of the existing infrastructure, which has priority over the construction of new infrastructure,
- preservation of characteristic features of space,
- rehabilitation of brownfield sites,
- protection of the environment, natural resources and conservation of nature,
- overall conservation of cultural heritage, including urban heritage,
- providing for the health of the population,

There are four spatial planning documents in Slovenia which incorporate the requirements that can be relied upon as IPSUD:

- National spatial plan
- Municipal spatial plan
- Detailed municipal spatial plan
- Regional spatial plan.

These documents determine all necessary guidelines that relate to interventions in space and under which conditions and criteria they can be implemented. All of the plans mentioned above represent a basis for the preparation of projects for the acquisition of a building permit under the regulations on construction.

We recommend at least some informal “double check” of projects to verify that they meet the IPSUD requirement before JESSICA FIs are implemented. Since the whole process of establishing planning documents in Slovenia is very time-consuming, the integrative and sustainable projects control should be very fast and part of the credit approval process. We recommend the formation of a small group of independent experts in the field of urban planning and urban design. The control process should not take more than one week after the project has been presented to the expert group.

## **2. RATIONALE AND OPTIONS FOR IMPLEMENTING JESSICA**

**There were several criteria for the selection of case studies for the purposes of this evaluation study:**

- Size of municipality – we included smaller as well as large city municipalities
- Geographical coverage – coverage across the entire country not focusing on a specific region
- Project typology – inclusion of as many JESSICA FI project typologies as possible
- Project size – smaller and larger projects (with larger projects the need for grant financing is also present due to project size)
- Availability of information – availability and quality of the project information to create the case studies

With these parameters in mind, five case studies were selected for a detailed evaluation which shows how JESSICA FIs can potentially benefit urban development projects in Slovenia. For each case study two scenarios were developed to show how the use of JESSICA FIs could potentially influence the project. The first scenario uses a 0% interest rate to show the project under soft financing conditions. The second scenario uses the State aid reference rate for Slovenia of 2.07% as of 1.3.2012.

### **2.1. The Business and Economic Center of SAŠA (GS SAŠA)**

The main objective of the GS SAŠA project, which is divided into three sub-projects, is to boost economic development within the region. We have already discussed the vision of both the SAŠA region and GS SAŠA but did not examine particular objectives of the project. The overall objective of GS SAŠA is to create and provide a technological and economic platform for entrepreneurship, which will lead both to the development of new products and services with higher added value and create new jobs in the SAŠA region in three main perspective industries – energy and renewable energy sources, environment and complete engineering and design of products and services.

In particular, the GS SAŠA project will provide a new and modern infrastructure for innovative and growing companies either from within the region or outside it. This inventive and entrepreneurial environment will boost the development of new products and services, technologies, materials and will build on the internationally recognized competences of GS SAŠA. It is very important to also establish competent management of GS SAŠA with the following duties: coordinating activities inside the centre, promoting the region, inviting new companies and offering quality support for small and medium sized companies (e.g. in applications for EU funds).

The GS SAŠA project consists of two infrastructural sub-projects:

- Velenje Technology Park with the infrastructure in the city of Velenje;

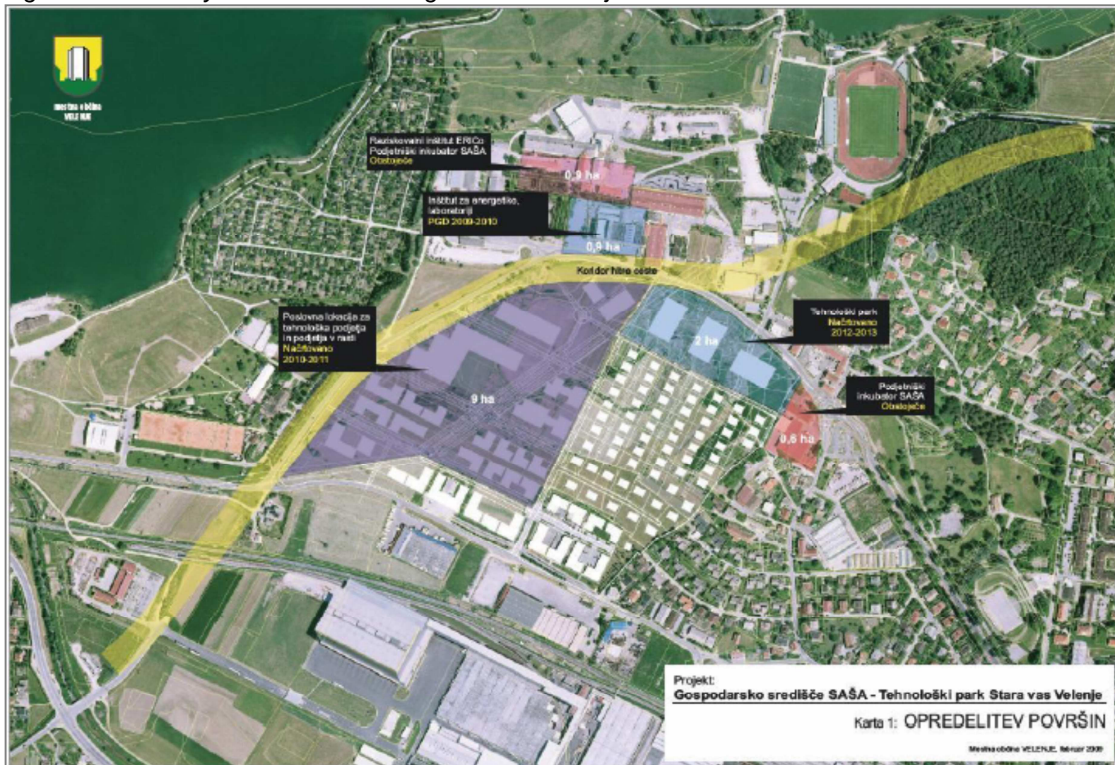
- Business incubator with the infrastructure in Velenje, Ljubno and Nazarje;

### 2.1.1. Case Study: Velenje Technological Park in *the SAŠA Region*

Velenje Technological Park is the first part of the GS SAŠA project. The goal is to provide 10,000 square meters of modern business facilities for supporting technological innovations, research and development and higher education in the SAŠA region. Velenje Technological Park will offer consulting services especially to start-ups, helping them to operate at an international level, receive EU funds and network with other technological parks.

The Velenje Technological Park will be located in the western part of the city of Velenje, between the industrial zone (where the company Gorenje is located), the old mineshaft of the Velenje coalmine and a residential area. It is a very strategic location, lying on the future 3rd development axis that will connect this region with the main national highway network. Indeed, the course of the new motorway is planned to pass nearby this area (See Figure 24).

Figure 24: Territory of future Technological Park Velenje



**Legend:**

- Purple and blue – new facilities for start-ups and growing companies
- Red – existing facilities
- Yellow – highway corridor

Source: MO Velenje, Gospodarsko središče Savinjsko – saleške regije, Študija izvedljivosti, 2009

**Project description and objectives**

The Velenje Technological Park project envisages the construction of the Central building of the Technological Park (building A) and reconstruction and renovation of two disused industrial facilities: the Old power plant (building B) and ESOTECH building (building C).

- The main objective of the Velenje Technological Park project, which is a cooperative project between the private and public sectors, is to create a stimulating business environment that offers suitable special conditions and other support required for:
  - The development of research achievements into marketable technological solutions
  - The establishment of new and development of existing high-technology companies
  - The development, strengthening and concentration of higher educational programs for regional development needs
  - The strengthening of research and development activities within the Velenje region and transfer of knowledge into the economy (decentralisation)
  - Development of a platform for innovations and technological development (e.g. research centres of excellence, centres for technological development)

Figure 25: Velenje Technological Park buildings' characteristics

	<b>Central building of Velenje Technology Park</b>	<b>Old power plant</b>	<b>ESOTECH building</b>
<i>Main intention</i>	<i>New building Technology park Management; fast growing hi-tech companies and hi-tech start-ups; also for supporting services</i>	<i>Existing building</i>	<i>Existing building</i>
<i>Primary industries</i>	<i>Energy, renewable energy sources, environmental technologies and complete engineering and design of products and services</i>	<i>Energy, renewable energy sources</i>	<i>Environmental technologies</i>
<i>Square meters</i>	<i>5,000</i>	<i>7,061</i>	<i>1,759</i>
<i>Estimated new jobs</i>	<i>250</i>	<i>100</i>	<i>70</i>
<i>Estimated no. of companies</i>	<i>60</i>	<i>10</i>	<i>20</i>
<i>Value of investment (current prices, VAT excluded)</i>	<i>EUR 10,381,566</i>	<i>EUR 21,690,103</i>	<i>EUR 1,718,401</i>

Source: MO Velenje, Gospodarsko središče Savinjsko – saleške regije, Študija izvedljivosti, 2009

### **Demand analysis and assumptions**

In the SAŠA region, especially in the city of Velenje, there is very little or no urbanized land still available for the construction of business or industrial facilities. Moreover, according to the feasibility study (MO Velenje, 2009), the SAŠA region lacks business offices and buildings for renting, especially offices that are located within modern and prosperous business environments with supporting industries at hand (e.g. design studios, centres of excellence, institutes, universities).

Many companies in the SAŠA region are research and development oriented and thus possess skills that can be passed forward to new hi-tech companies. According to the Slovenian Patent Agency, more than 200 patents registered in the USA and in Europe come from companies based in this region. The growing student population, which is also the result of new higher education study programmes opened in the region, is a positive indicator for the future.

Figure 26: Economic and Financial Assumptions of the project

	<b>Assumptions on Revenues</b>	<b>Assumptions on Costs and Inflation</b>	<b>Financial Assumptions</b>
<b>Velenje Technological Park Central building</b>	<p><b>Revenues from rents – without inflation:</b> Offices for growing hi-tech companies (2,500 m<sup>2</sup>) Offices for new hi-tech companies (1,250 m<sup>2</sup>)</p> <p>Average price for all rents (based on prices in the region) 9 EUR/m<sup>2</sup>. Occupancy starts at 90% and reaches 95% in one year due to high demand in the region for new modern offices.</p> <p>Classrooms and multi-functional rooms for rent (500 m<sup>2</sup>): 7,000 EUR per year (MO Velenje, 2009).</p> <p><b>Revenues from parking fees – without inflation:</b> 100 parking spaces at 35 EUR per month (MO Velenje, 2009). Capacity used is 90% (90 parking spaces).</p> <p><b>Revenues from consulting services – without inflation:</b> Support for small and middle sized companies (preparing applications for EU funding). Networking with technological parks in Slovenia and abroad. Trend monitoring, patent services, special services. Support with internationalization. Organising events. Estimated revenues: 42,000 EUR per year (MO Velenje, 2009).</p>	<p>Yearly personnel costs (MO Velenje, 2009): Average yearly wage: 40,000 EUR 1 employee: manager (year 1 to 3) 2 employees: manager and one consultant (year 4 to 5) 5 employees: manager, two consultants, business secretary and technician (after year 5)</p> <p>Yearly material costs – without inflation (MO Velenje, 2009): 20,000 EUR annually 1 to 3 and after that 40,000 EUR</p> <p>Yearly costs of services – without inflation (MO Velenje, 2009): 20,000 EUR (cleaning, basic repair etc.)</p> <p>Investment maintenance cost (MO Velenje, 2009): Bigger repairs to infrastructure. In the 10<sup>th</sup> year: 100,000 EUR In the 13<sup>th</sup>, 16<sup>th</sup>, and 19<sup>th</sup> years: 150,000 EUR</p>	<p>For the WACC calculation we used a risk free rate of 5%. This is based on the required return of a Slovenian 10-year Government Bond in November 2011 which was around 7% (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus the 5% risk free rate is used.</p> <p>For the Pretax Required Return on Debt we used 4.5% and 2.5% respectively as this is the expected interest rate for JESSICA Loans (based on different cases).</p> <p>In the cases where market loan is used, 10% market interest rate represents Pretax Required Return on Debt (due to current credit crunch in Slovenia).</p>
<b>Old power plant</b>	<p><b>Revenues from rents – without inflation:</b> Laboratories (1,975 m<sup>2</sup>) Offices for growing hi-tech companies (1,006 m<sup>2</sup>)</p> <p>Average price for all rents (based on prices in the region) 9 EUR/m<sup>2</sup>. Occupancy starts at 80% and reaches 95% in four years. High demand accounts for the high occupancy anticipated. However, growth is slower because buildings are not new. Capacity used for laboratories is 90% in the first year and reaches 95% in the second</p>	<p>All prices used in P&amp;L calculations are <b>inflation adjusted</b>. We assumed a 1,5% annual increase in rent prices, and a 1% annual increase in parking prices. a 1%</p>	<p>Market Risk premium is 5.75% (Damodaran, Country Default Spreads and Risk Premiums, 2011) and the Corporate tax rate in Slovenia is 20%.</p>

<p><b>ESOTECH building</b></p>	<p>year.</p> <p>Classrooms and multi-functional rooms for renting (893 m<sup>2</sup>): 14,500 EUR per year (MO Velenje, 2009).</p> <p><b>Revenues from parking fees – without inflation:</b> 40 parking spaces at 35 EUR per month (MO Velenje, 2009). Capacity used is 90% (36 parking spaces).</p> <p><b>Revenues from consulting services – without inflation:</b> Support for small and middle sized companies (preparing applications for EU funding). Networking with technological parks in Slovenia and abroad. Trend monitoring, patent services, special services. Support with internationalization. Organising events. Estimated revenues: 7,000 EUR per year (MO Velenje, 2009).</p> <p><b>Revenues from rents – without inflation:</b> Laboratory (52 m<sup>2</sup>) Offices for growing hi-tech companies (1,065 m<sup>2</sup>)</p> <p>Average price for all rents (based on prices in the region) 9 EUR/m<sup>2</sup>. Occupancy starts at 80% and reaches 95% in four years due to high demand. However, growth is slower because buildings are not new. Capacity used for laboratories is 90% in the first year and reaches 95% in the second year.</p> <p>Classrooms and multi-functional rooms for renting (92 m<sup>2</sup>): 1,500 EUR per year (MO Velenje, 2009).</p> <p><b>Revenues from consulting services – without inflation:</b> Support for small and middle sized companies (preparing applications for EU funding). Networking with technological parks in Slovenia and abroad. Trend monitoring, patent services, special services. Support with internationalization. Organising events. Estimated revenues: 14,000 EUR per year (MO Velenje, 2009).</p>	<p>annually and increase in all other prices 2% annually, which is expected future inflation rate for Slovenia (projected by UMAR). We did not adjust personnel costs and inv. maintenance. However, we added a new employee every few years to compensate also for the increase in wages.</p> <p>Depreciation costs: We assumed that depreciation of assets starts in year 5 when all buildings are built and renovated. We assumed Straight-line depreciation over 20 years.</p>	<p>For industry beta we took Real Estate Investment Trust as an industry that has a beta of 0.49 (Damodaran, 2011).</p> <p>Grants received from EU and Slovenian funds are shown as income on P&amp;L.</p>
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### Baseline vs. JESSICA scenario

In the Baseline Scenario the capital from % private investors (50%) is matched by an EU grant (50%). In the JESSICA scenario we substitute 15% of such grants with a JESSICA Loan.. The interest rate used for the JESSICA loan in the two sub-scenarios was 0% (soft market conditions) and 2,07% (as the State aid reference rate for Slovenia from 1.3.2012) respectively to provide a good range of possible values.

Figure 27: Funding sources (Baseline scenario and both JESSICA scenarios)

<b>Private investors' Capital (50%)</b>	<b>Grants (50%)</b>	
<b>Private investors' Capital (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan (soft market conditions) 0% rate (15%)</b>
<b>Private investors' Capital (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan 2,07% rate (15%)</b>
<b>Private Investors' Capital (100%)</b>		
<b>Private investors' Capital (50%)</b>	<b>Grants (30%)</b>	<b>JESSICA Loan (soft market conditions) 0% rate (20%)</b>
<b>Private investors' Capital (50%)</b>	<b>Grants (30%)</b>	<b>JESSICA Loan 2,07% rate (20%)</b>

Figure 28: Results (Baseline scenario and JESSICA Scenario)

<b>Baseline Scenario</b>	<b>JESSICA Scenario (0%)</b>	<b>JESSICA Scenario (2,07%)</b>
50% Private investors' Capital	50% Private investors' Capital	50% Private investors' Capital
50% Grants	35% Grants	35% Grants
	15% JESSICA Loan	15% JESSICA Loan
Enterprise Present Value: 6,851,374 EUR	Enterprise Present Value: 8.584.199 EUR	Enterprise Present Value: 7,997,852 EUR
Equity Present Value: 23,122,382 EUR	Equity Present Value: 17,513,204 EUR	Equity Present Value: 16,840,355,6 EUR
IRR: 16.92%	IRR: 5.27%	IRR: 4.61%

<b>Private-sector Scenario</b>	<b>JESSICA Scenario (0%)</b>	<b>JESSICA Scenario (2,07%)</b>
<i>100% Private investors' capital</i>	<i>50% Private investors' Capital 30% Grants 20% JESSICA Loan</i>	<i>50% Private investors' Capital 30% Grants 20% JESSICA Loan</i>
<i>Enterprise Present Value: 6,851,374.01 EUR</i>	<i>Enterprise Present Value: 9,106,891.9 EUR</i>	<i>Enterprise Present Value: 8,318,346.21 EUR</i>
<i>Equity Present Value: 6,851,374.01 EUR IRR: -3.74%</i>	<i>Equity Present Value: 15,675,716.74 EUR IRR: 2.89%</i>	<i>Equity Present Value: 14,789,065.60 EUR IRR: 2.10%</i>

## Conclusions

Analysis of the project cash flows yields the following results:

- We get a highly positive IRR of 16.92% in the Baseline Scenario and a positive IRR of 5.27% and 4.61% in the first two JESSICA Scenarios respectively. These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime with support from EU resources in the form of grant or loan. In addition, with support from JESSICA FIs, it is possible to save 5,068,510 EUR in grants which can be made available for other projects. Although the reduction of the grant amount decreased the returns on invested capital, left a reasonable margin was still left for private investors.
- The use of JESSICA FI support improves the Enterprise PV which is higher in both JESSICA cases (8,584,199 EUR and 7,997,852 EUR respectively). The WACC is lower in both JESSICA Scenarios, 6.53% and 6.92% respectively. In the baseline scenario (50% grant, 50% private investor financing) the estimated WACC is 7.8%. Enterprise PV which represents all net cash flows discounted is 6,851,374 EUR.
- The private-sector Scenario has a negative IRR, while the third and fourth JESSICA Scenarios have a slightly lower IRR (2.89% and 2.10% respectively) in comparison to the first two. This is due to the fact that the share of grants is lower in the last two JESSICA Scenarios.

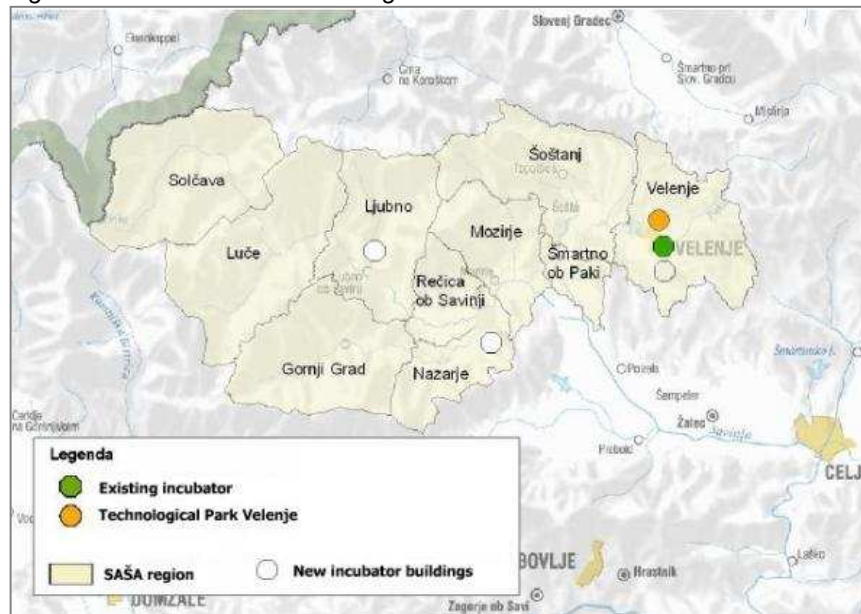
### 2.1.2. Case Study: Entrepreneurial Incubator in SAŠA Region

The purpose of the entrepreneurial incubator within the SAŠA region is to encourage the effective development of new companies by offering favorable rental conditions and providing administrative and business advisory services for the incubation period. Hence, increasing the survival rate of new companies. Moreover, the incubator acts as an ambassador for the creative and entrepreneurial culture and is an important provider of entrepreneurial training.

#### Project description and objectives

The entrepreneurial incubator SAŠA foresees the construction of three new buildings in the area of the Old mineshaft in Velenje, one building in Ljubno and one building in Nazarje.

Figure 29: Location of new buildings



Source: MO Velenje, Gospodarsko središče Savinjsko – šaleške regije, Študija izvedljivosti, 2009

The capacity of the existing SAŠA incubator is 1,142.22 m<sup>2</sup>, situated only in Velenje, the “centre” of the region. However, the feasibility study (MO Velenje, 2009) indicates that this is insufficient for the current requirements and for the new production and technology oriented companies. Moreover, if the SAŠA region is to develop as a whole, investments have to be made in other parts of the SAŠA region. This will also reduce dependency on the heavy industry and big companies in the region.

The main goals of the SAŠA incubator are the following:

- To promote economic development of the region by targeting young, inventive individuals in the region, encouraging them to think entrepreneurially.
- To create conditions for the establishment and development of as many firms as possible.
- To connect, encourage, inform and educate inventive individuals, companies and organisations. To promote networking among companies, universities and research centers in the region.
- To increase innovations and to promote the technological development in the region.
- To increase self-employment and decrease unemployment.

### Demand analysis and assumptions

In the case of the Velenje Technological Park we already pointed out that the SAŠA region lacks business offices and buildings for rent. At the same time, the SAŠA region wants to develop as a whole and in order to do that new facilities have to be built in other parts of the region. The incubator itself represents a great opportunity for young entrepreneurs to start their

business career. It is expected that this will boost the establishment and development of new hi-tech companies.

Figure 30: Entrepreneurship Incubator in SAŠA – characteristics of the buildings

	<b>Old mineshaft Velenje</b>	<b>Ljubno building</b>	<b>Nazarje building</b>
<b>Main intention</b>	<b>Three new buildings</b> Space for production for young entrepreneurs with hi-tech companies (start-ups).	<b>New building</b> Space for production + offices for start-up companies.	<b>New building</b> Space for production + offices for start-up companies.
<b>Primary industries</b>	Energetics, renewable energy sources, environmental technologies and complete engineering and design of products and services	Complete engineering and design of products and services	Energetics, renewable energy sources and complete engineering and design of products and services
<b>Square meters</b>	2,065.05	800	800
<b>Estimated new jobs</b>	35	15	15
<b>Estimated companies</b>	10	3	3
<b>Value of investment (current prices, VAT excluded)</b>	2,243,607 EUR	1,409,218 EUR	1,409,218 EUR
<b>Available</b>	<i>In the third year</i>	<i>In the ninth year</i>	<i>In the ninth year</i>

Source: MO Velenje, Gospodarsko središče Savinjsko – saleške regije, Študija izvedljivosti, 2009

Figure 31: Economic and Financial Assumptions of the project

	<b>Assumptions on Revenues</b>	<b>Assumptions on Costs and Inflation</b>	<b>Financial Assumptions</b>
<b>Old Mine Shaft</b>	<p><b>Revenues from rents – without inflation:</b> Production space for young entrepreneurs (1,549.05 m<sup>2</sup>)</p> <p>Average price (based on prices in the region) is 9 EUR/m<sup>2</sup> in the base year 1. Occupancy starts at 85% (in the third year) and reaches 100% in three years. Research shows that demand exists and so we expect full occupancy in three years after construction is completed.</p> <p>Classrooms and multi-functional rooms for renting: 2,100 EUR per year in base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from services – without inflation:</b> Marketing and promotional activities, e-services, translations, financial engineering ... Estimated revenues: 1,680 EUR per year in the base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from consulting services – without inflation:</b> Support with receiving EU funding. Networking with technological parks in Slovenia and abroad. Trend monitoring, patent services, special services. Support with internationalization. Organising events. Estimated revenues: 18,480 EUR per year in the base year 1 (MO Velenje, 2009).</p>	<p>Yearly personnel costs (MO Velenje, 2009): Average yearly wage: 30,000 EUR 2 employees: consultant and administrator (year 2 to 8) 3 employees: two consultants and administrator (year 9 to 20)</p> <p>Yearly material costs – without inflation (MO Velenje, 2009): 5,000 EUR annually from years 2 to 8 and afterwards 10,000 EUR</p> <p>Yearly cost of services (cleaning, repairing ...) – without inflation (MO Velenje, 2009): 82,602 EUR from 2 to 8 146,602 EUR from 9 to 20</p> <p>Investment maintenance cost (MO Velenje, 2009): Bigger repairs to infrastructure. In 10<sup>th</sup> year: 50,000 EUR In the 13<sup>th</sup>, 16<sup>th</sup>, and 19<sup>th</sup> years: 100,000 EUR</p> <p>All prices in P&amp;L calculation are <b>inflation adjusted</b>. We assumed a 1,5% annual rental price increase a 1% annual parking cost increase and a 2% (UMAR's projected future inflation rate for Slovenia) annual increase for all other costs,. We did not adjust personnel costs. However,</p>	<p>For WACC calculation we used the risk free rate of 5% based on the required return of Slovenian 10-year Government Bonds, which was around 7% in November 2011. (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus the 5% risk free rate is used.</p> <p>For the Pretax Required Return on Debt we used 4,5% and 2,5% respectively as this is the expected interest rate for JESSICA Loans (based on different cases).</p> <p>In cases where a market loan is used, the 10% market interest rate represents the Pretax Required Return on Debt (due to current credit crunch in Slovenia).</p> <p>Market Risk premium is 5,75% (Damodaran, Country Default Spreads and Risk Premiums, 2011) and the Corporate tax rate in Slovenia is 20%.</p>
<b>Ljubno building</b>	<p><b>Revenues from rents – without inflation:</b> Space for young entrepreneurs – for production and/or services (800 m<sup>2</sup>)</p> <p>Average price for all rents (based on prices in the region) 9 EUR/m<sup>2</sup>. Capacity used starts at 85% (in the ninth year) and reaches 95% in one year Due to the increased demand after a few buildings will have been built. We expect that at that time the region will already be more attractive for young entrepreneurs.</p>	<p>All prices in P&amp;L calculation are <b>inflation adjusted</b>. We assumed a 1,5% annual rental price increase a 1% annual parking cost increase and a 2% (UMAR's projected future inflation rate for Slovenia) annual increase for all other costs,. We did not adjust personnel costs. However,</p>	<p>Market Risk premium is 5,75% (Damodaran, Country Default Spreads and Risk Premiums, 2011) and the Corporate tax rate in Slovenia is 20%.</p>

<p><b>Nazarje building</b></p>	<p>Classrooms and multi-functional rooms for renting (based on Old Mineshaft figure): 630 EUR per year in base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from services – without inflation:</b>            Calculated based on Old mineshaft figure.            Estimated revenues: 504 EUR per year in the base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from consulting services – without inflation:</b>            Calculated based on Old Mineshaft figure.            Estimated revenues: 5,544 EUR per year in the base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from rents – without inflation:</b>            Space for young entrepreneurs – for production and/or services (800 m<sup>2</sup>)</p> <p>Average price for all rents (based on prices in the region) 9 EUR/m<sup>2</sup>. Occupancy starts at 85% (in the ninth year) and reaches 95% in one year due to increased demand after a few buildings will have been built. We expect that at that time region will already be more attractive for young entrepreneurs.</p> <p>Classrooms and multi-functional rooms for renting (based on Old Mine Shaft figure): 630 EUR per year in base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from services – without inflation:</b>            Calculated based on Old Mine Shaft figure.            Estimated revenues: 504 EUR per year in the base year 1 (MO Velenje, 2009).</p> <p><b>Revenues from consulting services – without inflation:</b>            Calculated based on Old Mine Shaft figure.            Estimated revenues: 5,544 EUR per year in the base year 1 (MO Velenje, 2009).</p>	<p>we added a new employee every few years to compensate for the increase in wages.</p> <p><b>Depreciation costs:</b>            We assumed straight-line depreciation over 20 years starting in the year when buildings are finished.</p>	<p>For industry beta we took Real Estate Investment Trust as an industry that has a beta of 0.49 (Damodaran, 2011).</p> <p>Grants received from EU and Slovenian funds are shown as income on P&amp;L account.</p>

### Baseline vs. JESSICA Scenario

In the Baseline Scenario the 50% private investors' equity is matched by an EU grant. In the JESSICA Scenario we substitute 15% of such grants with a JESSICA Loan. Similar to the grants the JESSICA Loan is public money, but there is a relevant difference – it can be reinvested when the loan is returned to the UDF. The interest rate used for the JESSICA Loan was 0% (soft market conditions) and 2.07% (State aid reference rate as of 1.3.2012).

Figure 32: Funding sources (Baseline scenario and JESSICA Scenario)

<b>Private investors' Capital (50%)</b>	<b>Grants (50%)</b>	
<b>Private investors' Capital (50%)</b>	<b>Grants (30%)</b>	<b>JESSICA Loan 0% (20%)</b>
<b>Private investors' Capital (50%)</b>	<b>Grants (30%)</b>	<b>JESSICA Loan 2,0,7% (20%)</b>
<b>Private Investors' Capital (100%)</b>		
<b>Private investors' Capital (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan (soft market conditions) 0% rate (15%)</b>
<b>Private investors' Capital (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan 2,07% rate (15%)</b>

Figure 33: Results (Baseline scenario and JESSICA Scenario)

<b>Baseline Scenario</b>	<b>JESSICA Scenario 0%</b>	<b>JESSICA Scenario 2,0,7%</b>
50% Private investors' Capital 50% Grants	50% Private investors' Capital 30% Grants 20% JESSICA Loan	50% Private investors' Capital 30% Grants 20% JESSICA Loan
Enterprise Present Value: 1,075,314 EUR	Enterprise Present Value: 1,544,094 EUR	Enterprise Present Value: 1,378,560 EUR
Equity Present Value: 3,512,851 EUR	Equity Present Value: 2,350,114 EUR	Equity Present Value: 2,214,603 EUR
IRR: 15.15%	IRR: 4.04%	IRR: 3.43%

<b>Private-sector Scenario</b>	<b>JESSICA Scenario 0%</b>	<b>JESSICA Scenario 2,0,7%</b>
100% Private investors' capital	50% Private investors' Capital 35% Grants 15% JESSICA Loan	50% Private investors' Capital 35% Grants 15% JESSICA Loan

<i>Enterprise Present Value:</i> 1,347,365.1 EUR	<i>Enterprise Present Value:</i> 1,347,365.1 EUR	<i>Enterprise Present Value:</i> 1,347,365.1 EUR
<i>Equity Present Value:</i> 893,669 EUR	<i>Equity Present Value:</i> 2,592,855 EUR	<i>Equity Present Value:</i> 2,491,221 EUR
<i>IRR:</i> -2.21%	<i>IRR:</i> 5.95%	<i>IRR:</i> 5.44%

## Conclusions

Analysis of the project cash flows yields the following results:

- We get a highly positive IRR of 15.15% in the Baseline Scenario and a positive IRR of 4.04% and 3.43% in both JESSICA sub-scenarios respectively. These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime. The implementation of the JESSICA mechanism makes it possible to save 1,012,408 EUR in grants which could be made available for other projects. The reduction of the grant amount decreased the profit, but still left a reasonable margin for the private investor.
- The use of the JESSICA mechanism improves Enterprise PV. The positive effect is visible from the Enterprise PV, which is higher in both JESSICA cases (1,544,094 EUR and 1,378,560 EUR respectively) because of the lower interest rate (WACC) at which cash flows are being discounted. WACC is lower in both JESSICA Scenarios, 6.23% and 6.70% respectively, which is expected since financing the project with debt is less expensive. In the baseline scenario (50% grant, 50% private investor financing) the estimated WACC is 7.8%. Enterprise PV which represents all net cash flows discounted at the WACC is 1,075,314 EUR.
- The Private-sector Scenario again proves to be unfavourable as the IRR is negative (-2.21%). With a higher share of grants in total financing, the additional JESSICA Scenarios reveal a higher equity present value as opposed to the first two JESSICA Scenarios. Moreover, the IRR of the last two JESSICA Scenarios indicate a higher internal rate of return.

## 2.2. Case Study: Parking Garage in Maribor

The Main Square ("Glavni trg") in Maribor was once known as the city's centre of social, economic and business life. Shortly after the construction of the bridge across the Drava river, traffic became very intense and the main market had to be moved to another location. This was the beginning of the end for the Main Square which soon lost its reputation and glory. The future however seems more promising as the Main Square is a central part of Maribor's urban development plan for the next decade.

Figure 34: Main Square («Glavni trg») in Maribor today



### Project description and objectives

The main purpose of this project is to provide Maribor with an additional 500 parking spaces (16,780 m<sup>2</sup>) in the city centre where they are needed the most. The main goals of the project are:

- To construct a functional underground parking garage with a capacity of 509 parking spaces (5% of parking spaces would be dedicated to disabled people ).
- To acquire the optimal solution for the location in question, to ensure economic and rational construction, and to justify all the investment and maintenance costs that will arise in the future.
- To build a facility that is responsible to its environment and user health and security with minimal effects on nature and the surroundings.

The parking garage will have three underground floors. Three staircase shafts with elevators are planned for vertical communication. The exit from the garage will lead through two new pavilions that will be built on the Main Square (“Glavni trg”) and through City Hall which is located at the edge of the Main Square. Payment will be organised by means of automatic machines located at the entrances to the parking garage. The parking garage will have a modern ventilation system with a special alarm in the case of high levels of CO<sub>2</sub> in the building. Special attention will be given to fire security and insurance.

In the second phase of the project, the plan is to renovate the “Old Platform” (“Stari peron”) and eastern part of the Main Square (overall 6,000 m<sup>2</sup>). This is the top plateau, which will serve as the “roof” of the garage and main square with pedestrian zones. The plan is to build five pavilions – two of them will serve as the already mentioned entrance/exit to the parking garage, while the other three will be dedicated to the revival of the city’s social life (restaurant/bar/café, ice cream/popcorn/chestnut/cotton candy and tobacco/magazine).

Figure 35: Project characteristics

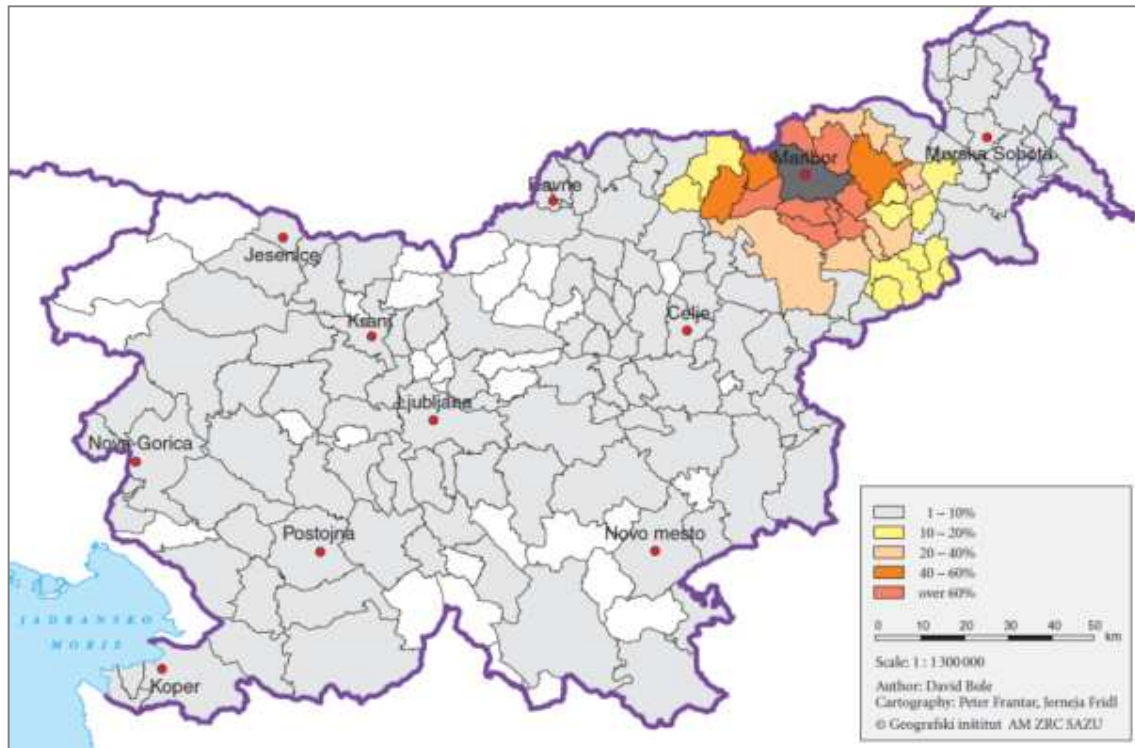
	<b>Parking Garage</b>	<b>Main Square and The Old Platform</b>
<b>Main intention</b>	<i>Provide Maribor with 509 new parking spaces in an environmentally friendly underground garage.</i>	<i>Give citizens of Maribor and tourists a new area for socializing and spending their free time. Provide new services for people (restaurant/café/ice cream/tobacco/magazine shop).</i>
<b>Square meters</b>	16,780	6,000 (+ additional 6,000 in the future)
<b>Value of investment (current prices, VAT excluded)</b>	14,478,205 EUR	600,000 EUR

### Demand analysis and assumptions

In the city of Maribor there are currently 439 outdoor paid parking spaces that are owned by the Municipality (priced EUR1 per hour; average monthly rent EUR 60). Additionally there are 159 free parking spaces for short-stay (up to one hour) parking (so called blue parking zones) and 1,828 free parking spaces for long-stay parking (so called white zones). There are also 3,506 parking spaces in six public parking garages that serve public facilities in the near vicinity (e.g. cinema, hospital, market, etc.). The average price per hour is EUR 1.17 (ranging from EUR 0.7 to EUR 1.60) and the average monthly rent is EUR 69.4 (ranging from EUR 60 to EUR 84). Parking garages in shopping centres are not included in this analysis (MO Maribor, 2011).

Even though there are already parking spaces, several past studies showed that Maribor still has an inadequate number of parking spaces. Moreover, it lacks sustainable parking spaces and parking spaces that do not detract aesthetically from the city's image. In particular, the development plan for the area of parking completed in June 2009 anticipated the need of an additional 5,500 parking spaces in this area of Maribor (MO Maribor, 2011). For many people in the region, Maribor is the main shopping, cultural and administrative centre. All functions of regional importance are concentrated in the city, which results in many daily journeys to and from the city (Ministrstvo za okolje in prostor, 2008). Some municipalities in close proximity to the city have more than 60% of their residents commuting to Maribor daily (as indicated in the figure below).

Figure 36: Proportion of all daily commuters who travel daily to the municipality of Maribor (2002 Population Census)



Source: David Bole, Daily mobility of workers in Slovenia, Acta Geographica Slovenica, 2004.

Figure 37: Economic and Financial Assumptions of Parking Garage project

Assumptions on Revenues	Assumptions on Costs and Inflation	Financial Assumptions
<p><b>Garage revenues:</b></p> <p>Capacity of the garage: 509            No. of parking spaces leased to monthly renters: 20%            Average length of stay in the garage (non-monthly users): 2 hours            Average number of cars per day: 1,018 (twice the capacity)</p> <p><b>Revenues from parking fees:</b>            Daily revenues = number of cars in the garage * average length of stay * price per hour.            Price per hour is 1.2 EUR (based on average prices of other garages in 2011)            Monthly rent is 70 EUR (based on the average prices of other garages in 2011)</p> <p><b>Main Square revenues:</b></p> <p>Number of pavilions: 3 (one large and two smaller)</p> <p><b>Revenues from pavilions:</b>            Monthly rent for the big pavilion: 5,000 EUR (adjusted based on similar prices for pavilions in Ljubljana).            Monthly rent for the small pavilion: 3,000 EUR each.</p>	<p><b>Garage costs:</b></p> <p><b>Electricity:</b>            Yearly consumption: 752,360 kWh (calculated from data provided in the project documentation)            Yearly cost: 81,051.5 EUR (Javna Agencija RS za energijo, 2011)</p> <p><b>Labor costs:</b>            24,000 EUR for one security person and 24,000 EUR for technician and maintenance person.</p> <p>The costs of cleaning, fire insurance and other maintenance were calculated based on the distribution of costs of another parking garage. We used yearly security costs (24,000 EUR) as a basis. Cleaning costs represent 15% of security costs, fire insurance costs represent 37% of security costs (the amount was additionally checked with one insurance company) and other costs represent 15% of security costs.</p> <p>Annual <b>cleaning cost</b>: 3,619 EUR            Annual <b>insurance cost</b>: 9,049 EUR            Other annual <b>maintenance costs</b>: 3,713 EUR</p> <p><b>Main Square costs:</b>            Additional investment costs of EUR 600,000 are covered equally by equity and debt.</p> <p><b>Maintenance:</b>            3% of investment (maintenance of lights, paving, installation, etc.): 18,000 EUR per year</p>	<p>For WACC calculation we used a risk free rate of 5%. It is based on the required return on a Slovenian 10-year Government Bond in November 2011, which was around 7% (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus the 5% risk free rate was used.</p> <p>For the Pretax Required Return on Debt we used a 4.5% interest rate as this is the expected interest rate for JESSICA Loans (based on the Kredex case in Estonia).</p> <p>The Market Risk premium is 5.75% (Damodaran, Country Default Spreads and Risk Premiums, 2011) and the Corporate tax rate in Slovenia is 20%.</p> <p>For industry beta we took beta of 0.49 (Damodaran, 2011).</p>

*Electricity:*

*Mostly covered by subtenants, except for lighting.  
68,400 kWh per year; yearly cost: 7,359 EUR*

***Other:***

***Depreciation cost*** is calculated on a straight line basis  
for 20 years.

*We assumed the following inflation rates for prices of  
particular products and services: electricity – 4.82%  
annually, cleaning – 4.12% annually, insurance –  
5.19% annually, other maintenance services – 1.9%  
annually, parking fees and rents – 1.9% annually.*

### Baseline vs. JESSICA Scenario

Three scenarios are analyzed. The Baseline Scenario assumes financing of the project with mostly private investor capital. However, the economic situation questions the ability of private investors to raise sufficient funds for project realisation. Some funds are provided by the municipality. In the JESSICA scenarios we withdrew Public Funds received from the municipality and implemented a JESSICA mechanism. In both JESSICA cases 50% of private investor equity is matched by a 50% JESSICA loan. The difference between the two scenarios is the additional investment. The JESSICA 2 Scenario assumes investment in the renovation of the main square above the parking garage. The interest rate used for the JESSICA Loan was 0% (soft market conditions) and 2.07% (as the State aid reference rate for Slovenia from 1.3.2012).

Figure 38: Funding sources (Baseline scenario and two JESSICA Scenarios)

<b>Baseline Scenario</b>	<b>JESSICA 1 Scenario 0%</b>	<b>JESSICA 2 Scenario 2.07%</b>
1.84% - Municipality (266,399 EUR)	50% - JESSICA (7,239,103 EUR) – 20 years at 0% annual interest rate	50% - JESSICA (7,539,103 EUR) – 20 years at 2.07% annual interest rate
98.16% - Private investors (14,211,806 EUR)	50% - Private investors (7,239,103 EUR)	50% - Private investors (7,239,103 EUR)
	0% - Municipality	0% - Municipality
<b>Total investment: 14,478,205 EUR</b>	<b>Total investment: 14,478,205 EUR</b>	<b>Total investment: 14,478,205 EUR</b>

<b>JESSICA 0%</b>	<b>JESSICA 2,07%</b>
50% - Private investors (7,239,103 EUR)	50% - Private investors (7,239,103 EUR)
35% - Grant (5,067,372 EUR)	35% - Grant (5,067.372 EUR)
15% - JESSICA (2,171.731 EUR) – 20 years at 0% annual interest rate	15% - JESSICA (2,171,731 EUR) – 20 years at 2.07% annual interest rate
<b>Total investment: 14,478,205 EUR</b>	<b>Total investment: 14,478,205 EUR</b>

Figure 39: Cash flow analysis (Baseline scenario and two JESSICA Scenarios)

<b>Baseline Scenario</b>	<b>JESSICA 1 Scenario 0%</b>	<b>JESSICA 2 Scenario 2,07%</b>
Sources of funding: 100% Equity	Sources of funding: 50% JESSICA Loan, 50% Equity	Sources of funding: 50% JESSICA Loan, 50% Equity
WACC = 7.82%	WACC = 5.04%	WACC = 5.86%
Enterprise PV = 11,028,475 EUR	Enterprise PV = 18,183,604 EUR	Enterprise PV = 15,325,116 EUR
Equity PV = 11,028,475 EUR	Equity PV = 8,195,787 EUR	Equity PV = 7,383,289 EUR
IRR = 5.40%	IRR = 7.73%	IRR = 6.90%
	<b>JESSICA 0%</b>	<b>JESSICA 2.07%</b>
	Sources of funding: 15% JESSICA Loan, 50% Equity, 35% Grant	Sources of funding: 15% JESSICA Loan, 50% Equity, 35% Grant
	Enterprise PV = 13,378,837 EUR	Enterprise PV = 13,378,837 EUR
	Equity PV = 10,652,860 EUR	Equity PV = 10,396,064 EUR
	IRR = 6.51%	IRR = 6.34 %

## Conclusions

Analysis of project cash flows yields the following results:

- The use of the JESSICA mechanism improves Enterprise PV. Enterprise PV is higher in both JESSICA cases (18,183,604 EUR and 15,325,116 EUR respectively) because of the lower interest rate (WACC) at which cash flows are being discounted. WACC is lower in JESSICA Scenarios (7.73% and 6.90%) which is expected since financing the project with debt is less expensive than financing only with equity.
- Moreover, in both JESSICA Scenarios we get a higher IRR than in the Baseline Scenario, 7.73% and 6.90% in JESSICA Scenarios respectively compared to 5.40% in the Baseline scenario. These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime.
- The last two JESSICA Scenarios also have a higher IRR in comparison to the baseline scenario. However, they are slightly lower as opposed to scenarios with a higher proportion of JESSICA loans in their funding. Nevertheless, scenarios with a higher grant amount generate a higher Equity PV.
- In the baseline scenario (100% private investor financing) the estimated WACC is 7.82%. Enterprise PV which represents all net cash flows discounted at the WACC is 11,028,475 EUR.

## 2.3. Case Study: Network of Park & Ride Systems in Ljubljana Urban Region

So far, the development of the traffic system in Slovenia has been oriented towards road infrastructure and so Public Passenger Transport (PPT) stagnated (RRA LUR, 2010). Neither the railway system nor public road transport have improved significantly in the biggest cities. Some exceptions may be seen in the Municipality of Ljubljana (MOL), where some new bus lines were established or extended in order to move public transport closer to people living on the outskirts. This is in accordance with the main goal of the Regional Development Agency of the Ljubljana Urban region (RRA) which aims to have public transport nodes located within 300 meters of more than 80% of residents in the region. However, we cannot ignore previous developments which did not seriously consider the problem of the increasing number of cars travelling to the city on a daily basis, which has reduced the mobility of non-motorized users, caused frequent traffic jams on main roads and increased emissions and noise. (RRA LUR, 2010).

In order to achieve sustainable mobility in the Ljubljana Urban Region (LUR), the use of private vehicles must first be reduced. A proportion of the passengers that travel to Ljubljana with private cars (71% according to 2008 data) must be shifted from private cars to public transport.

Figure 40: Comparison of methods for travel to work in LUR with some other urban regions in Europe

	Number of inhabitants	Share of travel to work by car	Share of travel to work on foot/by bicycle	Share of travel to work by public transport (metro, bus, tram)	Other
Ljubljana (SI)	488.364	71	12	16	1
Graz (AT)	357.548	60	20	18	2
Kobenhavn (DK)	1.806.667	52	24	20	4
Tartu (EE)	149.488	34	28	36	3
Barcelona (ES)	4.804.606	49	17	29	5
Oviedo (ES)	1.075.329	55	27	17	2
Logrono (ES)	270.400	58	31	9	3
Oulu (FI)	192.974	49	23	28	0
Luxembourg (LU)	136.625	66	14	17	3
s' Gravenhage (NL)	955.243	51	27	19	3
Amsterdam (NL)	1.320.137	51	22	24	3
Rotterdam (NL)	1.345.339	58	21	18	3
Utrecht (NL)	1.117.997	57	26	14	3
Groningen (NL)	359.957	55	35	7	3
Enschede (NL)	608.827	62	32	3	3
Oporto (PT)	1.089.118	46	21	27	6
Braga (PT)	164.192	47	25	21	7
Banska Bystrica (SK)	111.984	26	26	47	0
Nitra (SK)	163.540	22	21	53	4

Source: Institute for Spatial Policies, 2008

### Project description and objectives

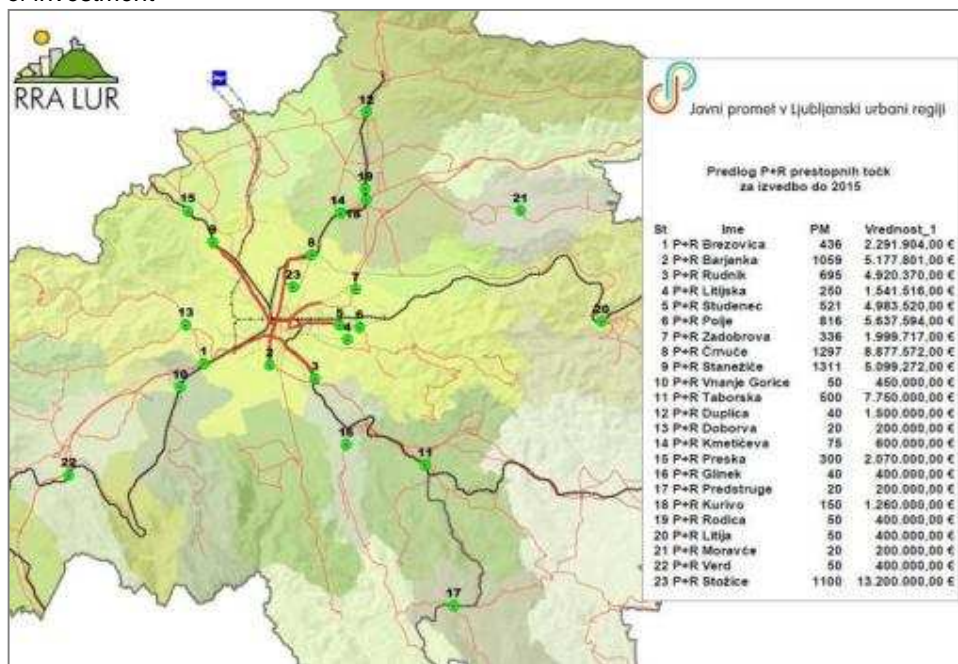
It is expected that the renovation of PPT in LUR would boost the region's attractiveness and quality of living, studying, working and visiting. As suggested by RRA LUR (2010), this "entails a potential for synergy development effects in numerous fields, which augments the region's international competitiveness." The study entitled *Expert guidelines for the regulation of regional public transport* was submitted in late 2009 and proposed a PPT system designed to allow users to choose a transport service that is attractive in terms of time and cost. It was planned that quality

PPT in LUR would be established by 2027. “The common goal of the new PPT regulation has been to raise the quality of life in the region with the paradigm of sustainable mobility” (RRA LUR, 2010).

As noted in the study about PPT in LUR (RRA LUR, 2010), “the shift to public transport can be accomplished by traffic restrictions and toll schemes for entry to urban centers, respectively, followed by favoring PPT development.” The most effective solutions for the latter are:

- High-speed bus routes (HSRs) running in dedicated yellow lanes that link inter-modal interchange points with car parks alongside arterial roads.
- Park & Ride (P&R) sites as mentioned inter-modal interchange points where daily commuters are offered the most convenient transport solution.

Figure 41: Planned P&R sites with the number of parking spaces and value of investment



Source: RRA LUR

Figure 42: High-speed routes system that connects P&R sites alongside arterial roads



Source: RRA LUR, 2010

The positive effects of such renovation of PPT are numerous, but most important is sustainability. It is expected that trips made by PPT will increase by more than 50% as a result of this investment. The survey that was performed showed that the introduction of high-speed routes running 30% faster would attract 60% of all respondents to public transport despite a 10% higher cost. Additional passengers would switch from private cars to PPT at the journey's origin or at P&R sites. "Such a rise in the use of Public Passenger Transport (PPT) services (reduction in the number of private cars used) results in a better quality of living in the region due to the reduction of noise, gas emissions (CO<sub>2</sub>, NO<sub>x</sub>, ...) particulate matter (PM<sub>10</sub>), and the relief of traffic congestion in urban centers. It also contributes to reorienting surfaces formerly used by motorized traffic to give priority to non-motorized traffic, green areas and areas for recreation or public use. The proposed PPT plan in LUR with HSRs on yellow lanes is an upgrading of the existing plan, which allows for its rapid implementation. The proposed HSR system is sustainable over the entire planning period, which leaves sufficient time to reflect on the next step: tram or underground railway (metro)" (RRA LUR, 2010).

The whole system of P&R sites in the region will act as intermodal interchange points situated in local centers and on the outskirts of Ljubljana where, apart from various forms of transportation, users will also have at their disposal other services (e.g. libraries, pharmacies, some administrative offices, shops, banks). Thus the function of the intermodal interchange point is two-fold: to enable fast and safe transits between forms of transport and to attract passengers to public forms of transport, thereby making them competitive (RRA LUR, 2010).

"Contemporary HSRs will run along the main routes in Ljubljana and, given the traffic burden, they will connect all parts of the region and also of Slovenia. The objective of HSRs is a quality connection with public transport starting bus stops capable of generating sufficient demand and thus boosting the competitiveness of public against the private transport and shift passengers from private cars to public transport before they reach the urban

agglomeration. Within the HSRs system, travel speed has to be raised from today's average of 5km/h to 24 km/h and, along with it, the frequency rate in peak periods to 5 minutes" (RRA LUR, 2010).

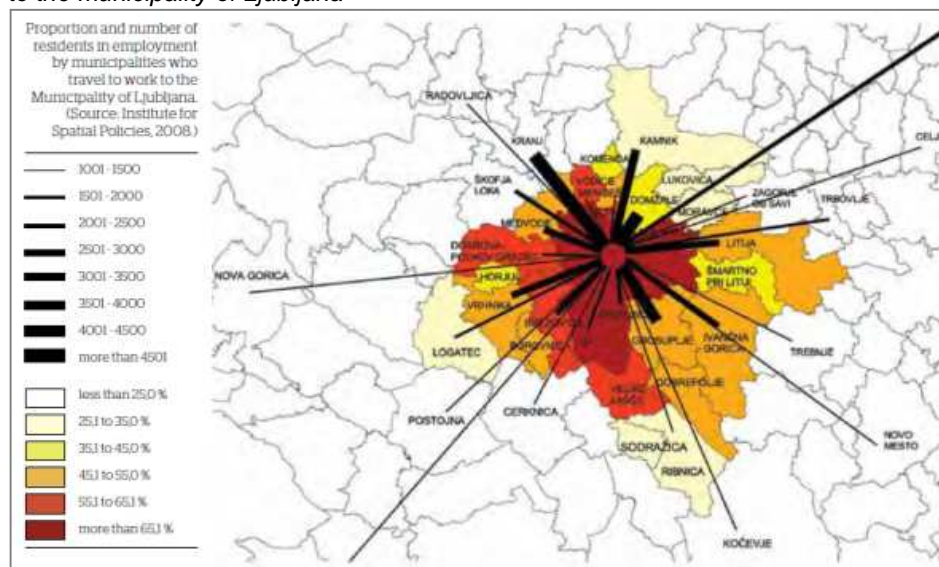
Figure 43: LUR Investments' characteristics

	<b>P&amp;R</b>	<b>Main Square and The Old Platform</b>
<b>Characteristics</b>	23 sites (14 linked to Public Bus lines) with overall 9,186 parking spaces. Put in use in years 1-6	Four high-speed routes with yellow lines for buses. Put in use in year 6.
<b>Value of investment</b>	69,559,271 EUR	7,454,971 EUR
<b>Funding (Baseline)</b>	50% Municipality, 50% EU	50% Municipality, 50% EU

### Demand analysis and assumptions

There are approx. 140,000 daily commuters that travel to Ljubljana for work or education. Of those, some are already using PPT (especially students) rather than cars. However, there are still around 25.000 daily commuters who use private cars and represent a potential market for the P&R systems (RRA LUR, 2010).

Figure 44: Proportion and number of all daily commuters who travel to work to the municipality of Ljubljana



Source: RRA LUR, 2010

There are 23 P&R sites planned. Assumptions regarding those P&R sites are presented in the table on the next page. Price (columns 1 and 2) is calculated based on the interval on current prices in Ljubljana. P&Rs that are located closer to the center are expected to have a higher price. Also, the number of cars per day (4) is judged based on location (proximity to the city) and number of parking spaces. The average duration (8) a car is parked (for people who do not use daily but "per hour" tariffs) is assumed to be 1.6 hours. Moreover, the share of cars that pay a daily tariff is based on a subjective assessment. We believe that prices are very favorable, especially for the daily tariff, and thus more people will be inclined to pay.

Commuters that pay the daily tariff at the P&R sites linked to the LPP (Ljubljana Public Bus) line receive two »free« tickets for the bus valid on that day. This, together with the electricity and maintenance is considered as a cost. However, we consider this ticket as a cost only for those commuters who actually use it. We assumed that only a certain percentage of commuters paying a daily tariff will indeed use the bus since they might use other means of transport or walk if their job/school is close to the P&R site. We assumed that 50% of commuters who pay the daily tariff will also use both bus tickets.

Figure 45: P&R sites' basic assumptions

No.	P&R name	Tariffs		Parking spaces (3)	No. of cars per day in times capacity (4)	No. of cars per day (5) = (3) * (4)	% cars paying daily tariff (6)	% cars paying per hour tariff (7)	Average duration in hours (non-daily) (8)	Source of commuters (cities, towns) (9)	Current PPT (10)
		Daily (1)	Per hour (2)								
1	<b>Brezovica</b>	1.80 EUR	1.00 EUR	436	1.80	785	0.7	0.3	1.6	Logatec, Vrhnika, Postojna	RS, LPP
2	<b>Barjanka</b>	2.40 EUR	1.00 EUR	1059	1.80	1906	0.7	0.3	1.6	Barje, Logatec, Vrhnika, Postojna	LPP
3	<b>Rudnik</b>	2.40 EUR	1.00 EUR	695	2.00	1390	0.6	0.4	1.6	Škofljica, Lavrica, Ivančna Gorica, Grosuplje	RS, LPP
4	<b>Litijska</b>	1.80 EUR	1.00 EUR	250	1.50	375	0.7	0.3	1.6	Litija, Grosuplje	LPP
5	<b>Studenec</b>	1.80 EUR	1.00 EUR	521	2.00	1042	0.7	0.3	1.6	Litija, Senožeti, Domžale, Kamnik, Grosuplje	RS, LPP
6	<b>Polje</b>	1.80 EUR	1.00 EUR	816	1.80	1469	0.7	0.3	1.6	Litija, Senožeti, Sevnica, Domžale	RS, LPP
7	<b>Zadobrova</b>	1.80 EUR	1.00 EUR	336	1.50	504	0.6	0.4	1.6	Litija, Senožeti, Sevnica, Domžale	LPP
8	<b>Črnuče</b>	2.40 EUR	1.00 EUR	1297	2.00	2594	0.7	0.3	1.6	Kamnik, Mengeš, Domžale, Trzin	RS*, LPP
9	<b>Stanežiče</b>	2.40 EUR	1.00 EUR	1311	1.80	2360	0.7	0.3	1.6	Škofja Loka, Kranj, Medvode	RS LPP
10	<b>Vnanje Gorice</b>	1.80 EUR	1.00 EUR	50	1.80	90	0.8	0.2	1.6	Logatec, Vrhnika, Postojna	RS, LPP
11	<b>Taborska (Grosuplje)</b>	2.40 EUR	1.00 EUR	500	2.00	1000	0.6	0.4	1.6	Novo mesto	RS, LPP
12	<b>Duplica</b>	1.40 EUR	N/A	40	1.50	60	0.8	0.2	1.6	Kamnik	RS, PPP
13	<b>Dobrova</b>	1.40 EUR	N/A	20	1.50	30	1	0	1.6	Horjul, Polhov Gradec	PPP, LPP*

14	<b>Kmetičeva (Trzin)</b>	1.40 EUR	N/A	75	1.80	135	1	0	1.6	Kamnik, Mengeš, Domžale	RS, PPP, LPP*
15	<b>Preska (Medvode)</b>	2.00 EUR	1.00 EUR	300	2.00	600	0.6	0.4	1.6	Škofja Loka, Kranj	RS, LPP
16	<b>Glinek</b>	1.40 EUR	N/A	40	1.50	60	1	0	1.6	Grosuplje, Ivančna Gorica	RS**, PPP, LPP**
17	<b>Predstruge (Dobropolje)</b>	1.40 EUR	N/A	20	1.50	30	1	0	1.6		RS
18	<b>Kurivo</b>	1.40 EUR	N/A	150	1.50	225	1	0	1.6	Kamnik, Mengeš, Domžale	RS, PPP, LPP*
19	<b>Rodica</b>	1.40 EUR	N/A	50	1.50	75	1	0	1.6	Kamnik, Mengeš, Domžale	RS, PPP, LPP*
20	<b>Litija</b>	2.00 EUR	1.00 EUR	50	1.50	75	0.6	0.4	1.6	Litija	RS, PPP
21	<b>Moravče</b>	1.40 EUR	N/A	20	1.50	30	1	0	1.6	Moravče, Blagovica	PPP
22	<b>Verd</b>	1.40 EUR	N/A	50	1.50	75	1	0	1.6		RS, PPP
23	<b>Stožice</b>	2.40 EUR	1.20 EUR	1100	1.90	2090	0.6	0.4	1.6	Kamnik, Mengeš, Domžale, Trzin	LPP

Legend:

RS – railway station; LPP – Ljubljana Public Bus line; PPP – Commercial Bus line; \* - planned; \*\* - near; N/A – not available, only daily tariff available;

Number in the first column is the same as in Figure 9: Planned P&R sites with the number of parking spaces and value of investment

Figure 46: Other assumptions on revenues and costs for the LUR project

Assumptions on Revenues	Assumptions on Costs	Financial Assumptions
<p><b>Parking spaces in use:</b>  Year 1: 1,100 (1,100)  Year 2: 1,150 (50)  Year 3: 2,209 (1,059)  Year 4: 8,536 (6,327)  Year 5: 9.186 (650)</p> <p>It is assumed that new P&amp;Rs are finished midyear. Hence, first cash flow is only half-year cash flow.</p> <p><b>Changes in year 7 when HSRs are finished:</b>  5% increase in the number of cars using P&amp;Rs daily  20 percentage point increase in use of LPP tickets.  10 percentage point increase in the share of users that pay for a daily parking tariff.</p>	<p><b>Electricity cost – without inflation:</b>  Yearly consumption per street light: 1000 kWh  Five street lights per 100 cars.  Yearly cost = no. of street lights * 1000 kWh * price per kWh (0.108 EUR) (Javna Agencija RS za energijo, 2011)</p> <p><b>LPP tickets cost – without inflation:</b>  Transfer price: 0.8 EUR for one ticket (1.6 EUR for two tickets that they receive)  Daily cost = 1.6 EUR * no. of daily parking tickets sold * share of commuters that actually use the ticket</p> <p><b>Maintenance cost – without inflation:</b>  Cleaning, maintenance of lighting and other maintenance.  Average of 2EUR per parking space per month.  Monthly cost = no. of parking spaces * 4EUR</p> <p>There is no insurance hence insurance costs are not included.</p> <p><b>Depreciation cost:</b>  We estimated that 70% of the investment is subject to depreciation (the remaining 30% other is non-depreciated investment in land, etc.)  Depreciation cost is calculated on a straight line basis for 20 years.</p>	<p>For WACC calculation we used a risk free rate of 5%. It is based on the required return on a 10-year Slovenian Government Bond in November 2011 which was around 7% (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus a 5% risk free rate is used.</p> <p>For the Pretax Required Return on Debt we used a 4,5% interest rate as this is the expected interest rate for JESSICA Loans.</p> <p>The Market Risk premium is 5.75% (Damodaran, Country Default Spreads and Risk Premiums, 2011) and the Corporate tax rate in Slovenia is 20%.</p> <p>For industry beta we took beta of 0.49 (Damodaran, 2011).</p> <p>We assumed the following inflation rates for the prices of particular products and services: electricity – 4.82% annually, cleaning – 4.12% annually, LPP tickets – 3% annually, parking tariffs – 2% annually.</p>

### Baseline vs. JESSICA Scenario

In the Baseline Scenario the 50% Municipality Equity is matched by an EU grant. In the JESSICA Scenario we substitute 15% of the Municipality Equity for a JESSICA Loan. The JESSICA Loan represents reinvested public capital. Similar to funds invested by the municipality it is public money with one big difference – it can be reinvested when returned to the UDF. The interest rate used for the JESSICA Loan was 2.07% (State aid reference rate for Slovenia from 1.3.2012).

Figure 47: Funding sources for the LUR project (Baseline scenario and JESSICA Scenario)

Municipality Equity (50%)	Grants (50%)	
Municipality Equity (50%)	JESSICA Loan (50%)	
Municipality Equity (100%)		
Municipality Equity (50%)	Grants (35%)	JESSICA Loan 0% (15%)
Municipality Equity (50%)	Grants (35%)	JESSICA Loan 2.07% (15%)

Figure 48: Results for the LUR project (Baseline scenario and JESSICA Scenario)

<b>Baseline Scenario</b>	<b>JESSICA Scenario 0%</b>	<b>JESSICA Scenario 2,07%</b>
50% Municipality Equity 50% Grants	50% Municipality Equity 50% JESSICA Loan	50% Municipality Equity 50% JESSICA Loan
Enterprise Present Value: 70,778,888 EUR	Enterprise Present Value: 126,429,330 EUR	Enterprise Present Value: 103,353,286 EUR
Equity Present Value: 107,863.728 EUR	Equity Present Value: 48,775,118 EUR	Equity Present Value: 44,714,001 EUR
IRR: 34.64 %	IRR: 10.77%	IRR: 10.01%

<b>Municipality Scenario</b>	<b>JESSICA 0%</b>	<b>JESSICA 2,07%</b>
100% Municipality Equity	50% Municipality Equity 15% JESSICA Loan 35% Grant	50% Municipality Equity 15% JESSICA Loan 35% Grant
Enterprise Present Value: 70,778,888 EUR	Enterprise Present Value: 77,635,017 EUR	Enterprise Present Value: 77,635,017 EUR
Equity Present Value: 70,778,888 EUR	Equity Present Value: 87,427,398 EUR	Equity Present Value: 86,126,444 EUR
IRR: 29.24 %	IRR: 23.07%	IRR: 22.65%

## Conclusions

Analysis of project cash flows gives us the following results:

- In both scenarios we get a highly positive IRR, 10.77% and 10.01% respectively, that is above WACC (4.73% and 5.65% respectively). These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime. Through the implementation of the JESSICA mechanism it is possible to save 38,507,121 EUR in grants which can be made available for other projects. The reduction of the grant amount decreased the profit, however as the municipality is the investor, profit is not the primary focus

in that particular project. Other objectives, such as an improved standard of living in the city, are more important. Moreover, the municipality will be able to save some funds and invest them elsewhere as necessary.

- The use of the JESSICA mechanism improves Enterprise PV (126,429,330 EUR and 103,353,286 EUR) because of the lower interest rate (WACC) at which cash flows are being discounted. This is expected since financing the project with debt is less expensive than financing it with equity capital. In the baseline scenario (50% grant, 50% municipality) the estimated WACC is 7,8%. Enterprise PV which represents all net cash flows discounted at the WACC is 70,778,888 EUR.
- The Municipality Scenario shows a slightly lower IRR (29.24%) as opposed to the Baseline Scenario. The last two JESSICA Scenarios, where grants represent 35% of the total financing, have a higher IRR and Equity PV in comparison to the first two JESSICA Scenarios. On the other hand, the Enterprise PV is lower than in the first two cases.

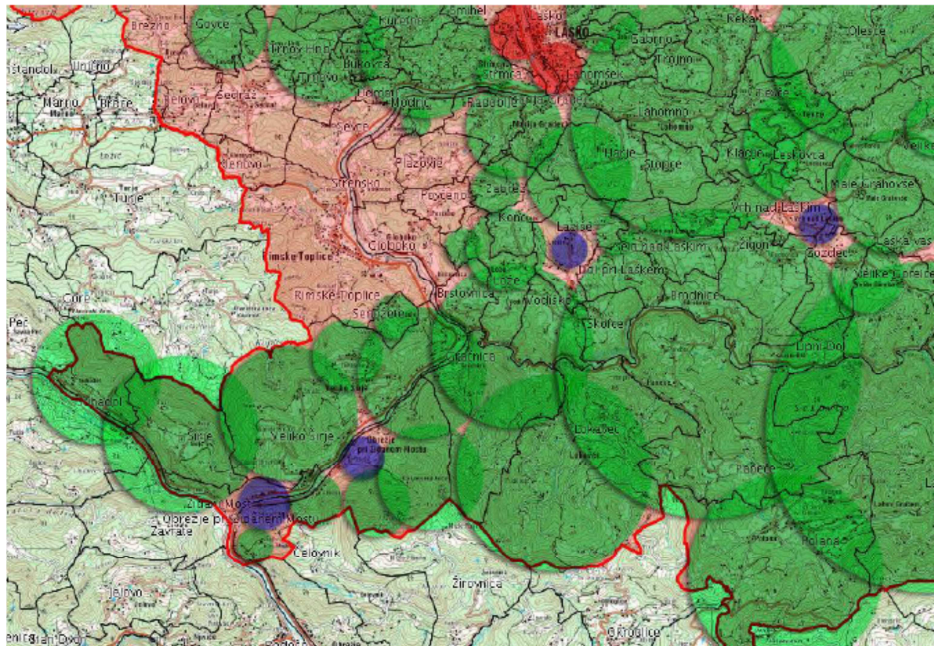
## ***2.4. Case Study: Construction of an open broadband electronic communication network in the municipalities Dobrna, Laško, Štore and Vojnik***

### **Project description and objectives**

The objective of the investment programme is the construction of an open broadband network of electronic communications. The primary purpose of the investment is the construction of a broadband network of electronic communications in the area of blind spots in the municipalities Dobrna, Laško, Štore and Vojnik.

The aim of the Investment Operation is to enable access to all network operators and service providers as well as all interested end users under the same conditions, to create preconditions for further development of the blind spot area, new jobs, preservation and development of the company, entire area and region.

Figure 49: The geographical location of blinds spots in municipalities Dobrna, Laško, Štore and Vojnik



With the existing telecommunications network, Telekom Slovenije d.d. covers all the municipalities of Dobrna, Laško, Štore and Vojnik. In the municipality area in question, the cable network is constructed of cables of varying capacities and copper conductors, telecommunications cable network is partly laid in ground and partly above ground. The cables and lines above the ground are over 30 years old.

The existing telecommunications network and devices do not enable access to the broadband network in all areas. These areas are defined as “blind spots”. There are two types of blind spots:

- Complete blind spots which means that none of the households in the settlement can have broadband connection.
- Partial blind spots which means that some users do have broadband connection, however, the network is in such condition that it does not enable expansion of the offer. For this reason the households which neither have broadband access nor the possibility of obtaining it, considering the data of providers, are entitled to connection within the frame of construction of an open broadband network. Data on households with no broadband connection were delivered by the investor.

### Demand analysis and assumptions

The constructed network will be leased to the operators and in this way, contractor revenue will be created with the administration and maintenance of the system. In addition to (real) revenue, social benefits will also be reaped.

The socio-economic benefits of the construction of a broadband network of electronic communications are reflected in:

- Obtaining charges, contributions and reimbursements which the network operator charges together with the price and are deducted from the municipal and state budget; VAT payment from the investment and invoicing of services.
- Opportunity costs due to

- Preservation of settlements in rural areas – less costs for new apartments in cities
- Reduction of disease-related costs (healthier life in rural areas – less disease)
- Reduction of unemployment in rural areas
- Preservation of the cultural landscape of rural areas
- Accelerated development of rural areas (entrepreneurship, economy, tourism...) resulting in preservation and new jobs (bigger and smaller shops, tourism, catering ...)
- Operators' revenues (added value – provision of services through this network or system)

Consumer (household and corporate) savings achieved with the use of services through the broadband network (Klik, electronic banking, e-administration)

- Companies' revenues (added value), using the system for online shops, benefits and savings from other services (e-administration, e-school – education, e-medical treatment ...).

Calculations from the cash flow of the project were supplemented with the following effects:

Revenues from charges, contributions and reimbursements when charging services are calculated on the basis of services to be provided and VAT charged, investment VAT, contributions for new employees, tax on the profits of new companies

- VAT services
- VAT investment (with a delay of a refund or profit)
- Contributions for new employees: we have estimated 2 new employees per 100 households in the blind spot area, which means a total of 36 new employees (in 2014) with an average gross salary of EUR 1,237; contributions here amount to 36.2% + 5% salary tax
- Tax on profits of new companies: our estimate is that in 2014, there will be 30 new companies with average revenue of EUR 5,500, due to the investment; tax or profit from this is 30% of revenue
- Environmental tax for pollution of the environment due to discharge of waste waters – 0.5192 EUR/m<sup>3</sup>;

Opportunity costs – benefits are calculated on the basis of estimate of new posts, lower unemployment, which means lower costs for the unemployed, lower costs of insurance for the unemployed, aid, added value of operators and users of services, savings of households and companies with use of the system

- New job openings – salaries
- Lower unemployment: lower costs of health insurance (23.6%), aid
- Value added: average value added
- Savings of households and companies: in average EUR 5 per household per month.

With investments of this kind – construction of network in blind spots, where there is no commercial interest – benefits of the investment are even more important, although it is difficult or even impossible to evaluate them financially.

Due to its nature – investment in construction of broadband network of electronic communications – the investment in question cannot be justified by financial and economic indicators, since the purpose and aim of the investment is not its profitability.

The socio-economic aspect takes into consideration broader interests than merely economic ones and these are very difficult or even impossible to evaluate financially. This is about facilities and devices of public services of environmental protection and positive effects of the protection of the human environment.

The Investment Operation of the construction of the broadband network of electronic communications in the blind spot area will have the following positive effects:

- Investment - construction of a broadband network of electronic communications in the blind spot area in the municipalities of Laško, Dobrna, Štore and Vojnik will influence the further development of this more scarcely populated area as it will create preconditions and possibilities for the further accelerated development of this area . This in turn will indirectly influence the development of tourism and recreational activities and increase the number of guests, and tourists, which will indirectly promote the development of other activities (craft industry, small industry, etc.), as well as the development of the Šmohor area.
- Further development of rural areas.
- Improved and increased quality of life in the blind spot areas in the municipalities of Laško, Dobrna, Štore and Vojnik. Blind spot areas will be more appealing for population; the current population and activities in this area (influence on depopulation and development) will be preserved; the influence will also be noticeable in the increased level of health security, social inclusion of the population and increased level of education and schooling.
- Further development of Šmohorje, Dobrna, Svetina as well as recreational areas enabling connections that will indirectly influence the development of tourism in the entire municipality of Laško (and beyond in the municipalities of Žalec, Zreče, Šentjur).
- Availability of a wider tourist offer that will lead to the further development of the area in terms of new jobs and supporting activities.
- The enabling of the accelerated development of the rural area (positively influencing catering, entrepreneurship, tourism, etc.) including preservation of population in the rural area, lower unemployment, new posts, more uniform regional development, increased level of social and health security, education and schooling, information society, quality of life.

Figure 50: Economic and Financial Assumptions of the project

Assumptions on revenues	Assumptions on costs and inflation	Financial Assumptions
Revenue calculations include network construction dynamics Network accessibility increases annually and reaches 100% in 2040	Material costs: 48,285 EUR p.a. Provider: 28,971 EUR p.a. Operator: 19,314 EUR p.a.	For the WACC calculation we used a risk free rate of 5%. This is based on the required return of 10-year Slovenian Government Bonds in November 2011 which was around 7% (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus the 5% risk free rate was used.
The constructed network will be rented to operators which will generate revenues. In the revenue estimations only households in white spots are included	Service Cost: 54,462 p.a. Insurance, Telecommunications, energy Provider: 35,682 EUR p.a. Operator: 18,780 EUR p.a.	
Subscriber development 2013-2040: TV: 1,001 --> 2,700 Telefon: 475-->1,350 Internet: 601-->1,620	Labor costs: 109,200 EUR p.a. 4 employees, 2 for the provider 2 for the operator responsible for network operation and maintenance	
Revenues are	3. Depreciation: 485,736 EUR p.a. Facilities 5%: 234,879 EUR p.a. Equipment 14%: 97,000	For the Pretax Required Return on Debt we used 4.5% and 2.5% respectively as this is

<p>estimated through the number of connections and number of subscribers to TV, telephone and internet. All service prices include VAT</p> <p>Services pricing Connection Fee: 99 EUR/ connection TV subscription: 16.40 EUR per month/ per subscriber Telephone subscription: 5.9 EUR per month/ per subscriber Internet subscription: 18.00 EUR per month/ per subscriber</p>	<p>EUR p.a. Other investments 5%: 153,857 EUR p.a.</p> <p>4. Other costs: 50,699.25 EUR p.a.</p> <p>5. Maintenance: 45,000 EUR p.a. 30% of depreciation</p> <p>Total annual costs: 738,920.25 EUR</p> <p>2% inflation is assumed on all revenues and costs except on the connection fee</p>	<p>the expected interest rate for JESSICA Loans (based on different cases).</p> <p>For the MIRR calculation in the financial modelling we used WACC as both the discount rate and the investment rate. We could not obtain the true IRR value due to unusual financing cash flows.</p>
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### Baseline vs. JESSICA scenario

In the Baseline Scenario the 16.66% private investors' equity is matched by a EU grant amounting to 83.29% and equity from municipalities amounting to 0.05%. In the JESSICA Scenario we substituted 43.34% of such grants with a JESSICA Loan. Similar to the Grants the JESSICA Loan is public money but there is a relevant difference – it can be reinvested when the loan is returned to the UDF. The interest rate used for the JESSICA Loan in the two sub-scenarios was 0% (soft market conditions) and 2.07% (State aid reference rate for Slovenia from 1.3.2012) respectively to provide a good range of possible values.

Figure 51: Funding sources for the project (Baseline scenario and JESSICA Scenario)

<b>Grants (83.29%)</b>	<b>Private investors' Capital (16.66%)</b>	<b>Municipality (0.05%)</b>
<b>Grants (40%)</b>	<b>Private investors' Capital (16.66%)</b>	<b>JESSICA Loan 0% rate (43.34%)</b>
<b>Grants (40%)</b>	<b>Private investors' Capital (16.66%)</b>	<b>JESSICA Loan 2,07% rate (43.34%)</b>
<b>Municipality (100%)</b>		
<b>Municipality (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan 0% rate (15%)</b>
<b>Municipality (50%)</b>	<b>Grants (35%)</b>	<b>JESSICA Loan 2.07% rate (15%)</b>

Figure 52: Results for the project (Baseline scenario and JESSICA Scenario)

<b>Baseline Scenario</b>	<b>JESSICA Scenario (0%)</b>	<b>JESSICA Scenario</b>
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(2.07%)		
16.66% Private investors' capital	16.66% Private investors' Capital	16.66% Private investors' Capital
83.29% Grants	40% Grants	40% Grants
0.05% Municipality	43.34% JESSICA Loan	43.34% JESSICA Loan
Enterprise Present Value: 3,736,724 EUR	Enterprise Present Value: 6,756,995 EUR	Enterprise Present Value: 403,477 EUR
Equity Present Value: 12,974,906 EUR	Equity Present Value: 6,171,635 EUR	Equity Present Value: 5,496,733 EUR
MIRR: 18.76%	MIRR: 10.31%	MIRR: 10.41%

Municipality Scenario	JESSICA (0%)	JESSICA (2,07%)
100% Municipality	50% Municipality 35% Grants 15% JESSICA Loan	50% Municipality 35% Grants 15% JESSICA Loan
Enterprise Present Value: 960,816 EUR	Enterprise Present Value: 960,816 EUR	Enterprise Present Value: 960,816 EUR
Equity Present Value: 1,554,126 EUR	Equity Present Value: 5,588,742 EUR	Equity Present Value: 5,385,409 EUR
MIRR: -0.03%	MIRR: 5.94%	MIRR: 5.78%

## Conclusions

Analysis of project cash flows yields the following results:

- We get a highly positive MIRR of 18.76% in the Baseline Scenario and a positive MIRR of 10.31% and 10.41% in both JESSICA Scenarios respectively. These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime. Through the implementation of the JESSICA mechanism it is possible to save 5,010,055 EUR in grants which can be made available for other projects. The reduction of the grant amount decreased the profit of the project but it still leaves a reasonable margin for the private investor.
- WACC is lower in both JESSICA Scenarios, 7.09% and 5.93% respectively, which is expected since financing the project with debt is less expensive. In the baseline scenario (83.29% grant, 16.66% private investor financing, 0.05% municipality financing) the estimated WACC is 8.62%.
- The Municipality Scenario has a negative MIRR, while both the Enterprise and Equity PV are much lower than those in the Baseline Scenario. In the last two JESSICA Scenarios the Equity PV are lower in comparison to the first two JESSICA Scenarios due to a lower share of grants and JESSICA loans in total financing.

## 2.5. Case Study: Biogas power plant at the Loke waste water treatment plant

### Project description and objectives

The objective of the project is to produce renewable energy from biodegradable waste, solving municipal waste management problems, promoting local energy

self-sufficiency, reducing greenhouse gas emissions and providing residents with a cheaper alternative energy.

### **Demand analysis and assumptions**

Previously the focus was on removing compounds from wastewater. Now a wastewater facility can generate value through the production of biogas. Biogas from wastewater treatment plants (WWTPs) has been successfully used to provide both heat and electricity and also to qualify for carbon credits, which can be sold on the market. Therefore adopting a wastewater treatment system that recovers biogas is a way to meet corporate sustainability targets.

High oil & gas prices favor Biogas projects but direct incentives (grants) and indirect incentives (tax deductions, renewable energy quotas) increase their appeal.

There are a number of benefits of biogas to energy wastewater systems:

- Significant cost savings associated with transporting and incinerating wastewater sludge offsite
- The treated wastewater meets government discharge standards
- More effective than limiting Carbon Dioxide going to the atmosphere
- Provides innovative financing using carbon credits
- Reduces or eliminates odor and groundwater pollution
- Provides employment, generates power
- Reduces reliance on wastewater lagoons and ponds

Figure 53: Economic and Financial Assumptions of the project

Assumptions on revenues	Assumptions on costs and inflation	Financial Assumptions
The generated electricity is bought by Borzen which is the entity responsible for the organisation of the Slovenian electricity market	Operating costs are estimated at 5% of total investment value: 25,000 EUR annually  All risk insurance 2,750 annually	For the WACC calculation we used a risk free rate of 5%. This is based on the required return of 10-year Slovenian Government Bonds in November 2011 which was around 7% (MMC RTVSLO, 2011). It is assumed that the situation will improve in the next 18 years of this project and thus the 5% risk free rate was used.
Borzen electricity buying price: 6.25 EUR/ kWh	2% inflation is assumed on all revenues and costs	
Estimated annual electricity production in kWh: 8,000	Depreciation is spread equally across the 15 year period at 33,333 EUR annually	
Annual revenues: 50,000 EUR		For the Pretax Required Return on Debt we used 4.5% and 2.5% respectively as this is the expected interest rate for JESSICA Loans (based on different cases).
Annual energy loss, calculated after year 5: 2%		For the private Loan we used a 6.5% annual interest rate as specified by the project documentation.

### Baseline vs. JESSICA scenario

In the Baseline Scenario the 63% municipality equity is matched by a 37% of private loan (with an annual interest rate of 6.5%). In the JESSICA Scenario we reduced the municipality equity and the private loan with a 30% JESSICA Loan. Similar to the Grants the JESSICA Loan is public money but there is a relevant difference – it can be reinvested when the loan is returned to the UDF. The interest rate used for the JESSICA Loan in the two sub-scenarios was 0% (soft market conditions) and 2.07%(State aid reference rate for Slovenia from 1.3.2012) respectively to provide a good range of possible values.

Figure 54: Funding sources for the project (Baseline scenario and JESSICA Scenario)

<b>Municipality (63%)</b>	<b>Private Loan (6.5%) (37%)</b>	
<b>Municipality (33%)</b>	<b>Private Loan (6,5%) (37%)</b>	<b>JESSICA Loan 0% rate (30%)</b>
<b>Municipality (33%)</b>	<b>Private Loan (6,5%) (37%)</b>	<b>JESSICA Loan 2.07% rate (30%)</b>

<b>Municipality (100%)</b>		
<b>Municipality (50%)</b>	<b>Grant (35%)</b>	<b>JESSICA Loan 0% rate (15%)</b>
<b>Municipality (50%)</b>	<b>Grant (35%)</b>	<b>JESSICA Loan 2.07% rate (15%)</b>

Figure 551: Results for the project (Baseline scenario and JESSICA Scenario)

<b>Baseline Scenario</b>	<b>JESSICA Scenario (0%)</b>	<b>JESSICA Scenario (2.07%)</b>
<b>63% Municipality</b>	33% Municipality	33% Municipality
<b>37% Private loan (6.5%)</b>	37% Private loan (6.5%)	37% Private loan (6.5%)
	30% JESSICA Loan	30% JESSICA Loan
<b>Enterprise Present Value: 280,724 EUR</b>	Enterprise Present Value: 406,938 EUR	Enterprise Present Value: 355,632 EUR
<b>Equity Present Value: 166,522 EUR</b>	Equity Present Value: 201,219 EUR	Equity Present Value: 129,596 EUR
<b>IRR: 3.3%</b>	IRR: 5.83%	IRR: 3.78%

<b>Municipality Scenario</b>	<b>JESSICA Scenario (0%)</b>	<b>JESSICA Scenario (2.07%)</b>
<b>100% Municipality</b>	50% Municipality	50% Municipality
	35% Grants	35% Grants
	15% JESSICA Loan	15% JESSICA Loan
<b>Enterprise Present Value: 314,347 EUR</b>	Enterprise Present Value: 296,035 EUR	Enterprise Present Value: 296,035 EUR
<b>Equity Present Value: 227,766 EUR</b>	Equity Present Value: 367,364 EUR	Equity Present Value: 376,476 EUR
<b>IRR: 3.8%</b>	IRR: 42.91%	IRR: 44.16%

## Conclusions

Analysis of project cash flows yields the following results:

- We get a positive IRR of 3.3% in the Baseline Scenario and a positive IRR of 5.83% and 3.78% in both JESSICA Scenarios respectively. These financing cash flows show the ability of the project to finance itself from the cash flows generated during the project's lifetime. Through the implementation of the JESSICA FI it is possible to save 150,000 EUR of the municipal budget which can be made available for other projects.
- WACC is lower in both JESSICA Scenarios, 5.04% and 5.86% respectively, which is expected since financing the project with a JESSICA Loan is less expensive than financing it only with a private Loan.
- In the baseline scenario the estimated WACC is 7.7%. Enterprise PV which represents all net cash flows discounted is 280,724 EUR.
- The Municipality Scenario is more favorable to the Baseline Scenario in all stated variables. When comparing the first two and the last two

JESSICA Scenarios, one notices that the Enterprise PV is higher in the former while Equity PV is higher in the latter.

In conclusion, the main advantage of JESSICA intervention in the selected cases is to provide JESSICA Loan financing to the selected projects. Through this financing the municipalities are able to potentially use the grants on other projects and thereby increase the financing capacity of urban development projects in Slovenia. Additionally JESSICA offers a potential source of financing that is more attractive for municipalities and would also potentially attract investors from the private sector to participate in project financing which would otherwise be unattractive under market conditions.

## 3. OPTIONS FOR IMPLEMENTING JESSICA IN SLOVENIA

### 3.1. JESSICA as a financial engineering instrument

EU Regulations offer Managing Authorities the opportunity to use JESSICA FIs, in the context of EU Cohesion Policy, as a mechanism for utilising all or part of their SF allocations and national co-financing under a revolving scheme. This allows for the leveraging of other public and private resources as co-investment, consequently increasing the financing capacity that supports integrated plans for sustainable urban development.

The use of HFs and UDFs as JESSICA FIs enables EU Structural Funds to be deployed via financial intermediaries operating between the MA and project entities. The presence of HFs and UDFs can also help generate financial leverage.

HFs and UDFs act as revolving funds and aim to maximise socio-economic impact while ensuring financial sustainability and correct implementation of the investment strategy defined by the MA in line with the OPs from which the resources are drawn. The optional appointment of a Holding Fund by the MA in the context of using JESSICA FIs relies *inter alia* on the considerations of market maturity in terms of UDF development as well as the need of the MA to benefit from technical assistance and expertise in providing financing, supporting PPP structures, handling EU SF resources and the use of financial instruments.

The use of a HF can provide methodological and operational support, assistance in the tendering process as well as administration, marketing and communication support, training and other tailored services to help address any issues that may arise while using JESSICA FIs.

Considering that in most CEE regions, UDFs are still at early stages of their investment cycle, promoting their establishment and proper functioning is a key role that HFs could assume, while encouraging local public authorities to use JESSICA FIs for investments in sustainable urban development.

Since JESSICA was launched in 2007, a total amount of around EUR 1.94bn has already been committed to JESSICA Operations across 11 Member States (Bulgaria, Czech Republic, Estonia, Germany, Greece, Italy, Lithuania, Poland, Portugal, Spain and the United Kingdom) with around 40 UDFs already in Operation. So far, investment agreements are in place with Urban Projects in Estonia, Germany, Lithuania, Poland, Portugal, Spain and the UK.

Tailoring JESSICA implementation into different models applicable to the Slovenian context is presented in this section of the Evaluation Study.

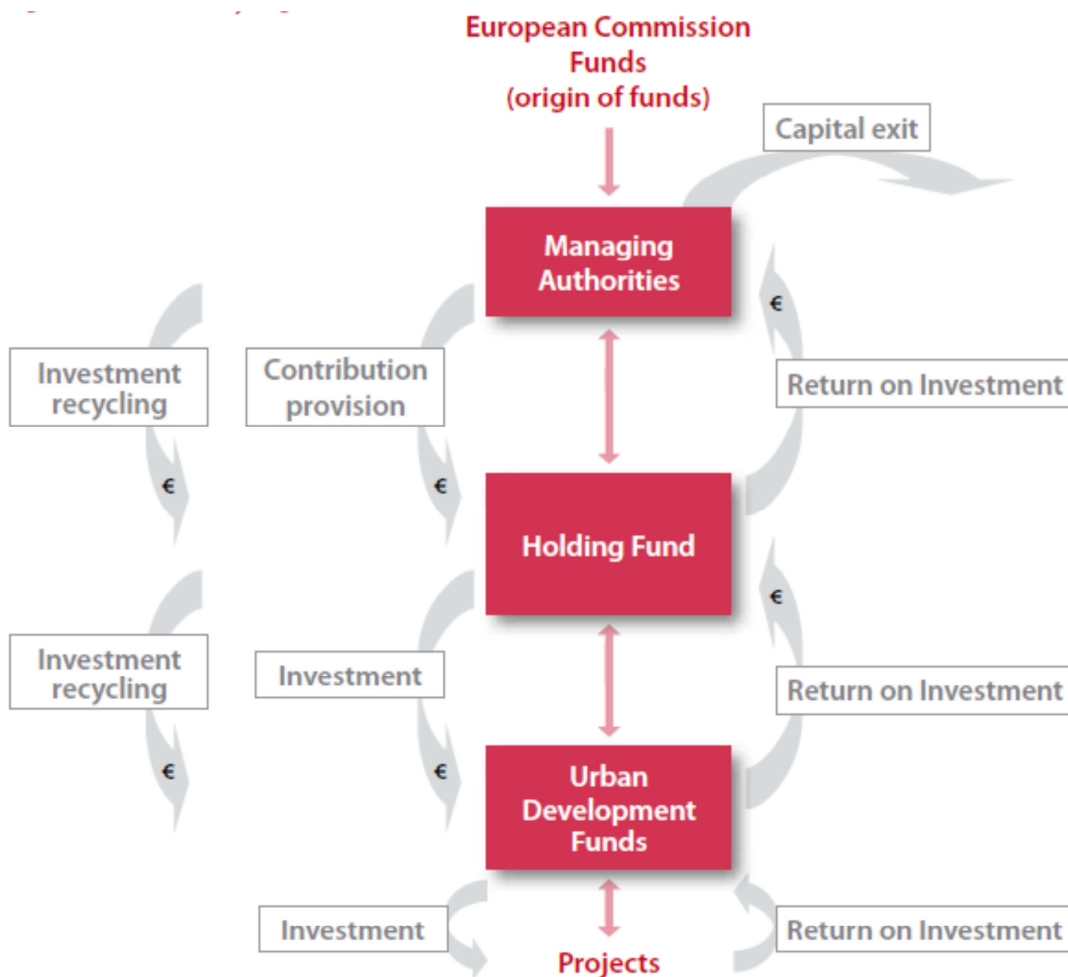
The Managing Authority of the Operational Programmes can either enter into contract with a UDF directly or it can entrust to a HF the task of selecting and setting up one or more UDFs. Experience across the EU so far shows that Managing Authorities are mostly implementing JESSICA with the utilisation of the EIB as a Holding Fund.

In terms of existing financial instruments in Slovenia, development into financial engineering actions and products targeting sustainable urban transformation that could be supported by JESSICA FIs may be done under different scenarios.

From the stakeholder analysis (see §1.1.4.) it appears that there are enough financial institutions available for a successful competitive selection as a UDF in a public procurement procedure led by the MA.

The MA may also use a HF to manage the allocation of resources to one or more UDFs. In later chapters of this study, we will analyse possible advantages of establishing a HF structure from a governance point of view.

It is worth noting that, by bringing additional expertise and seeking to increase the financial resources being made available for investment into urban projects, the presence of a HF, with its technical and financial competencies, can facilitate and contribute to the “leveraging” of the selected UDFs.



Moreover, the rationale for using the option offered by the EU regulations to establish a HF must also consider the following elements:

- The need for assistance to the MA with selecting the right structure and manager of UDFs;
- The need for assistance to the MA on the contractual negotiations with UDFs;

In conclusion, the following two options could be considered for the implementation of JESSICA FIs in Slovenia:

1. Utilising an HF structure which has three possible sub-options:
  - Appointing the EIB as a HF
  - Appointing a public financial entity (e.g. SID Bank or a Slovene Public Fund) as a HF by the award of a grant, defined for this purpose as a direct financial contribution by way of donation to a financial institution without a call for proposals, if this is in accordance with a national law compatible with the Treaty
  - Selecting a HF by a public procurement
2. Public procurement by MA of a financial institution as UDF (without the use of a Holding Fund);

## ***3.2. Detailed analysis of the different options***

### **Option 1: Establishing a Holding Fund**

Option 1 involves creating an HF for the implementation of the JESSICA FIs in Slovenia. According to Article 44 of the Regulation 1083/2006, as amended, the Member State or the MA has the option of organising financial engineering instruments for sustainable urban development through an intermediary fund of funds (i.e. an HF to invest in one or more UDFs) under one or more of the following forms:

- (a) the award of a public contract in accordance with applicable public procurement law;
- (b) when the agreement is not a public service contract within the meaning of applicable public procurement law, the award of a grant, defined for this purpose as a direct financial contribution by way of donation to a financial institution without a call for proposals, if this is in accordance with a national law compatible with the Treaty;
- (c) the award of a contract directly to the EIB or the EIF.

HFs invest the resources of OPs in one or more UDFs, under a revolving scheme. UDFs are financial engineering instruments investing directly in Urban Projects. Urban Projects, approved for investment by the UDFs, can be funded through equity, guarantees or loans. However, it is acknowledged that investment by the UDF may take place within the context of wider support from national and/or EU resources and thus could also require “traditional” grant funding.

There are both advantages and limitations in using a Holding Fund, the main ones are listed below:

#### ***Advantages***

- A HF is a robust financial structure equipped to manage funds, investments and reimbursements, and to assess controls and risks on behalf of the Management Authority. It ensures independent and professional management of funds by performing a variety of functions and tasks, including:
  - Treasury management
  - Risk management
  - Monitoring
  - Reporting on the implementation of the investment strategy
  - Provision of Technical Assistance to support successful UDF implementation
- Furthermore, as a flexible and dedicated tool managing the allocation of funds to several UDFs, a HF enables diversification of investments in

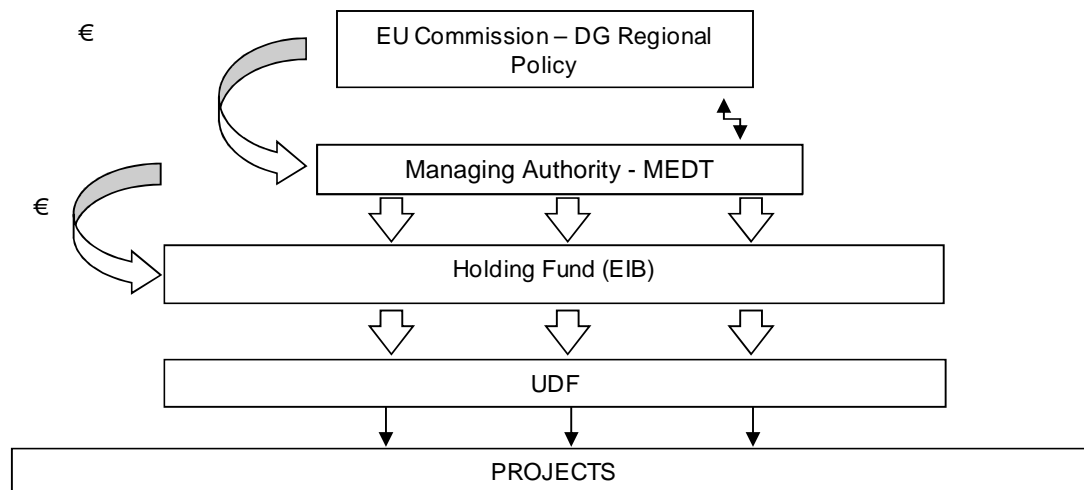
several types of UDFs and more effective controls. Indeed, as UDFs can have different features and characteristics according to the investment goals they pursue and due to the necessary flexibility of investment strategies, the use of a Holding Fund mechanism can be particularly relevant to diversify a portfolio of investments.

- In certain cases, the HF can be seen as a valuable temporary Technical Assistance structure, supporting the MA in the acquisition of sufficient skill and knowledge to manage and supervise the UDFs in-house at a later stage.
- In cases where plans and projects are at an early development stage, or the UDFs are not yet selected, it will not only hold the funds but invest them as part of the HF's treasury management activity, generating interest income on the funds deposited before they are disbursed into UDFs. Interest earned on the monies committed to the HF can thus be used to invest in urban projects and defray HF management fees including financing the cost of Technical Assistance services in the planning and preparation of projects. Such additional resources would not be available under conventional grant mechanisms.
- In some cases a single HF can manage the resources from different OPs and MAs, achieving significant economies of scale and acting as centralised manager for payments and a catalyst in the investment process.
- There is less administrative burden on the MA if all financing is organised via a Holding Fund compared to a UDF-only structure.

#### **Limitations**

- The added value of the Holding Fund mechanism is perhaps lower when UDF-type structures involved in supporting revenue-generating Urban Projects (with the use of Structural Funds) are already active in the market and ready to be mobilised by the MA. Establishing a HF involves an additional step, though can be achieved rapidly such as in the case of the EIB acting as HF, and is ultimately for the provision of support to the MA and to help ensure smoother implementation.

### **Option 1.1 EIB as Holding Fund**



The EIB has been a key player in the launch of the JESSICA initiative and its experience has been recognised among 23 Member States of the European Union through either delivering JESSICA Evaluation Studies such as this one and/or involvement in the implementation of JESSICA FIs.

In practice, there is only one known instance of a JESSICA HF being selected under a scheme without using the EIB. Given both the role of the EIB in developing the JESSICA initiative and the experience gained so far in the implementation of JESSICA FIs, the EIB brings both the technical and financial competences needed to select, set-up and manage UDFs investing in urban renewal and development projects across Europe.

As the European Union’s long-term lending institution, the EIB has, in particular, an internal structure that is particularly suitable and experienced to act as a HF. Indeed, all the governance structures, rules and procedures usually required in the context of fund management are already in place within the EIB.

Under this option, a JESSICA HF would be established as a separate block of finance within the EIB upon the signature of a Funding Agreement between the MA and the EIB. In accordance with Article 44 of Regulation 1063/2006, the MA would thus transfer the relevant contribution from the OPs to the EIB. These financial resources could be kept either as a treasury instrument of the EIB or be deposited in a bank account indicated by the MA.

The EIB, as a manager of the Holding Fund, would also need to establish an Investment Board of the HF. The Investment Board members would be nominated by the MA and would consist of 3 to 5 voting members. The EIB representatives would be non-voting observers.

UDF(s) selected by the HF would enter into contract(s) directly with the HF. Given that the public procurement rules of the EIB would be used in the selection of the UDF(s), risk of State aid should be avoided at this stage.

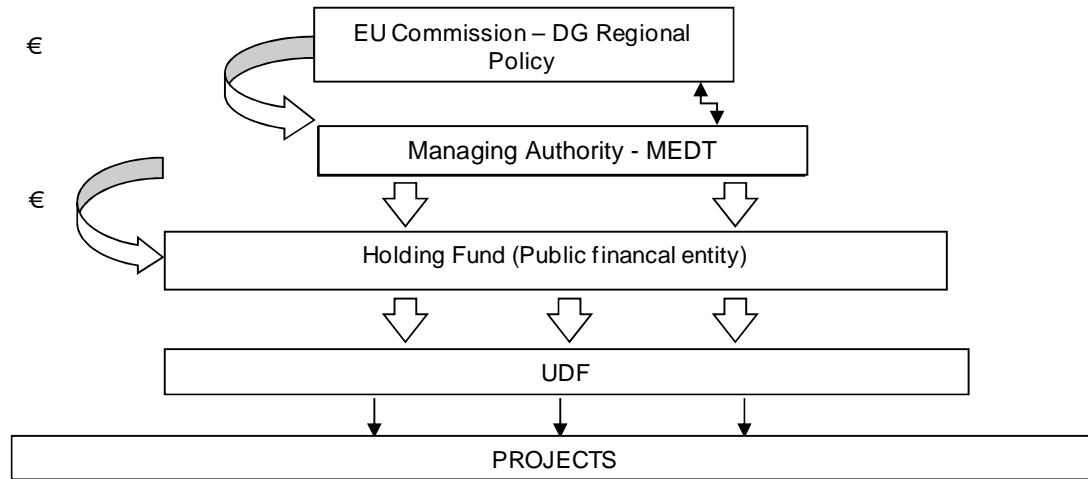
#### **Advantages**

- EU regulation allows the EIB to be directly appointed (ie. without following Slovene procurement procedures) which in turn reduces the time necessary to establish a Holding Fund
- The selection of UDFs is carried out under EIB procurement guidelines rather than Slovene procurement rules
- This implementation option should be the least time-consuming as :
  - the contract between the Managing Authority and the EIB can be based on a template funding agreement established by the EIB as already used for other Member States;
  - the selection of UDFs by the EIB follows established procedure that has already been used to appoint more than 35 UDFs thus far.
- If so decided by the MA, OP resources can be returned to the MA after the first round of investments or reinvested by the EIB HF into other UDFs
- Using the EIB as an HF provides for a structured system of reporting, giving comfort to the MA that reporting and monitoring requirements are adequately satisfied, thus significantly reducing risk that monies have to be paid back by the MA in the event of irregularities.
- The EIB has the skills, knowledge and expertise covering both the targeted investment sector and the operational procedures needed for fund management.
- EIB involvement may also increase the visibility of the HF and UDF, making them more attractive to other investors (thus a higher potential for leveraging financial resources contributed to the UDF).
- They have experience dating to the beginning of the JESSICA initiative, including JESSICA Evaluation Studies, discussions on necessary regulatory changes, selection of UDFs in numerous Member States and a close working relationship with the EC.
- The involvement of an EU institution offers independence and stability from changes at the national level such as political shifts.

### **Limitations**

- The EIB is headquartered in Luxembourg. However, when acting as a Holding Fund, the EIB has in some cases used local experts to assist with fund management activities (eg. the use of EIB Local Holding Fund officers).

**Option 1.2 Public financial entity (e.g. SID Bank or a Slovene Public Fund) or private financial entity as Holding Fund**



In accordance with Article 43, paragraph 3 and article 44 under (b), section (i) and (ii), of Regulation 1828/2006, a Holding Fund may be set up as a separate block of finance within a financial institution. Under this option, the MA may appoint a public financial entity, such as SID bank or a Slovene Public Fund to implement JESSICA FIs by way of a direct grant in accordance with Article 106j of the Public Finance Act. Special implementation rules would be applied for the Holding Fund in order to assure separate record-keeping and differentiation between resources of the JESSICA holding fund and other resources of the public financial entity.

The Holding Fund so established would have a supervisory board and/or a director overseeing its activities. The Managing Authority should be represented in the fund's supervisory board. The public financial entity would thus act as a manager of the Holding Fund that would combine various instruments of financial engineering. This could also mean the use of resources from one or from both Operational Programmes with other resources dedicated by way of the Slovene Promotion of Balanced Regional Development Act, the Development platform, the public financial entity's own funds or resources of possible strategic investors and venture capital.

The role of the public financial entity's Holding Fund would be the integration of resources dedicated to urban development. This would mean a centralized management of urban development resources and the public financial entity's implementation of best practices of comparable schemes.

The establishment of a holding fund by engaging private financial institutions would entail the MA's selection of such a private financial institution by way of a public procurement held in line with Article 44 of Regulation 1083/2006, as amended.

**Advantages**

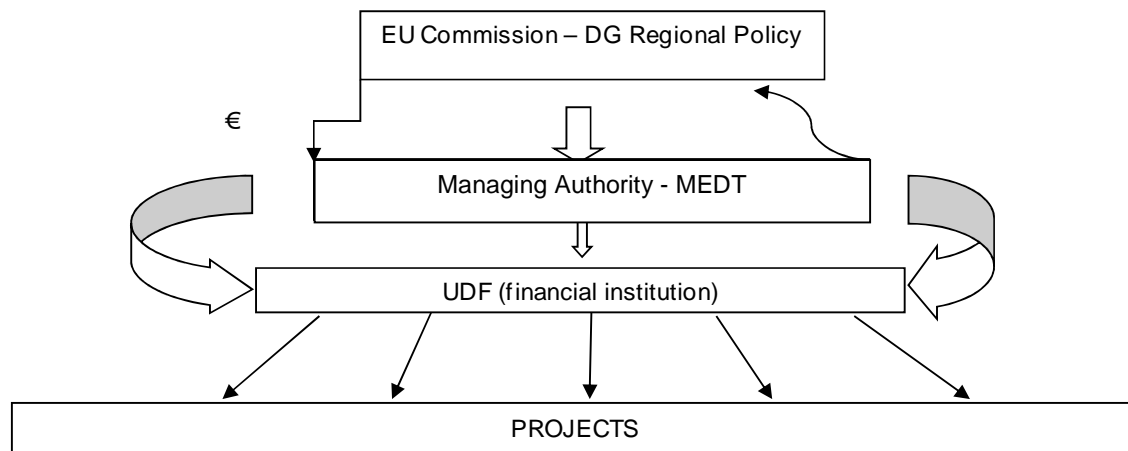
- Developed knowledge of the financial sector that may assist with the selection of UDFs.  
Some Slovene public financial entities already have experience in deploying EU structural funds in the form of grants.
- Some Slovene public financial entities already have experience in performing financial engineering measures (with or without EU funds).

- Some players have expertise in financial engineering through participation in EU projects such as INTERREG IVC and FIN-EN (sharing methodologies on FINancial Engineering for enterprises).
- Skills and Capacity to deliver required separate evidence of public funds and monitoring (risk management)
- Co-operation of commercial banks with Slovene public financial entities

### Limitations

- In the case of awarding a grant, it may be advisable to seek an approval from the European Commission;
- With the award of a grant to a Slovene public entity, OP resources stay with the public entity for reinvestment rather than having the option of being returned to the MA after one or more cycles of investment.
- Limited expertise from national entities in using EU structural funds by way of investment;
- Slovene public financial entities have no experience so far in selecting, establishing and managing UDFs.

### **Option 2: Public procurement by MA of a financial institution as a UDF (without the use of a Holding Fund)**



Option 2 consists of the MA nominating a financial institution as a UDF by means of a public procurement procedure.

#### *State Aid Considerations*

Award of a public contract to a financial institution outside of a public procurement procedure may be allowed if this is pursuant to national law compatible with the Treaty.

Such an award might eventually be made in accordance with Article 106j of the Public Finance Act, on the basis of which the MA would entrust the role of the UDF directly to a public financial institution either SID bank or a Slovene Public Fund.

Nevertheless, it is advisable to undergo notification and authorisation procedures towards the European Commission before assigning the functions of JESSICA FIs to a financial institution by way of a direct grant.

The approval by the European Commission of the scheme may extend the time frame of the implementation of JESSICA FIs. However, the notification and the approval procedure would help mitigate the risks of inadmissible State aid.

### Advantages

- Competition between prospective UDFs brought by the public procurement process should encourage an enhanced level of commitment and more competitive pricing.
- Financial institutions have experience in financing projects and monitoring credit risk, resources, even if only to a narrow group of target applicants, due to exposure as set out under 1.1.3.

### Limitations

- Option 2 does not bring innovative elements and additional expertise into the management and monitoring of both the UDFs and the resources being deployed;
- If establishing a UDF by the award of a grant, OP resources stay with the public entity for reinvestment rather than having the option of being returned to the MA, or reinvested by a different UDF, after one or more cycles of investment
- No leverage effect through inclusion of existing commercial financial institutions (eg. Retail Banks) or other private investors; Limited human resources available within a UDF-only JESSICA operation may not provide the support needed to handle the challenging implementation issues that may arise. This in turn may mean that the implementation of JESSICA FIs through a UDF-only structure may less adequately address the identified market gaps in the financing of urban development projects.

## 3.3. Governance structure

According to Article 43, paragraph 3, of Regulation 1828/2006, as amended, financial engineering instruments, including HFs, are independent legal entities or separate blocks of finance within a financial institution. In both cases, they are governed via agreements between the co-financing partners or shareholders.

Further, in accordance with the same provision, where the financial engineering instrument is within a financial institution, it is set up as a separate block of finance subject to specific implementation rules within the financial institution. This stipulates, in particular, that separate accounts should be kept which distinguish the new resources invested in the financial engineering instrument, including those contributed from Operational Programmes, from those initially available in the institution.

The Level I and Level II Funding Agreements will provide the rules and provisions regarding the governance of the investment decision making process. The governance structure should ensure that the funds remain under the supervision of the MA. Depending on the selected implementation option, the governance structure at either the HF level or MA level could be structured as follows:

- Regular monitoring of the HF or UDF overall performance (depending on the implementation option), progress of the investment strategy implementation and the underlying projects which have to be in line with the OP SRDP and DETI
- Issuing of recommendations regarding the performance and development of JESSICA FIs

- Review of Investment Strategies and progress reports of the HF and UDFs

To assure compliance with issues such as personal independence, conflicts of interest and other such provisions within the funding agreements, the members of the governance structure should approve and sign internal rules and a code of conduct. The code of conduct typically includes the following elements:

- Provisions on compliance with the highest standards of ethical conduct, such as professionalism, integrity, accountability and impartiality;
- Withdrawal from roles and assignments which could give rise to a conflict of interest
- Non-disclosure agreements to protect confidential and sensitive information
- The stipulation that inside information may not be used directly or indirectly in any type of transactions involving UDFs, Urban Projects, companies and securities.

## 4. INVESTMENT STRATEGY

The investment strategy should be aligned with the objectives of the OP SRDP and OP DETI objectives as well as municipal integrated plans for sustainable urban development. The purpose of the investment strategy is to define the guidelines of a coordinated approach for the preparation, programming and implementation of the JESSICA instrument in Slovenia.

The analysis of projects which would qualify under the JESSICA typology and are eligible under the OP DETI or OP SRDP showed that there is sufficient demand for JESSICA. The analysis of our project samples from municipalities, private investors and ministries reached close to EUR 4 billion of total project cost.<sup>17</sup> Due to the current economic situation in Slovenia and past practices of urban development, three general trends can be observed:

- The majority of Slovenian municipalities are close to their borrowing limits;
- Projects are being delayed due to difficulties securing equity from Retail Banks;
- PPP's practices have not been very common in the past and will have to be promoted in order to stimulate future funding for urban development projects.

The implementation of JESSICA FIs would have positive effects on the business environment in Slovenia by providing:

- Long term stability in terms of assuring a revolving source of financing;
- An increased rate of project implementation;
- Synergies between public and private partners.

There are a number of financing sources in Slovenia.<sup>18</sup> The most important stakeholders in terms of annual investments are the Retail Banks; however their capacity for financing of new projects has decreased in recent years due to the financial crisis in Slovenia.

SID Bank is a state owned special purpose bank which provides financing and insurance of projects, which financial institutions and the private reinsurance market is not willing to cover or do not have sufficient capacity to cover. SID Bank was also established by law for the use and channeling of EU funds to act in this regard as an agent or an administrator, and to cooperate in international incentives programs and with EU financial institutions.

Besides the banks there are numerous existing Public Funds in Slovenia.<sup>19</sup> However, they are expected to play only a limited, but targeted, role as eventual JESSICA FIs due to their size, purpose and technical capability limitations.

Municipalities represent the largest investors in the field of urban development in Slovenia.

For the EU Cohesion Fund and both EU Structural funds, an institutional structure in Slovenia currently in place consists of a managing authority, a certifying authority, Intermediary Bodies, bodies for tender implementation, and bodies for project implementation.

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<sup>17</sup> Total sample of 745 projects with municipalities representing 90% of all projects and 70% of the value.

<sup>18</sup> Retail banks, SID Bank, public funds, private investors, municipalities and ministries.

<sup>19</sup> Eco fund, Public fund for entrepreneurship of the Republic of Slovenia, Slovenian regional development fund, Housing fund of the Republic of Slovenia, Pension real estate and disabled insurance fund, The Republic of Slovenia's fund for farming areas and forests, Financial fund for the decommissioning of the Nuclear power plant Krško.

The Certifying Authority in Slovenia is the Ministry of Finance and National Fund, while the Audit Authority is the Budget Supervision Office of the Slovene Ministry of Finance.

The Managing Authority is responsible for managing and implementing the relevant Operational Programme for Slovenia in accordance with the principle of sound financial management. This entity is obliged to establish a system of implementation as defined in the provisions of Regulation 1083/2006 and of the implementing ordinance.

Slovenia has 3 Operational Programmes, however in the context of the JESSICA initiative two Operational Programmes are relevant; Operational Programme of Environmental and Transport Infrastructure (OP DETI) and Operational Programme for Strengthening Regional Development Potentials (OP SRDP).

The main goal of OP DETI is to provide conditions for growth by providing sustainable mobility, improving the quality of the environment and constructing a suitable and sustainable infrastructure. At the same time the programme should help to attain one of the core objectives defined in the NSRF, namely ensuring balanced regional development throughout the entire country. Under this OP two priority axes are relevant for the JESSICA initiative:

- PA3: Transport infrastructure – ERDF and
- PA6: Sustainable use of energy

The primary goal of OP SRDP is to improve conditions of growth and employment by investing into physical and human resources, innovations of knowledge-based society, adaptability to economic and social changes and environmental protection. Under this OP two priority axes are relevant for the JESSICA initiative:

- PA1: Competitiveness and research excellence (ERDF-public)
- PA2: Economic/development infrastructure (ERDF-public)
- PA3: Integration of natural and cultural potentials (ERDF-public)
- PA4: Development of regions (ERDF-public)

There is a great fit between the two OPs and the objectives of using JESSICA FIs. The JESSICA Holding Fund or MA directly may only make investments or commit for investment to support projects which are aligned with the one of the two OPs and are conducted in the following sectors:

- Urban infrastructure (transport, water/waste water, energy, etc):
- Tourism and cultural objects
- Redevelopment of Brownfield sites
- Office space
- University buildings
- Energy efficiency improvements
- Public buildings (kindergartens, schools, health centres, sports and recreational facilities, community centers).

The MA will ensure the strategic coherence of JESSICA actions with regional planning objectives and will support the municipalities in elaborating projects in line with the principles described in Section 1.4.3.

Based on the existing financial mechanisms in Slovenia, development of financial engineering and products which are aimed at urban development that would be supported by JESSICA FIs can be done under different scenarios. The MA can either enter into contract directly with a UDF or it can select an HF which will carry out the task of selecting and setting up one or more UDF's.

There are two implementation possibilities for JESSICA in Slovenia:

- Using a HF structure by appointing either the EIB or a Slovene Public financial entity (e.g. SID Bank or a Slovene Public Fund) or a private financial entity as a HF

- Appointment of a Slovene financial institution as a UDF (without the use of a HF)

Both options have their advantages and disadvantages as described in detail in the chapter 3.2. The experience from different EU countries which have implemented JESSICA thus far shows that MAs are predominantly implementing JESSICA with an HF structure. Out of the 22 JESSICA Operations currently underway, 18 HF agreements are signed with the EIB. Progress in setting up UDFs has so far been rather heterogeneous throughout MSs, particularly as regards timeframes, fund design and the restraints imposed by national regulations. The reason for this could be the highly innovative character of JESSICA FIs, but also the potentially complex structure that may be necessary to establish UDFs in response to challenges specific to each region or MS. In addition to monitoring financial backflows (IRR) and the social or public benefits achieved for citizens (ERR), the fund management should also ensure that operations comply with rules for State aid at all necessary levels.

Implementation of JESSICA FIs in Slovenia will be regulated by Regulations 1083/2006 and 1828/2006, as amended, both directly applicable in Slovene law. The regulations are the proper legal basis for the JESSICA scheme and prevail, in terms of regulation of implementation of the JESSICA scheme, over Slovene regulation in case of conflicts between the EU and national sets of regulations.

Urban development, which would be supported by the JESSICA FIs, is mentioned in the current Operational Programmes. However, the JESSICA implementation structure is not, strictly speaking, regulated by Slovene law.

The Slovene Decree on the implementation of procedures for the use of the European cohesion policy funds in the Republic of Slovenia in the programming period 2007-2013 stipulates that a plan for the distribution of funds as well as the implementation of certain types of funding is done by Intermediary Bodies i.e. the relevant Ministries. However, the Decree expressly states that these competences are given to Intermediary Bodies by the Managing Authority.

The MA may, under current Slovene regulation, establish a JESSICA holding fund and entrust its management to an existing financial entity or, alternatively, it can channel funds directly to UDFs (without a HF) such as e.g. as a Public Fund or a Retail Bank.

When implementing Operational Programmes, rules of public procurement also determined in Directives 2004/18/EC and 2004/17/EC and relevant provisions of the EU Treaty must also be taken into account.

In terms of ways to implement JESSICA FIs in Slovenia, European regulations on the implementation of financial engineering instruments will prevail over relevant Slovene law in case of discrepancies between Slovene and EU law, including in the sense of *options of implementation at the national level*. In this sense, gaps and possible discrepancies would be regulated directly or interpreted in accordance with relevant EU regulation.

The MA may entrust, on the basis of Article 44 of Regulation 1083/2006, directly applicable in Slovenia, management of a JESSICA holding fund directly to the EIB.

State aid is defined as any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods, in so far as it affects trade between Member States, be incompatible with the internal market. In terms of JESSICA FIs, the four criteria could be applied as follows: Advantage, State resources, Selective and Distortion.

The resources contributed by a JESSICA HF or MA directly can be invested by the UDF through:

- Equity instruments;
- Loans;
- Guarantees.

Fund size, investment limits and maximum and minimum percentages planned:

- There are two potential fund sizes for JESSICA in Slovenia. The first option would be a smaller fund under the current financial perspective which would invest between EUR 20-30 million in one or more UDFs. The second option would be a larger fund which would have an approximate size of about EUR 100 million to invest in one or more UDFs. The larger fund would be comparable in size with other already established HFs.
- Investment limits: the maximum size of an investment should not exceed 25% of the total fund size.
- Limits for the number of Operations: there are no maximum or minimum limits for the number of Operations.
- Limit for the geographic area: as described in chapter 1.1.2 the scope of Operations is limited to the 211 municipalities within the territorial borders of the Republic of Slovenia. However, the focus of the Operations has to support the polycentric development of Slovenia
- There is a good pipeline of identified projects in Slovenia totalling almost EUR 4 billion which would be eligible for JESSICA funding.

## **5. IMPLEMENTATION REQUIREMENTS AND ACTION PLAN**

### ***5.1. Recommendation for the implementation of JESSICA in Slovenia***

As already elaborated in chapter 3.1 the MA has two alternatives for the implementation of JESSICA FIs in Slovenia. On the one hand, the MA can establish an HF (the EIB or Slovene financial institution) to which different tasks may be delegated. The HF can either select a newly established UDF or it can select urban development funds already established in Slovenia. Furthermore, the HF could fund and also monitor the selected urban development funds as a service to the MA. Here the HF not only has a financing function, but also provides essential technical assistance in the overall JESSICA implementation process.

Alternatively, the MA may invest Structural Fund resources directly into a UDF(s) (e.g. a Slovene financial institution). In this way the MA could do without an HF in its intermediary and supporting role. On the other hand, the work that would be undertaken by an HF would then need to be taken on by the MA.

### ***5.2. Proposal of an Action Plan to implement JESSICA in Slovenia***

In this section two timelines are presented for the implementation of JESSICA FIs with the establishment of a HF. The purpose is to show the difference in the implementation steps and estimated timelines when the EIB is selected as a HF or when a public financial entity is selected.

The expected time to implement JESSICA FIs in Slovenia would differ based on the selected implementation route. If the EIB is selected as a HF, then the implementation would take somewhere between 8 -12 months (including the HF set-up) with start-up procedures being standard practice as is being applied elsewhere.

Figure 56: JESSICA implementation action plan with EIB selected as HF

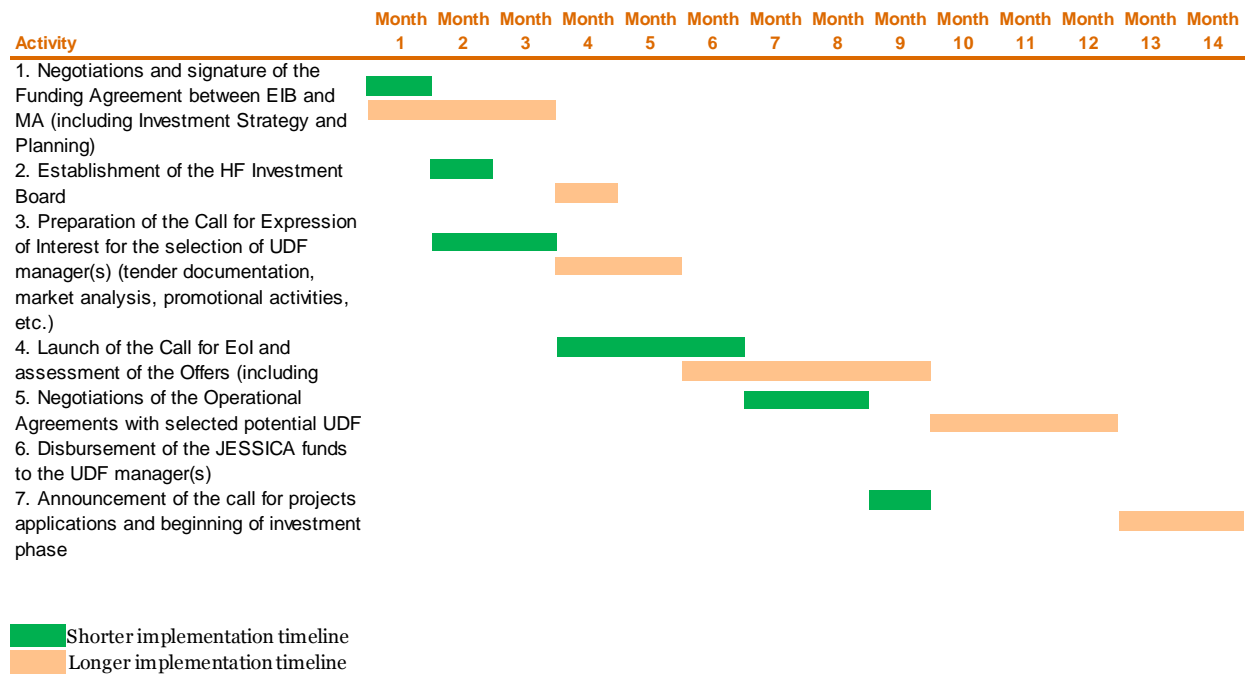


Figure 57: JESSICA implementation action plan with non-EIB HF<sup>20</sup>



**Key steps for implementation:**

**1. Decision to award the HF**

- Under the option of making a direct award to the EIB, a JESSICA HF would be established as a separate block of finance within the EIB upon

<sup>20</sup> Assumes that the decision to award the HF also includes the necessary preparations and public procurement under Slovene law.

the signature of a Funding Agreement between the Managing Authority and the EIB. In accordance with Article 44 of Regulation 1063/2006, the Managing Authority would thus transfer the relevant contribution from the Operational Programmes to the EIB. These financial resources could be kept either as a treasury instrument of the EIB or deposited in a bank account indicated by the MA.

- The award of HF tasks to a public financial institution by means of public procurement or in some cases by the award of a grant, defined for this purpose as a direct financial contribution by way of donation to a financial institution without a call for proposals, if this is in accordance with a national law compatible with the Treaty.
- Alternatively, the MA may invest Structural Fund resources directly into a UDF(s). The work that would be undertaken by an HF would then need to be taken on by the MA.

## 2. Formulation and signature of a Level I Funding Agreement

The EIB or other Slovene financial entity as the users of EU resources for the purposes of financial engineering must define in the funding agreement the following:

- The definition of the parties involved in the agreement;
- The subject of the agreement;
- The obligations of each party (reporting, audit, amount invested, criteria for investing the funds, etc.);
- The investment strategy or a reference to it;
- The governance rules of the Holding Fund covering the issues related to the implementation of the investment strategy. The rationale and benefits of the set-up of an Investment Board are described in section 3.1.2. It is an option offered in order to improve the decision-making process, avoid conflicts of interest and enhance the overall fund's governance;
- The Holding Fund's budget, applicable fees and eligible expenditures. Before formulating the funding agreement, the selected HF should analyze the possible cost reimbursement / cost coverage for HF management-related services in order to define the appropriate eligible management costs according to the thresholds indicated by Structural Funds' regulations, and negotiate them with the MA;
- Options for the temporary investment of the funds contributed to the HF (i.e. treasury management) before investment in a UDF and the treasury management during the investment period when necessary, defined jointly by the selected HF and the MA. The HF, as a financial institution, proposes the most suitable opportunities to the MA according to market conditions and takes into account the obligation to preserve the value of the financial resources temporarily invested. Appropriate treasury instructions should be included in the funding agreement along with the process to be followed for any modification of the treasury management scheme and the necessary flow of information that the HF has to provide on any changes to the selected treasury investment scheme. In most cases it is recommended that the MA communicates its treasury preference formally in order to provide evidence that it has granted or delegated to the Holding Fund all necessary powers to duly carry out its functions under the terms of the funding agreement;
- The exit policy for the contribution from the Operational Programme out of the JESSICA Holding Fund and winding-up provisions of the JESSICA Holding Fund;
- A funding agreement should also consider the appropriate measures to be taken in the event of a dispute (e.g. due to a delay or failure of a party to comply with its obligations), and the provisions for termination of the contract.

## 3. HF governance and Investment Board set-up

In order to avoid any potential conflict of interest and to provide the MA's administration with the ability to regularly monitor HF activities, a HF should be organised with an Investment Board governance structure.

#### **4. Selection of the procurement procedure for the UDF**

Includes all the necessary steps for the preparation of the procurement process which is necessary before the start of the selection process. The EIB applies its own procurement guidelines whereas, in the case of Slovene entities selecting UDFs, Slovenian public procurement rules will apply. In the case of the EIB, the preparation of Call for EoI (including selection and award criteria) is done in cooperation with the Investment Board.

#### **5. Selection process of the UDF**

The JESSICA Holding Fund (or the MA) publishes or sends the final tender document and invitations to tender. In accordance with tender instructions, candidates should submit their proposals to the Holding Fund. Once the proposals have been received, selection of the UDF(s) is triggered.

#### **6. UDF selection**

Awarding of UDF to the selected institution, Public Funds, Retail Banks or SID Bank. The Public Funds would have to adopt their general terms of business in order to meet JESSICA requirements.

UDFs would have to implement transparent rules for the selection of projects eligible for JESSICA funding as defined in the contract on financing or transfer of funds in the context of financial engineering made between UDFs and the MA or the UDFs and the JESSICA HF.

If SID Bank would be chosen for the role of a UDF, it would likewise need to respect the criteria determined by the JESSICA holding fund manager or the MA in selecting the projects which are eligible for funding. At the same time, in accordance with Article 5 of the Slovene Development and Export Bank Act, projects financed or co-financed by SID Bank must be economically viable.

#### **7. Negotiation of the Level II Funding Agreement with the UDF**

##### **8. Investment phase**

Implementation of the investments in the UDF. The main processes at this stage include the authorisation of payments, the administration of repayments between the UDFs and the Holding Funds, monitoring of operations and the recycling of the investment.

# CONCLUSION

There is a strong case to pursue the use of JESSICA FIs to support (in a highly targeted way) sustainable urban transformation in Slovenia. Through this study we were able to identify a large number of projects in Slovenia that were likely to be suitable for JESSICA FI support.

These projects match the OP SRDP, DETI and JESSICA criteria for urban development projects. A total demand of almost EUR 4 billion of urban development projects has been identified in Slovenia. However, many are still in the early phase of developing exact cash flow projections and capital requirements. This can be largely attributed to the effects of the economic crisis which has also had a negative effect on the development of municipal urban development projects. If project maturity is considered, there is an estimated project cost of EUR 150-200 million of projects which could get off the ground immediately.

Due to the relatively late stage of the current financial period, relatively limited amounts are available from both relevant OPs in Slovenia. Therefore, the size of the potential JESSICA fund is estimated to be between EUR 20 – 100 million, depending on the decision if a smaller or larger fund is selected.

A key decision that would have to be made is between the two main scenarios to implement JESSICA FIs in Slovenia. That is, with a HF structure or by direct investment into an UDF. Although both options have their pros and cons, the vast majority of member states in Europe have so far decided to implement JESSICA FIs with the support of a HF in order to secure a proven approach and a smooth transition into the investment phase.

There are no legal or regulatory obstacles to implement JESSICA in Slovenia. The legal framework that is currently in place in Slovenia supports the implementation of JESSICA FIs.

In assessing the potential risks related to the implementation of JESSICA in Slovenia, there are two areas which would potentially have to be considered for implementation.

- First is the imbalance between supply and demand as the list of potential urban development projects show that there is currently more demand in the market than available financing sources. On the one hand, this is the consequence of the current economic situation in Slovenia. On the other hand is the fact that the current financial perspective is coming to an end and the majority of sources under both relevant OPs would appear to have been assigned.
- The second is the political risk as Slovenia is currently in a turbulent period of trying to cope with the recession which could potentially delay the decision/confirmation of the implementation of JESSICA FI in Slovenia.

Further implementation steps including additional detailed analysis of the market, demand (updated project pipeline reflecting any potential changes), supply (available resources), Operational Programmes, IPSUD and implementation options for JESSICA in Slovenia may potentially be required.

# Appendices

## Appendix 1 - Calculations for the case studies provided in chapter 2

### Calculations for 2.1.1 Case Study: Technological Park Velenje

Baseline scenario Enterprise and EquityPV

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
WACC	7,8 %																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27
Present value of Net Cash Flow	0	-72.902	-68.306	213.888	554.335	553.105	357.121	351.435	331.820	264.357	295.739	279.164	204.955	248.691	234.698	174.767	208.985	197.184
PV of Net Cash Flows	4.329.036,4																	
PV of Terminal Value	2.522.337,6																	
Enterprise Value	6.851.374,0																	

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Exit
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025	
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932	
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Grant	16.895.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	16.895.035	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	16.895.035	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
Discount rate	7,8 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	
Present value of Net Cash Flow	16.271.008	-72.902	-68.306	213.888	554.335	553.105	357.121	351.435	331.820	264.357	295.739	279.164	204.955	248.691	234.698	174.767	208.985	197.184	
PV of Net Cash Flows	20.600.044,2																		
PV of Terminal Value	2.522.337,6																		
Equity Value	23.122.381,8																		

### JESSICA scenario (0%) Enterprise and Equity PV

Net cash flows																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.989	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
WACC	6,5%																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,71	0,66	0,62	0,58	0,55	0,51	0,48	0,45	0,43	0,40	0,37	0,35	0,33
Present value of Net Cash Flow	0	-74.224	-70.383	223.048	585.042	590.780	386.044	384.477	367.393	296.226	335.385	320.404	238.067	292.351	279.227	210.432	254.665	243.180
PV of Net Cash Flows	4.862.111,9																	
PV of Terminal Value	3.722.086,7																	
Enterprise Value	8.584.198,7																	

Net cash flows																		Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.989	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Grant	11.826.524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	11.826.524	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	11.826.524	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
Discount rate	8,5%																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,96	0,88	0,82	0,75	0,69	0,64	0,59	0,54	0,50	0,46	0,42	0,39	0,36	0,33	0,31	0,28	0,26	0,24
Present value of Net Cash Flow	11.354.150	-72.222	-67.246	209.258	538.953	534.405	342.897	335.334	314.644	249.110	276.945	259.794	189.544	228.559	214.354	158.623	188.498	176.744
PV of Net Cash Flows	15.432.344,2																	
PV of Terminal Value	2.080.860,1																	
Equity Value	17.513.204,3																	

### JESSICA scenario (2,07%) Enterprise and Equity PV

Net cash flows																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
WACC	6,9%																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,97	0,90	0,85	0,79	0,74	0,69	0,65	0,61	0,57	0,53	0,50	0,46	0,43	0,41	0,38	0,35	0,33	0,31
Present value of Net Cash Flow	0	-73.827	-69.756	220.269	575.689	579.257	377.161	374.287	356.378	286.317	323.008	307.476	227.645	278.553	265.098	199.069	240.053	228.408
PV of Net Cash Flows	4.695.085,7																	
PV of Terminal Value	3.302.766,2																	
Enterprise Value	7.997.851,9																	

Net cash flows																		Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	104.918	100.049	95.078	90.005	84.827	79.541	74.146	68.640	63.019	57.282	51.426	45.450	39.349	33.122	26.766	20.279	13.657	6.899
EBIT	-104.918	-181.665	-177.526	257.939	-899.218	-834.988	-1.083.848	-1.042.804	-1.026.060	-1.109.054	-991.780	-974.234	-1.106.413	-938.311	-919.924	-1.051.247	-882.276	-863.006
- Cash Taxes on EBIT	0	0	0	51.588	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	-104.918	-181.665	-177.526	206.351	-899.218	-834.988	-1.083.848	-1.042.804	-1.026.060	-1.109.054	-991.780	-974.234	-1.106.413	-938.311	-919.924	-1.051.247	-882.276	-863.006
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Grant	11.826.524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	11.721.606	-181.665	-177.526	206.351	692.984	757.214	508.353	549.398	566.141	483.148	600.422	617.967	485.789	653.891	672.278	540.954	709.925	729.195
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	11.721.606	-181.665	-177.526	206.351	692.984	757.214	508.353	549.398	566.141	483.148	600.422	617.967	485.789	653.891	672.278	540.954	709.925	729.195
Discount rate	8,5%																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,98	0,88	0,82	0,75	0,69	0,64	0,59	0,54	0,50	0,46	0,42	0,39	0,36	0,33	0,31	0,28	0,26	0,24
Present value of Net Cash Flow	11.253.422	-160.754	-144.794	155.128	480.176	483.605	299.249	298.091	283.128	222.706	255.096	241.996	175.342	217.539	206.147	152.891	184.940	175.088
PV of Net Cash Flows	14.778.997,2																	
PV of Terminal Value	2.061.358,5																	
Equity Value	16.840.355,6																	

## Private-sector scenario Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
WACC	7,8 %																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27
Present value of Net Cash Flow	0	-72.902	-68.306	213.888	554.335	553.105	357.121	351.435	331.820	264.357	295.739	279.164	204.955	248.691	234.698	174.767	208.985	197.184
PV of Net Cash Flows		4.329.036,4																
PV of Terminal Value		2.522.337,6																
Enterprise Value		6.851.374,0																

### II. Equity value

Net cash flows																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094
Discount rate	7,8 %																	
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27
Present value of Net Cash Flow	0	-72.902	-68.306	213.888	554.335	553.105	357.121	351.435	331.820	264.357	295.739	279.164	204.955	248.691	234.698	174.767	208.985	197.184
PV of Net Cash Flows		4.329.036,4																
PV of Terminal Value		2.522.337,6																
Equity Value		6.851.374,0																

## 20% JESSICA scenario (0%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025	
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932	
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
WACC	6,2 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,97	0,91	0,86	0,81	0,76	0,72	0,68	0,64	0,60	0,56	0,53	0,50	0,47	0,44	0,42	0,39	0,37	0,35	
Present value of Net Cash Flow	0	-74.545	-70.890	225.301	592.650	600.183	393.316	392.846	376.469	304.417	345.650	331.160	248.766	303.905	291.098	220.008	267.020	255.711	4.105.828
PV of Net Cash Flows	5.001.063,6																		
PV of Terminal Value	4.105.828,3																		
Enterprise Value	9.106.891,9																		

### II. Equity value

Net cash flows																		Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025	
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932	
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Grant	10.137.021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	10.137.021	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	10.137.021	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
Discount rate	8,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,96	0,88	0,81	0,75	0,69	0,63	0,58	0,53	0,49	0,45	0,42	0,38	0,35	0,32	0,30	0,27	0,25	0,23	
Present value of Net Cash Flow	9.722.043	-71.997	-66.899	207.744	533.947	528.345	338.306	330.159	309.146	244.251	270.980	253.672	184.694	222.249	208.005	153.605	182.157	170.445	1.954.864

## 20% JESSICA scenario (2.07%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025	
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932	
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
EBIT	0	-81.616	-82.448	347.944	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
- Cash Taxes on EBIT	0	0	0	69.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-81.616	-82.448	278.355	-814.391	-755.446	-1.009.702	-974.164	-963.041	-1.051.772	-940.353	-928.785	-1.067.064	-905.189	-893.157	-1.030.968	-868.619	-856.108	
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
Cash flow from operations	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-81.616	-82.448	278.355	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
WACC	6,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,70	0,66	0,61	0,58	0,54	0,51	0,47	0,44	0,42	0,39	0,37	0,34	0,32	
Present value of Net Cash Flow	0	-74.049	-70.107	221.823	580.916	585.691	382.118	379.968	362.514	291.833	329.892	314.661	233.432	286.209	272.932	205.364	248.142	236.579	3.530.430
PV of Net Cash Flows	4.787.916,1																		
PV of Terminal Value	3.530.430,1																		
Enterprise Value	8.318.346,2																		

### II. Equity value

Net cash flows																		Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025	
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932	
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	
- Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	139.891	133.398	126.771	120.006	113.102	106.055	98.862	91.519	84.025	76.376	68.569	60.599	52.465	44.163	35.688	27.039	18.210	9.198	
EBIT	-139.891	-215.014	-209.219	227.937	-927.493	-861.501	-1.108.564	-1.065.684	-1.047.067	-1.128.148	-1.008.922	-989.384	-1.119.529	-949.351	-928.846	-1.058.007	-886.829	-865.306	
- Cash Taxes on EBIT	0	0	0	45.587	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	-139.891	-215.014	-209.219	182.350	-927.493	-861.501	-1.108.564	-1.065.684	-1.047.067	-1.128.148	-1.008.922	-989.384	-1.119.529	-949.351	-928.846	-1.058.007	-886.829	-865.306	
+ Depreciation	0	0	0	0	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	1.592.202	
+ Grant	10.137.021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	9.997.130	-215.014	-209.219	182.350	664.708	730.700	483.638	526.518	545.135	464.054	583.280	602.817	472.672	642.850	663.356	534.195	705.373	726.896	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	9.997.130	-215.014	-209.219	182.350	664.708	730.700	483.638	526.518	545.135	464.054	583.280	602.817	472.672	642.850	663.356	534.195	705.373	726.896	
Discount rate	8,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,96	0,88	0,81	0,75	0,69	0,63	0,58	0,53	0,49	0,45	0,42	0,38	0,35	0,32	0,30	0,27	0,25	0,23	
Present value of Net Cash Flow	9.587.879	-189.674	-169.761	136.093	456.306	461.380	280.889	281.269	267.859	209.732	242.476	230.500	166.242	207.962	197.386	146.205	177.573	168.315	1.930.437
PV of Net Cash Flows	12.858.628,9																		

### Baseline scenario Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Exit	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025		
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932		
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Grants	16.895.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-16.895.035	16.895.035	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094	9.263.811

IRR 16,92%

### JESSICA scenario (0%) Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Exit	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025		
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932		
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584	281.584		
+ Grants	11.826.524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-16.895.035	11.544.940	-363.200	-364.032	66.360	496.226	555.171	300.916	336.454	347.576	258.846	370.264	381.833	243.554	405.429	417.460	279.649	441.999	454.510	9.263.811

IRR 5,27%

### JESSICA scenario (2,07%) Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Exit	
+ Operating income	0	0	0	431.241	924.055	984.325	1.023.724	1.064.086	1.080.130	1.096.419	1.112.957	1.129.748	1.146.795	1.164.103	1.181.676	1.199.518	1.217.633	1.236.025		
- Operating costs	0	81.616	82.448	83.297	146.245	147.570	441.224	446.048	450.969	555.989	461.109	466.331	621.657	477.091	482.632	638.285	494.051	499.932		
EBITDA	0	-81.616	-82.448	347.944	777.810	836.755	582.500	618.037	629.160	540.430	651.848	663.417	525.138	687.013	699.044	561.233	723.583	736.094		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	104.918	100.049	95.078	90.005	84.827	79.541	74.146	68.640	63.019	57.282	51.426	45.450	39.349	33.122	26.766	20.279	13.657	6.899		
- Financial Payment	235.246	240.116	245.086	250.160	255.338	260.624	266.018	271.525	277.146	282.882	288.738	294.715	300.816	307.043	313.388	319.886	326.507	333.286		
+ Grants	11.826.524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-16.895.035	11.486.360	-421.781	-422.613	7.779	437.646	496.590	242.335	277.873	288.996	200.265	311.684	323.252	184.973	346.848	358.879	221.069	383.418	395.929	9.263.811

IRR 4,61%

## Calculations for 2.1.2 Case Study: Entrepreneurial Incubator in SAŠA Region

### Baseline scenario Enterprise and Equity PV

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
EBIT	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
Cash flow from operations	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	2.137.988

WACC	7,8 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	17,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,27
Present value of Net Cash Flow	0	-133.408	15.325	21.570	27.020	31.747	30.210	28.736	64.349	46.090	66.689	63.031	20.534	56.276	53.162	19.072	47.418	44.772	572.721
PV of Net Cash Flows	502.593,2																		
PV of Terminal Value	572.721,2																		
Enterprise Value	1.075.314,3																		

Net cash flows																		Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Grant	2.531.021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	2.531.021	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	2.531.021	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	2.137.988

Discount rate	7,8 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	17,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,27
Present value of Net Cash Flow	2.437.536	-133.408	15.325	21.570	27.020	31.747	30.210	28.736	64.349	46.090	66.689	63.031	20.534	56.276	53.162	19.072	47.418	44.772	572.721
PV of Net Cash Flows	2.940.129,6																		
PV of Terminal Value	572.721,2																		
Equity Value	3.512.850,8																		

### JESSICA scenario (0%) Enterprise and Equity PV

Net cash flows																		Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Grant	1.518.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	1.518.613	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	1.518.613	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	1.916.923
Discount rate	8,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,96	0,88	0,81	0,75	0,69	0,63	0,58	0,53	0,49	0,45	0,42	0,38	0,35	0,32	0,30	0,27	0,25	0,23	
Present value of Net Cash Flow	1.456.445	-131.752	15.009	20.950	26.026	30.326	28.619	26.996	59.952	42.584	61.106	57.275	18.504	50.293	47.115	16.763	41.331	38.701	443.871
PV of Net Cash Flows	1.906.243,7																		
PV of Terminal Value	443.870,9																		
Equity Value	2.350.114,6																		

Net cash flows																		Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
EBIT	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
Cash flow from operations	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	2.683.638
WACC	6,2 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	
Present Value Factor:	0,97	0,91	0,86	0,81	0,76	0,72	0,68	0,64	0,60	0,56	0,53	0,50	0,47	0,44	0,42	0,39	0,37	0,35	
Present value of Net Cash Flow	0	-136.414	15.904	22.721	28.887	34.449	33.272	32.122	73.008	53.074	77.944	74.771	24.723	68.770	65.937	24.009	60.586	58.062	932.268
PV of Net Cash Flows	611.826,2																		
PV of Terminal Value	932.268,0																		
Enterprise Value	1.544.094,2																		

## JESSICA scenario (2,07%) Enterprise and Equity PV

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
EBIT	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149.354	-93.683	-84.109	-74.268	-64.153	-62.905	-61.645	-131.090	-158.880	-106.110	-103.313	-200.489	-97.638	-94.761	-191.856	-88.924	-85.965	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
Cash flow from operations	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	2.494.165
WACC	6,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	17,50
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,70	0,66	0,61	0,58	0,54	0,51	0,47	0,44	0,42	0,39	0,37	0,34	0,32	0,32
Present value of Net Cash Flow	0	-135.508	15.729	22.370	28.315	33.617	32.325	31.069	70.302	50.880	74.391	71.046	23.387	64.766	61.822	22.411	56.302	53.717	801.618
PV of Net Cash Flows	576.942,2																		
PV of Terminal Value	801.618,3																		
Enterprise Value	1.378.560,5																		
Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418	
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281	
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	
- Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	20.957	19.984	18.991	17.978	16.944	15.886	14.810	13.710	12.598	11.442	10.272	9.078	7.860	6.616	5.346	4.051	2.728	1.378	
EBIT	-20.957	-169.338	-112.674	-102.087	-91.211	-80.041	-77.715	-75.356	-143.677	-170.322	-116.382	-112.391	-208.349	-104.254	-100.107	-195.907	-91.652	-87.343	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	-20.957	-169.338	-112.674	-102.087	-91.211	-80.041	-77.715	-75.356	-143.677	-170.322	-116.382	-112.391	-208.349	-104.254	-100.107	-195.907	-91.652	-87.343	
+ Depreciation	0	0	112.180	112.180	112.180	112.180	112.180	112.180	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	253.102	
+ Grant	1.518.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	1.497.656	-169.338	-494	10.093	20.969	32.140	34.465	36.825	109.425	82.780	136.720	140.711	44.753	148.848	152.995	57.195	161.450	165.759	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	1.497.656	-169.338	-494	10.093	20.969	32.140	34.465	36.825	109.425	82.780	136.720	140.711	44.753	148.848	152.995	57.195	161.450	165.759	1.901.119
Discount rate	8,7 %																		
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	17,50
Present Value Factor:	0,96	0,88	0,81	0,75	0,69	0,63	0,58	0,53	0,49	0,45	0,42	0,38	0,35	0,32	0,30	0,27	0,25	0,23	0,23
Present value of Net Cash Flow	1.436.346	-149.381	-401	7.533	14.395	20.294	20.017	19.672	53.767	37.413	56.836	53.804	15.740	48.152	45.525	15.654	40.644	38.382	440.211
PV of Net Cash Flows	1.774.391,7																		
PV of Terminal Value	440.211,4																		
Equity Value	2.214.603,1																		

Exit



20% JESSICA scenario (0%) Enterprise and Equity PV

1. Enterprise Value

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	189,899	181,035	182,736	204,747	207,930	211,162	205,497	421,379	427,886	434,504	441,222	448,040	454,874	462,712	469,558	476,418	
- Operating costs	0	149,394	151,141	152,984	154,823	160,720	166,654	180,621	213,484	327,194	280,897	284,719	288,609	292,581	296,633	400,708	304,881	309,261	
EBITDA	0	-149,394	16,498	28,071	37,913	48,028	49,276	56,538	132,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	
- Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
EBIT	0	-149,394	-93,683	-84,109	-74,268	-64,153	-62,908	-61,642	-131,090	-158,980	-106,110	-103,313	-200,489	-97,638	-94,761	-191,858	-88,924	-85,968	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149,394	-93,683	-84,109	-74,268	-64,153	-62,908	-61,642	-131,090	-158,980	-106,110	-103,313	-200,489	-97,638	-94,761	-191,858	-88,924	-85,968	
+ Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
Cash flow from operations	0	-149,394	16,498	28,071	37,913	48,028	49,276	50,538	122,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	-149,394	16,498	28,071	37,913	48,028	49,276	50,538	122,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	2,458,114
WACC	0.3 %																		
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	17.50
Present Value Factor	0.97	0.91	0.86	0.79	0.74	0.70	0.66	0.61	0.57	0.54	0.50	0.47	0.44	0.41	0.38	0.36	0.34	0.33	0.32
Present value of Net Cash Flow	0	-135,201	15,093	22,298	28,198	33,647	32,132	30,955	89,754	50,437	73,679	75,297	23,120	63,666	61,003	22,393	55,494	52,858	777,405
PV of Net Cash Flows		399,980.3																	
PV of Terminal Value		777,404.8																	
Enterprise Value		1,347,385.1																	

2. Equity value

Net cash flows																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+ Operating income	0	0	189,899	181,035	182,736	204,747	207,930	211,162	205,497	421,379	427,886	434,504	441,222	448,040	454,874	462,712	469,558	476,418	
- Operating costs	0	149,394	151,141	152,984	154,823	160,720	166,654	180,621	213,484	327,194	280,897	284,719	288,609	292,581	296,633	400,708	304,881	309,261	
EBITDA	0	-149,394	16,498	28,071	37,913	48,028	49,276	56,538	132,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	
- Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	-149,394	-93,683	-84,109	-74,268	-64,153	-62,908	-61,642	-131,090	-158,980	-106,110	-103,313	-200,489	-97,638	-94,761	-191,858	-88,924	-85,968	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	-149,394	-93,683	-84,109	-74,268	-64,153	-62,908	-61,642	-131,090	-158,980	-106,110	-103,313	-200,489	-97,638	-94,761	-191,858	-88,924	-85,968	
+ Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
+ Grant	1,771,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	1,771,715	-149,394	16,498	28,071	37,913	48,028	49,276	50,538	122,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	1,771,715	-149,394	16,498	28,071	37,913	48,028	49,276	50,538	122,012	94,222	146,992	149,789	52,613	155,464	158,241	81,248	164,178	167,137	1,816,003
Discount rate	8.7 %																		
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	17.50
Present Value Factor	0.98	0.88	0.81	0.75	0.69	0.63	0.58	0.53	0.48	0.45	0.42	0.38	0.35	0.32	0.30	0.27	0.25	0.23	0.23
Present value of Net Cash Flow	1,893,186	-131,752	15,009	20,950	26,026	30,326	28,619	26,996	59,923	42,684	61,106	57,275	18,504	50,293	47,175	16,763	41,331	38,701	443,871
PV of Net Cash Flows		2,148,964.8																	
PV of Terminal Value		463,970.8																	
Equity Value		2,582,935.5																	

20% JESSICA scenario (2.07%) Enterprise and Equity PV

I. Enterprise Value

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
+ Operating income	0	0	188,888	181,035	180,736	204,717	207,390	271,182	266,467	421,378	427,888	434,834	441,222	448,555	454,874	462,212	469,158	476,418
- Operating costs	0	149,324	151,141	152,964	154,802	156,720	158,654	160,601	162,564	164,544	166,541	168,554	170,582	172,624	174,681	176,752	178,837	180,936
EBITDA	0	-149,324	16,498	26,071	37,913	48,028	49,276	50,535	122,912	94,222	140,922	149,789	52,613	155,464	158,341	81,248	184,178	187,137
- Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102
EBIT	0	-149,324	-83,683	-84,109	-74,268	-64,153	-62,905	-61,649	-121,269	-158,880	-106,110	-103,313	-200,489	-97,638	-94,761	-191,860	-88,924	-88,865
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	-149,324	-83,683	-84,109	-74,268	-64,153	-62,905	-61,649	-121,269	-158,880	-106,110	-103,313	-200,489	-97,638	-94,761	-191,860	-88,924	-88,865
+ Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102
Cash flow from operations	0	-149,324	16,498	26,071	37,913	48,028	49,276	50,535	122,612	94,222	140,922	149,789	52,613	155,464	158,341	81,248	184,178	187,137
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	-149,324	16,498	26,071	37,913	48,028	49,276	50,535	122,612	94,222	140,922	149,789	52,613	155,464	158,341	81,248	184,178	187,137
WACC	8.0 %																	
Discount Period	0.89	1.80	2.60	3.40	4.20	5.00	5.80	6.60	7.40	8.20	9.00	9.80	10.60	11.40	12.20	13.00	13.80	14.60
Present Value Factor	0.87	0.81	0.80	0.79	0.78	0.77	0.76	0.75	0.74	0.73	0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65
Present value of Net Cash Flow	0	-135,321	15,993	22,298	28,198	33,447	32,132	30,855	89,754	80,437	133,675	130,297	23,120	83,988	81,932	22,583	95,454	92,859
PV of Net Cash Flows																		
PV of Terminal Value																		
Enterprise Value																		

II. Equity value

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Exit
+ Operating income	0	0	188,888	181,035	180,736	204,717	207,390	271,182	266,467	421,378	427,888	434,834	441,222	448,555	454,874	462,212	469,158	476,418	
- Operating costs	0	149,324	151,141	152,964	154,802	156,720	158,654	160,601	162,564	164,544	166,541	168,554	170,582	172,624	174,681	176,752	178,837	180,936	
EBITDA	0	-149,324	16,498	26,071	37,913	48,028	49,276	50,535	122,912	94,222	140,922	149,789	52,613	155,464	158,341	81,248	184,178	187,137	
- Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	14,288	14,244	13,481	12,704	11,918	11,128	10,333	9,534	8,731	7,924	7,113	6,300	5,484	4,663	3,838	3,009	2,184	
EBIT	-15,718	-164,342	-107,220	-97,203	-86,975	-76,090	-74,912	-71,828	-140,531	-187,462	-113,814	-110,122	-200,384	-97,638	-94,771	-191,894	-88,978	-88,868	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	-15,718	-164,342	-107,220	-97,203	-86,975	-76,090	-74,912	-71,828	-140,531	-187,462	-113,814	-110,122	-200,384	-97,638	-94,771	-191,894	-88,978	-88,868	
+ Depreciation	0	0	112,180	112,180	112,180	112,180	112,180	112,180	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	253,102	
+ Grant	1,771,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	1,755,997	-164,342	4,254	14,588	25,205	36,112	36,168	40,333	112,379	85,941	130,288	141,980	48,718	150,802	154,332	38,258	182,132	186,104	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	1,755,997	-164,342	4,254	14,588	25,205	36,112	36,168	40,333	112,379	85,941	130,288	141,980	48,718	150,802	154,332	38,258	182,132	186,104	
Discount rate	8.7 %																		
Discount Period	0.85	1.60	2.40	3.20	4.00	4.80	5.60	6.40	7.20	8.00	8.80	9.60	10.40	11.20	12.00	12.80	13.60	14.40	
Present Value Factor	0.98	0.88	0.81	0.76	0.69	0.63	0.58	0.53	0.49	0.45	0.42	0.39	0.36	0.33	0.30	0.27	0.25	0.23	
Present value of Net Cash Flow	1,684,112	-144,974	3,452	10,887	17,303	22,802	22,187	21,503	55,314	38,706	57,954	54,872	16,421	49,887	48,922	15,931	40,816	38,462	
PV of Net Cash Flows																			
PV of Terminal Value																			
Equity Value																			

## Baseline scenario Financing Cash Flows

Net cash flows																		Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418		
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281		
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Grants	2.531.021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-2.531.021	2.531.021	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137	2.103.438

IRR 15,15%

## JESSICA scenario (0%) Financing Cash Flows

Net cash flows																		Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418		
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281		
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245	56.245		
+ Grants	1.518.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-2.531.021	1.462.368	-205.599	-37.747	-28.174	-18.332	-8.217	-6.969	-5.710	65.767	37.977	90.747	93.544	-3.632	99.219	102.096	5.001	107.933	110.892	2.103.438

IRR 4,04%

## JESSICA scenario (2,07%) Financing Cash Flows

Net cash flows																		Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
+ Operating income	0	0	169.639	181.035	192.736	204.747	207.930	211.162	395.497	421.376	427.889	434.504	441.222	448.045	454.974	462.012	469.159	476.418		
- Operating costs	0	149.354	151.141	152.964	154.823	156.720	158.654	160.627	273.484	327.154	280.897	284.715	388.609	292.581	296.633	400.766	304.981	309.281		
EBITDA	0	-149.354	18.498	28.071	37.913	48.028	49.276	50.535	122.012	94.222	146.992	149.789	52.613	155.464	158.341	61.246	164.178	167.137		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	20.957	19.984	18.991	17.978	16.944	15.888	14.810	13.710	12.588	11.442	10.272	9.078	7.860	6.616	5.346	4.051	2.728	1.378		
- Financial Payment	48.989	47.962	46.955	45.968	44.988	43.988	42.988	41.988	40.988	39.988	38.988	37.988	36.988	35.988	34.988	33.988	32.988	31.988		
+ Grants	1.518.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-2.531.021	1.450.667	-217.300	-49.448	-39.875	-30.033	-19.918	-18.670	-17.411	54.066	26.276	79.046	81.843	-15.333	87.518	90.395	-6.700	96.232	99.191	2.103.438

IRR 3,43%

## Calculations for 2.2 Case Study: Parking Garage in Maribor

### Baseline Scenario Enterprise and Equity

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
EBIT	0	22.669	150.255	164.616	179.098	193.694	208.400	223.208	238.114	253.109	268.186	283.337	298.552	313.823	329.138	344.487	359.858	375.238	390.614	405.972
- Cash Taxes on EBIT	0	4.534	30.051	32.923	35.820	38.739	41.680	44.642	47.623	50.622	53.637	56.667	59.710	62.765	65.828	68.897	71.972	75.048	78.123	81.194
Profit after Taxes	0	18.135	120.204	131.693	143.278	154.955	166.720	178.567	190.491	202.487	214.549	226.669	238.842	251.058	263.310	275.589	287.886	300.191	312.491	324.777
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
Cash flow from operations	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
WACC	7,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,25	0,23
Present value of Net Cash Flow	0	123.970	699.323	657.446	618.033	580.940	546.031	513.176	482.257	453.158	425.773	400.002	375.750	352.927	331.451	311.243	292.227	274.335	257.500	241.660
PV of Net Cash Flows	7.937.200,6																			
PV of Terminal Value	3.091.274,7																			
Enterprise Value	11.028.475,3																			

y

### PV

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	0	22.669	150.255	164.616	179.098	193.694	208.400	223.208	238.114	253.109	268.186	283.337	298.552	313.823	329.138	344.487	359.858	375.238	390.614	405.972
- Cash Taxes on EBIT	0	4.534	30.051	32.923	35.820	38.739	41.680	44.642	47.623	50.622	53.637	56.667	59.710	62.765	65.828	68.897	71.972	75.048	78.123	81.194
Profit after Taxes	0	18.135	120.204	131.693	143.278	154.955	166.720	178.567	190.491	202.487	214.549	226.669	238.842	251.058	263.310	275.589	287.886	300.191	312.491	324.777
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
Discount rate	7,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,25	0,23
Present value of Net Cash Flow	0	123.970	699.323	657.446	618.033	580.940	546.031	513.176	482.257	453.158	425.773	400.002	375.750	352.927	331.451	311.243	292.227	274.335	257.500	241.660
PV of Net Cash Flows	7.937.200,6																			
PV of Terminal Value	3.091.274,7																			
Equity Value	11.028.475,3																			

Exit

### JESSICA Scenario (0%) Enterprise and Equity PV

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976	
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094	
<b>EBITDA</b>	0	<b>143.321</b>	<b>874.165</b>	<b>888.526</b>	<b>903.008</b>	<b>917.604</b>	<b>932.310</b>	<b>947.118</b>	<b>962.024</b>	<b>977.019</b>	<b>992.096</b>	<b>1.007.247</b>	<b>1.022.462</b>	<b>1.037.733</b>	<b>1.053.048</b>	<b>1.068.397</b>	<b>1.083.768</b>	<b>1.099.148</b>	<b>1.114.524</b>	<b>1.129.882</b>	
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	
<b>EBIT</b>	0	<b>22.669</b>	<b>150.255</b>	<b>164.616</b>	<b>179.098</b>	<b>193.694</b>	<b>208.400</b>	<b>223.208</b>	<b>238.114</b>	<b>253.109</b>	<b>268.186</b>	<b>283.337</b>	<b>298.552</b>	<b>313.823</b>	<b>329.138</b>	<b>344.487</b>	<b>359.858</b>	<b>375.238</b>	<b>390.614</b>	<b>405.972</b>	
- Cash Taxes on EBIT	0	4.534	30.051	32.923	35.820	38.739	41.680	44.642	47.623	50.622	53.637	56.667	59.710	62.765	65.828	68.897	71.972	75.048	78.123	81.194	
<b>Profit after Taxes</b>	0	18.135	120.204	131.693	143.278	154.955	166.720	178.567	190.491	202.487	214.549	226.669	238.842	251.058	263.310	275.589	287.886	300.191	312.491	324.777	
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	
<b>Cash flow from operations</b>	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687	
<b>WACC</b>		5,0 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	
Present Value Factor:	0,98	0,93	0,88	0,84	0,80	0,76	0,73	0,69	0,66	0,63	0,60	0,57	0,54	0,52	0,49	0,47	0,44	0,42	0,40	0,38	
<b>Present value of Net Cash Flow</b>	0	128.927	746.549	720.431	695.178	670.761	647.151	624.320	602.242	580.891	560.242	540.271	520.955	502.272	484.201	466.721	449.811	433.454	417.629	402.320	7.989.279
<b>PV of Net Cash Flows</b>																					10.194.325,2
<b>PV of Terminal Value</b>																					7.989.279,2
<b>Enterprise Value</b>																					18.183.604,4

Net cash flows																					Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976	
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094	
<b>EBITDA</b>	0	<b>143.321</b>	<b>874.165</b>	<b>888.526</b>	<b>903.008</b>	<b>917.604</b>	<b>932.310</b>	<b>947.118</b>	<b>962.024</b>	<b>977.019</b>	<b>992.096</b>	<b>1.007.247</b>	<b>1.022.462</b>	<b>1.037.733</b>	<b>1.053.048</b>	<b>1.068.397</b>	<b>1.083.768</b>	<b>1.099.148</b>	<b>1.114.524</b>	<b>1.129.882</b>	
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>EBIT</b>	0	<b>22.669</b>	<b>150.255</b>	<b>164.616</b>	<b>179.098</b>	<b>193.694</b>	<b>208.400</b>	<b>223.208</b>	<b>238.114</b>	<b>253.109</b>	<b>268.186</b>	<b>283.337</b>	<b>298.552</b>	<b>313.823</b>	<b>329.138</b>	<b>344.487</b>	<b>359.858</b>	<b>375.238</b>	<b>390.614</b>	<b>405.972</b>	
- Cash Taxes on EBIT	0	4.534	30.051	32.923	35.820	38.739	41.680	44.642	47.623	50.622	53.637	56.667	59.710	62.765	65.828	68.897	71.972	75.048	78.123	81.194	
<b>Profit after Taxes</b>	0	18.135	120.204	131.693	143.278	154.955	166.720	178.567	190.491	202.487	214.549	226.669	238.842	251.058	263.310	275.589	287.886	300.191	312.491	324.777	
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687	
<b>Discount rate</b>		10,1 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	
Present Value Factor:	0,95	0,87	0,79	0,71	0,65	0,59	0,54	0,49	0,44	0,40	0,37	0,33	0,30	0,27	0,25	0,23	0,21	0,19	0,17	0,15	
<b>Present value of Net Cash Flow</b>	0	120.182	664.070	611.519	563.088	518.454	477.321	439.415	404.483	372.294	342.633	315.302	290.120	266.919	245.543	225.851	207.710	190.999	175.607	161.431	1.602.845
<b>PV of Net Cash Flows</b>																					6.592.941,7
<b>PV of Terminal Value</b>																					1.602.845,3
<b>Equity Value</b>																					8.195.786,9

### JESSICA Scenario (2,07%) Enterprise and Equity PV

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
EBIT	0	22.669	150.255	164.616	179.098	193.694	208.400	223.208	238.114	253.109	268.186	283.337	298.552	313.823	329.138	344.487	359.858	375.238	390.614	405.972
- Cash Taxes on EBIT	0	4.534	30.051	32.923	35.820	38.739	41.680	44.642	47.623	50.622	53.637	56.667	59.710	62.765	65.828	68.897	71.972	75.048	78.123	81.194
Profit after Taxes	0	18.135	120.204	131.693	143.278	154.955	166.720	178.567	190.491	202.487	214.549	226.669	238.842	251.058	263.310	275.589	287.886	300.191	312.491	324.777
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
Cash flow from operations	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	855.603	867.188	878.865	890.630	902.477	914.401	926.397	938.459	950.579	962.752	974.968	987.220	999.499	1.011.796	1.024.101	1.036.401	1.048.687
WACC	5,9 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,97	0,92	0,87	0,82	0,77	0,73	0,69	0,65	0,62	0,58	0,55	0,52	0,49	0,46	0,44	0,41	0,39	0,37	0,35	0,33
Present value of Net Cash Flow	0	127.418	732.037	700.901	671.043	642.410	614.950	588.815	563.359	539.136	515.904	493.622	472.252	451.754	432.094	413.238	395.151	377.803	361.163	345.203
PV of Net Cash Flows	9.438.052,4																			
PV of Terminal Value	5.887.063,5																			
Enterprise Value	15.325.115,9																			
Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882
- Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	149.849	143.725	137.474	131.093	124.580	117.933	111.148	104.222	97.153	89.938	82.574	75.056	67.384	59.552	51.559	43.400	35.072	26.571	17.895	9.039
EBIT	-149.849	-121.056	12.781	33.523	54.517	75.761	97.252	118.986	140.961	163.171	185.613	208.280	231.168	254.270	277.579	301.087	324.786	348.667	372.719	396.932
- Cash Taxes on EBIT	0	0	2.556	6.705	10.903	15.152	19.450	23.797	28.192	32.634	37.123	41.656	46.234	50.854	55.516	60.217	64.957	69.733	74.544	79.386
Profit after Taxes	-149.849	-121.056	10.225	26.818	43.614	60.609	77.801	95.189	112.769	130.537	148.490	166.624	184.935	203.416	222.063	240.870	259.829	278.933	298.175	317.546
+ Depreciation	0	120.652	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910	723.910
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	-149.849	-404	734.135	750.728	767.524	784.519	801.711	819.099	836.679	854.447	872.400	890.534	908.845	927.326	945.973	964.780	983.739	1.002.843	1.022.085	1.041.456
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	-149.849	-404	734.135	750.728	767.524	784.519	801.711	819.099	836.679	854.447	872.400	890.534	908.845	927.326	945.973	964.780	983.739	1.002.843	1.022.085	1.041.456
Discount rate	10,1 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,95	0,87	0,79	0,71	0,65	0,59	0,54	0,49	0,44	0,40	0,37	0,33	0,30	0,27	0,25	0,23	0,21	0,19	0,17	0,15
Present value of Net Cash Flow	-142.829	-350	577.549	536.563	498.373	462.798	429.666	398.818	370.103	343.379	318.515	295.386	273.876	253.876	235.284	218.006	201.950	187.035	173.182	160.317
PV of Net Cash Flows	5.791.496,1																			
PV of Terminal Value	1.591.792,6																			
Equity Value	7.383.288,7																			

Exit

## Private Sector Scenario Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132
- Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
EBIT	0	22.670	150.255	248.647	265.036	281.564	298.224	315.011	331.918	348.938	366.062	383.282	400.589	417.972	435.422	452.925	470.471	488.045	505.634	523.222
- Cash Taxes on EBIT	0	4.534	30.051	49.729	53.007	56.313	59.645	63.002	66.384	69.788	73.212	76.656	80.118	83.594	87.084	90.585	94.094	97.609	101.127	104.644
Profit after Taxes	0	18.136	120.204	198.918	212.029	225.251	238.579	252.009	265.535	279.150	292.850	306.626	320.471	334.378	348.337	362.340	376.377	390.436	404.507	418.577
+ Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
Cash flow from operations	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
WACC	8,3 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor	0,96	0,89	0,82	0,76	0,70	0,64	0,59	0,55	0,51	0,47	0,43	0,40	0,37	0,34	0,31	0,29	0,27	0,25	0,23	0,21
Present value of Net Cash Flow	0	123.113	691.281	720.393	674.227	630.974	590.452	552.489	516.923	483.603	452.388	423.147	395.754	370.094	346.058	323.544	302.455	282.704	264.205	246.879
PV of Net Cash Flows	8.390.682,7																			
PV of Terminal Value	2.968.193,5																			
Enterprise Value	11.358.876,2																			

## 15% JESSICA scenario (0%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132
- Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
EBIT	0	22.670	150.255	248.647	265.036	281.564	298.224	315.011	331.918	348.938	366.062	383.282	400.589	417.972	435.422	452.925	470.471	488.045	505.634	523.222
- Cash Taxes on EBIT	0	4.534	30.051	49.729	53.007	56.313	59.645	63.002	66.384	69.788	73.212	76.656	80.118	83.594	87.084	90.585	94.094	97.609	101.127	104.644
Profit after Taxes	0	18.136	120.204	198.918	212.029	225.251	238.579	252.009	265.535	279.150	292.850	306.626	320.471	334.378	348.337	362.340	376.377	390.436	404.507	418.577
+ Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
Cash flow from operations	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
WACC	7,2 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,34	0,32	0,29	0,27	0,26
Present value of Net Cash Flow	0	124.993	708.967	746.328	705.594	667.036	630.537	595.989	563.285	532.330	503.028	475.292	449.038	424.188	400.667	378.404	357.333	337.390	318.515	300.651
PV of Net Cash Flows	9.219.562,9																			
PV of Terminal Value	4.159.274,0																			
Enterprise Value	13.378.836,9																			

### II. Equity value

Net cash flows																				Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132
- Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	0	22.670	150.255	248.647	265.036	281.564	298.224	315.011	331.918	348.938	366.062	383.282	400.589	417.972	435.422	452.925	470.471	488.045	505.634	523.222
- Cash Taxes on EBIT	0	4.534	30.051	49.729	53.007	56.313	59.645	63.002	66.384	69.788	73.212	76.656	80.118	83.594	87.084	90.585	94.094	97.609	101.127	104.644
Profit after Taxes	0	18.136	120.204	198.918	212.029	225.251	238.579	252.009	265.535	279.150	292.850	306.626	320.471	334.378	348.337	362.340	376.377	390.436	404.507	418.577
+ Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488
Discount rate	8,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,27	0,25	0,23	0,21	0,19
Present value of Net Cash Flow	0	122.322	683.901	709.650	661.327	616.251	574.204	534.984	498.400	464.277	432.449	402.764	375.077	349.255	325.174	302.716	281.773	262.243	244.033	227.054
PV of Net Cash Flows	8.067.853,7																			
PV of Terminal Value	2.585.006,4																			
Equity Value	10.652.860,1																			

# 15% JESSICA scenario (2.07%) Enterprise and Equity PV

## I. Enterprise Value

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311	
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179	
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132	
- Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	
EBIT	0	22.670	150.255	248.647	265.036	281.564	298.224	315.011	331.918	348.938	366.062	383.282	400.589	417.972	435.422	452.925	470.471	488.045	505.634	523.222	
- Cash Taxes on EBIT	0	4.534	30.051	49.729	53.007	56.313	59.645	63.002	66.384	69.788	73.212	76.656	80.118	83.594	87.084	90.585	94.094	97.609	101.127	104.644	
Profit after Taxes	0	18.136	120.204	198.918	212.029	225.251	238.579	252.009	265.535	279.150	292.850	306.626	320.471	334.378	348.337	362.340	376.377	390.436	404.507	418.577	
+ Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	
Cash flow from operations	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	138.787	844.114	952.828	965.939	979.161	992.490	1.005.919	1.019.445	1.033.061	1.046.760	1.060.536	1.074.381	1.088.288	1.102.248	1.116.250	1.130.287	1.144.346	1.158.417	1.172.488	16.220.457
WACC	7,2 %																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,34	0,32	0,29	0,27	0,26	0,26
Present value of Net Cash Flow	0	124.993	708.967	746.328	705.594	667.036	630.537	595.989	563.285	532.330	503.028	475.292	449.038	424.188	400.667	378.404	357.333	337.390	318.515	300.651	4.159.274
PV of Net Cash Flows	9.219.562,9																				
PV of Terminal Value	4.159.274,0																				
Enterprise Value	13.378.836,9																				

## II. Equity value

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311	
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179	
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132	
- Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	44.955	43.117	41.242	39.328	37.374	35.380	33.344	31.267	29.146	26.981	24.772	22.517	20.215	17.866	15.468	13.020	10.522	7.971	5.389	2.712	
EBIT	-44.955	-20.448	109.012	209.319	227.662	246.184	264.880	283.745	302.772	321.957	341.290	360.765	380.374	400.107	419.954	439.905	459.949	480.074	500.265	520.510	
- Cash Taxes on EBIT	0	0	21.802	41.864	45.532	49.237	52.976	56.749	60.554	64.391	68.258	72.153	76.075	80.021	83.991	87.981	91.990	96.015	100.053	104.102	
Profit after Taxes	-44.955	-20.448	87.210	167.455	182.130	196.947	211.904	226.996	242.218	257.565	273.032	288.612	304.299	320.085	335.963	351.924	367.959	384.059	400.212	416.408	
+ Depreciation	0	120.652	723.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	753.910	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	-44.955	100.204	811.120	921.366	936.040	950.857	965.814	980.906	996.128	1.011.475	1.026.942	1.042.522	1.058.209	1.073.996	1.089.873	1.105.834	1.121.870	1.137.969	1.154.122	1.170.318	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	-44.955	100.204	811.120	921.366	936.040	950.857	965.814	980.906	996.128	1.011.475	1.026.942	1.042.522	1.058.209	1.073.996	1.089.873	1.105.834	1.121.870	1.137.969	1.154.122	1.170.318	13.324.053
Discount rate	8,8 %																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,27	0,25	0,23	0,21	0,19	0,19
Present value of Net Cash Flow	-43.102	88.316	657.170	686.217	640.856	598.437	558.771	521.681	487.001	454.576	424.262	395.923	369.431	344.668	321.523	299.891	279.674	260.782	243.128	226.634	2.580.223
PV of Net Cash Flows	7.815.840,6																				
PV of Terminal Value	2.580.223,4																				
Equity Value	10.396.064,0																				

## Baseline Scenario Financing Cash Flows

Net cash flows																				Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976		
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094		
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-14.478.205	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882	13.146.884

IRR	5,40%
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## JESSICA Scenario (0%) Financing Cash Flows

Net cash flows																				Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976		
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094		
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955	361.955		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-7.239.102	-361.955	-218.634	512.210	526.571	541.052	555.649	570.354	585.163	600.069	615.064	630.141	645.292	660.507	675.777	691.093	706.442	721.813	737.193	752.569	767.926	13.146.884

IRR	7,73%
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## JESSICA Scenario (2,07%) Financing Cash Flows

Net cash flows																				Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.053.697	1.073.717	1.094.118	1.114.906	1.136.089	1.157.675	1.179.671	1.202.085	1.224.924	1.248.198	1.271.914	1.296.080	1.320.705	1.345.799	1.371.369	1.397.425	1.423.976		
- Operating costs	0	25.807	159.885	165.171	170.710	176.514	182.597	188.971	195.651	202.652	209.988	217.677	225.736	234.181	243.032	252.309	262.031	272.221	282.901	294.094		
EBITDA	0	143.321	874.165	888.526	903.008	917.604	932.310	947.118	962.024	977.019	992.096	1.007.247	1.022.462	1.037.733	1.053.048	1.068.397	1.083.768	1.099.148	1.114.524	1.129.882		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	149.849	143.725	137.474	131.093	124.580	117.933	111.148	104.222	97.153	89.938	82.574	75.056	67.384	59.552	51.559	43.400	35.072	26.571	17.895	9.039		
- Financial Payment	295.867	301.991	308.242	314.623	321.136	327.783	334.568	341.494	348.563	355.778	363.143	370.660	378.332	386.164	394.157	402.316	410.644	419.145	427.821	436.677		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-7.239.102	-445.716	-302.395	428.449	442.810	457.292	471.888	486.594	501.402	516.308	531.303	546.380	561.531	576.746	592.017	607.332	622.681	638.052	653.432	668.808	684.166	13.146.884

IRR	6,90%
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## Private Scenario, Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	Exit																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311		
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179		
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-14.478.205	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132	14.860.234

IRR 6,30%

## 15% JESSICA Scenario (0%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	Exit																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311		
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179		
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587	108.587		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-12.906.474	-108.587	34.735	765.578	893.971	910.360	926.887	943.548	960.335	977.242	994.262	1.011.386	1.028.606	1.045.913	1.063.296	1.080.745	1.098.249	1.115.794	1.133.369	1.150.957	1.168.545	14.860.234

IRR 6,51%

## 15% JESSICA Scenario (2,07%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	Exit																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
+ Operating income	0	169.128	1.034.050	1.196.019	1.218.743	1.241.899	1.265.495	1.289.540	1.314.041	1.339.008	1.364.449	1.390.373	1.416.790	1.443.709	1.471.140	1.499.091	1.527.574	1.556.598	1.586.173	1.616.311		
- Operating costs	0	25.807	159.885	193.461	199.796	206.425	213.361	220.618	228.212	236.159	244.476	253.181	262.291	271.827	281.808	292.256	303.193	314.643	326.629	339.179		
EBITDA	0	143.321	874.165	1.002.558	1.018.946	1.035.474	1.052.134	1.068.922	1.085.829	1.102.848	1.119.972	1.137.192	1.154.499	1.171.883	1.189.332	1.206.835	1.224.381	1.241.955	1.259.544	1.277.132		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	44.955	43.117	41.242	39.328	37.374	35.380	33.344	31.267	29.146	26.961	24.772	22.517	20.215	17.866	15.468	13.020	10.522	7.971	5.369	2.712		
- Financial Payment	88.780	90.597	92.473	94.387	96.341	98.335	100.370	102.446	104.559	106.733	108.943	111.198	113.500	115.849	118.247	120.695	123.193	125.743	128.346	131.003		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-12.906.474	-133.715	9.607	740.450	868.843	885.232	901.759	918.420	935.207	952.114	969.133	986.258	1.003.478	1.020.784	1.038.168	1.055.617	1.073.121	1.090.666	1.108.240	1.125.829	1.143.417	14.860.234

IRR 6,35%

# Calculations for 2.3 Case Study: Network of Park & Ride Systems in Ljubljana Urban Region

## Baseline scenario Enterprise and Equity PV

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734,294	1,523,669	2,261,993	6,849,133	11,322,195	11,969,396	13,578,400	13,849,969	14,126,968	14,409,507	14,697,697	14,991,651	15,291,484	15,597,314	15,909,260	16,227,446	16,551,994	16,883,034	17,220,695	17,565,109	
<b>- Operating costs</b>	192,437	408,034	642,400	2,116,523	3,565,402	3,787,672	6,459,713	6,660,645	6,867,910	7,081,710	7,302,255	7,529,762	7,764,454	8,006,562	8,256,325	8,513,990	8,779,810	9,054,049	9,336,978	9,628,879	
<b>EBITDA</b>	<b>541,857</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>	
<b>- Depreciation</b>	231,000	469,875	568,362	1,389,099	2,276,899	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	
<b>+ Financial income</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Financial costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>EBIT</b>	<b>310,857</b>	<b>645,760</b>	<b>1,051,231</b>	<b>3,343,511</b>	<b>5,479,893</b>	<b>5,747,149</b>	<b>4,684,113</b>	<b>4,754,749</b>	<b>4,824,484</b>	<b>4,893,223</b>	<b>4,960,868</b>	<b>5,027,315</b>	<b>5,092,456</b>	<b>5,156,177</b>	<b>5,218,361</b>	<b>5,278,881</b>	<b>5,337,610</b>	<b>5,394,411</b>	<b>5,449,142</b>	<b>5,501,656</b>	
<b>- Cash Taxes on EBIT</b>	62,171	129,152	210,246	668,702	1,095,979	1,149,430	936,823	950,950	964,897	978,645	992,174	1,005,463	1,018,491	1,031,235	1,043,672	1,055,776	1,067,522	1,078,882	1,089,828	1,100,331	
<b>Profit after Taxes</b>	248,685	516,608	840,985	2,674,809	4,383,915	4,597,720	3,747,291	3,803,799	3,859,587	3,914,578	3,968,694	4,021,852	4,073,965	4,124,942	4,174,688	4,223,105	4,270,088	4,315,529	4,359,314	4,401,325	
<b>+ Depreciation</b>	231,000	469,875	568,362	1,389,099	2,276,899	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	
<b>+ Grant</b>	38,507,121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>38,986,806</b>	<b>986,483</b>	<b>1,409,347</b>	<b>4,063,908</b>	<b>6,660,814</b>	<b>7,032,294</b>	<b>6,181,865</b>	<b>6,238,374</b>	<b>6,294,161</b>	<b>6,349,153</b>	<b>6,403,269</b>	<b>6,456,426</b>	<b>6,508,539</b>	<b>6,559,516</b>	<b>6,609,263</b>	<b>6,657,679</b>	<b>6,704,662</b>	<b>6,750,103</b>	<b>6,793,888</b>	<b>6,835,899</b>	
<b>- Change in working capital</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Capital expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>38,986,806</b>	<b>986,483</b>	<b>1,409,347</b>	<b>4,063,908</b>	<b>6,660,814</b>	<b>7,032,294</b>	<b>6,181,865</b>	<b>6,238,374</b>	<b>6,294,161</b>	<b>6,349,153</b>	<b>6,403,269</b>	<b>6,456,426</b>	<b>6,508,539</b>	<b>6,559,516</b>	<b>6,609,263</b>	<b>6,657,679</b>	<b>6,704,662</b>	<b>6,750,103</b>	<b>6,793,888</b>	<b>6,835,899</b>	<b>87,443,543</b>
<b>Discount rate</b>	7.8 %																				
<b>Discount Period</b>	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
<b>Present Value Factor:</b>	0.96	0.89	0.83	0.77	0.71	0.66	0.61	0.57	0.53	0.49	0.45	0.42	0.39	0.36	0.34	0.31	0.29	0.27	0.25	0.23	
<b>Present value of Net Cash Flow</b>	37,546,809	881,162	1,167,601	3,122,708	4,747,070	4,648,428	3,790,001	3,547,333	3,319,550	3,105,760	2,905,123	2,716,851	2,540,199	2,374,471	2,219,008	2,073,191	1,936,441	1,808,208	1,687,979	1,575,270	20,150,565
<b>PV of Net Cash Flows</b>	<b>87,713,163.6</b>																				
<b>PV of Terminal Value</b>	<b>20,150,564.9</b>																				
<b>Equity Value</b>	<b>107,863,728.5</b>																				
Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734,294	1,523,669	2,261,993	6,849,133	11,322,195	11,969,396	13,578,400	13,849,969	14,126,968	14,409,507	14,697,697	14,991,651	15,291,484	15,597,314	15,909,260	16,227,446	16,551,994	16,883,034	17,220,695	17,565,109	
<b>- Operating costs</b>	192,437	408,034	642,400	2,116,523	3,565,402	3,787,672	6,459,713	6,660,645	6,867,910	7,081,710	7,302,255	7,529,762	7,764,454	8,006,562	8,256,325	8,513,990	8,779,810	9,054,049	9,336,978	9,628,879	
<b>EBITDA</b>	<b>541,857</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>	
<b>- Depreciation</b>	231,000	469,875	568,362	1,389,099	2,276,899	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	
<b>EBIT</b>	<b>310,857</b>	<b>645,760</b>	<b>1,051,231</b>	<b>3,343,511</b>	<b>5,479,893</b>	<b>5,747,149</b>	<b>4,684,113</b>	<b>4,754,749</b>	<b>4,824,484</b>	<b>4,893,223</b>	<b>4,960,868</b>	<b>5,027,315</b>	<b>5,092,456</b>	<b>5,156,177</b>	<b>5,218,361</b>	<b>5,278,881</b>	<b>5,337,610</b>	<b>5,394,411</b>	<b>5,449,142</b>	<b>5,501,656</b>	
<b>- Cash Taxes on EBIT</b>	62,171	129,152	210,246	668,702	1,095,979	1,149,430	936,823	950,950	964,897	978,645	992,174	1,005,463	1,018,491	1,031,235	1,043,672	1,055,776	1,067,522	1,078,882	1,089,828	1,100,331	
<b>Profit after Taxes</b>	248,685	516,608	840,985	2,674,809	4,383,915	4,597,720	3,747,291	3,803,799	3,859,587	3,914,578	3,968,694	4,021,852	4,073,965	4,124,942	4,174,688	4,223,105	4,270,088	4,315,529	4,359,314	4,401,325	
<b>+ Depreciation</b>	231,000	469,875	568,362	1,389,099	2,276,899	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	2,434,574	
<b>Cash flow from operations</b>	<b>479,685</b>	<b>986,483</b>	<b>1,409,347</b>	<b>4,063,908</b>	<b>6,660,814</b>	<b>7,032,294</b>	<b>6,181,865</b>	<b>6,238,374</b>	<b>6,294,161</b>	<b>6,349,153</b>	<b>6,403,269</b>	<b>6,456,426</b>	<b>6,508,539</b>	<b>6,559,516</b>	<b>6,609,263</b>	<b>6,657,679</b>	<b>6,704,662</b>	<b>6,750,103</b>	<b>6,793,888</b>	<b>6,835,899</b>	
<b>- Change in working capital</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Capital expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>479,685</b>	<b>986,483</b>	<b>1,409,347</b>	<b>4,063,908</b>	<b>6,660,814</b>	<b>7,032,294</b>	<b>6,181,865</b>	<b>6,238,374</b>	<b>6,294,161</b>	<b>6,349,153</b>	<b>6,403,269</b>	<b>6,456,426</b>	<b>6,508,539</b>	<b>6,559,516</b>	<b>6,609,263</b>	<b>6,657,679</b>	<b>6,704,662</b>	<b>6,750,103</b>	<b>6,793,888</b>	<b>6,835,899</b>	<b>87,443,543</b>
<b>WACC</b>	7.8 %																				
<b>Discount Period</b>	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
<b>Present Value Factor:</b>	0.96	0.89	0.83	0.77	0.71	0.66	0.61	0.57	0.53	0.49	0.45	0.42	0.39	0.36	0.34	0.31	0.29	0.27	0.25	0.23	
<b>Present value of Net Cash Flow</b>	461,968	881,162	1,167,601	3,122,708	4,747,070	4,648,428	3,790,001	3,547,333	3,319,550	3,105,760	2,905,123	2,716,851	2,540,199	2,374,471	2,219,008	2,073,191	1,936,441	1,808,208	1,687,979	1,575,270	20,150,565
<b>PV of Net Cash Flows</b>	<b>50,628,322.7</b>																				
<b>PV of Terminal Value</b>	<b>20,150,564.9</b>																				
<b>Enterprise Value</b>	<b>70,778,887.6</b>																				

## JESSICA scenario (0%) Enterprise and Equity PV

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	734.294	1.523.869	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879
EBITDA	541.857	1.115.835	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
EBIT	310.857	645.760	1.051.231	3.343.511	5.479.893	5.747.149	4.684.113	4.754.749	4.824.484	4.893.223	4.960.868	5.027.315	5.092.456	5.156.177	5.218.361	5.278.881	5.337.610	5.394.411	5.449.142	5.501.656
- Cash Taxes on EBIT	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331
Profit after Taxes	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
Cash flow from operations	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
WACC	4,7 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,98	0,93	0,89	0,85	0,81	0,78	0,74	0,71	0,68	0,64	0,62	0,59	0,56	0,54	0,51	0,49	0,47	0,45	0,43	0,41
Present value of Net Cash Flow	468.736	920.461	1.255.675	3.457.379	5.410.958	5.454.910	4.578.823	4.412.142	4.250.693	4.094.316	3.942.857	3.796.167	3.654.099	3.516.514	3.383.275	3.254.250	3.129.311	3.008.333	2.891.197	2.777.785
PV of Net Cash Flows	67.657.880,7																			
PV of Terminal Value	58.771.449,7																			
Enterprise Value	126.429.330,3																			
Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	734.294	1.523.869	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879
EBITDA	541.857	1.115.835	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	310.857	645.760	1.051.231	3.343.511	5.479.893	5.747.149	4.684.113	4.754.749	4.824.484	4.893.223	4.960.868	5.027.315	5.092.456	5.156.177	5.218.361	5.278.881	5.337.610	5.394.411	5.449.142	5.501.656
- Cash Taxes on EBIT	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331
Profit after Taxes	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
Discount rate	10,6 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,95	0,86	0,78	0,70	0,63	0,57	0,52	0,47	0,42	0,38	0,35	0,31	0,28	0,26	0,23	0,21	0,19	0,17	0,15	0,14
Present value of Net Cash Flow	456.047	847.711	1.094.666	2.853.074	4.226.705	4.033.454	3.204.831	2.923.226	2.665.842	2.430.624	2.215.691	2.019.320	1.839.932	1.676.083	1.526.449	1.389.817	1.265.078	1.151.214	1.047.296	952.472
PV of Net Cash Flows	39.819.530,5																			
PV of Terminal Value	8.955.587,3																			
Equity Value	48.775.117,8																			

Exit

64.274.311

### JESSICA scenario (2,07%) Enterprise and Equity PV

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	734.294	1.523.869	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109	
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230	
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
EBIT	310.857	645.760	1.051.231	3.343.511	5.479.893	5.747.149	4.684.113	4.754.749	4.824.484	4.893.223	4.960.868	5.027.315	5.092.456	5.156.177	5.218.361	5.278.881	5.337.610	5.394.411	5.449.142	5.501.656	
- Cash Taxes on EBIT	62.171	129.152	210.245	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331	
Profit after Taxes	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325	
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
Cash flow from operations	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	121.064.508
WACC	5,6 %																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,97	0,92	0,87	0,83	0,78	0,74	0,70	0,66	0,63	0,59	0,56	0,53	0,50	0,48	0,45	0,43	0,40	0,38	0,36	0,34	0,34
Present value of Net Cash Flow	466.691	908.463	1.228.514	3.353.135	5.202.109	5.198.691	4.325.750	4.131.980	3.946.114	3.767.840	3.598.858	3.432.881	3.275.631	3.124.843	2.980.261	2.841.640	2.708.744	2.581.347	2.459.231	2.342.187	41.480.376
PV of Net Cash Flows	61.872.910,4																				
PV of Terminal Value	41.480.376,1																				
Enterprise Value	103.353.286,6																				
Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	734.294	1.523.869	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109	
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230	
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	797.097	764.520	731.267	697.327	662.684	627.323	591.231	554.392	516.790	478.410	439.235	399.250	358.436	316.778	274.259	230.857	186.568	141.342	95.190	48.082	
EBIT	-486.241	-118.759	319.964	2.646.185	4.817.210	5.119.826	4.092.882	4.200.357	4.307.694	4.414.813	4.521.633	4.628.066	4.734.020	4.839.399	4.944.103	5.048.024	5.151.052	5.253.069	5.353.952	5.453.573	
- Cash Taxes on EBIT	0	0	63.993	529.237	963.442	1.023.965	818.576	840.071	861.539	882.963	904.327	925.613	946.804	967.880	988.821	1.009.805	1.030.210	1.050.614	1.070.790	1.090.715	
Profit after Taxes	-486.241	-118.759	255.971	2.116.948	3.853.768	4.095.861	3.274.306	3.360.286	3.446.155	3.531.851	3.617.306	3.702.453	3.787.216	3.871.520	3.955.282	4.038.420	4.120.842	4.202.455	4.283.162	4.362.859	
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	-255.241	351.116	824.333	3.506.046	6.130.667	6.530.435	5.708.880	5.794.860	5.880.729	5.966.425	6.051.881	6.137.027	6.221.790	6.306.094	6.389.857	6.472.994	6.555.416	6.637.030	6.717.736	6.797.433	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	-255.241	351.116	824.333	3.506.046	6.130.667	6.530.435	5.708.880	5.794.860	5.880.729	5.966.425	6.051.881	6.137.027	6.221.790	6.306.094	6.389.857	6.472.994	6.555.416	6.637.030	6.717.736	6.797.433	63.912.636
Discount rate	10,6 %																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,95	0,86	0,78	0,70	0,63	0,57	0,52	0,47	0,42	0,38	0,35	0,31	0,28	0,26	0,23	0,21	0,19	0,17	0,15	0,14	0,14
Present value of Net Cash Flow	-242.662	301.723	640.274	2.461.426	3.890.293	3.745.607	2.959.623	2.715.401	2.490.736	2.284.105	2.094.102	1.919.424	1.758.870	1.611.329	1.475.776	1.351.263	1.236.917	1.131.930	1.035.557	947.113	8.905.194
PV of Net Cash Flows	35.808.807,5																				
PV of Terminal Value	8.905.193,7																				
Equity Value	44.714.001,2																				

Exit

# Municipality scenario Enterprise and Equity PV

## I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
EBIT	310.857	645.760	1.051.231	3.343.511	5.479.893	5.747.149	4.684.113	4.754.749	4.824.484	4.893.223	4.960.868	5.027.315	5.092.456	5.156.177	5.218.361	5.278.881	5.337.610	5.394.411	5.449.142	5.501.656
- Cash Taxes on EBIT	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331
Profit after Taxes	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
Cash flow from operations	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Net cash flows</b>	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
WACC	7,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,25	0,23
<b>Present value of Net Cash Flow</b>	461.968	881.162	1.167.601	3.122.708	4.747.070	4.648.428	3.790.001	3.547.333	3.319.550	3.105.760	2.905.123	2.716.851	2.540.199	2.374.471	2.219.008	2.073.191	1.936.441	1.808.208	1.687.979	1.575.270
PV of Net Cash Flows	50.628.322,7																			
PV of Terminal Value	20.150.564,9																			
<b>Enterprise Value</b>	70.778.887,6																			

## II. Equity value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	310.857	645.760	1.051.231	3.343.511	5.479.893	5.747.149	4.684.113	4.754.749	4.824.484	4.893.223	4.960.868	5.027.315	5.092.456	5.156.177	5.218.361	5.278.881	5.337.610	5.394.411	5.449.142	5.501.656
- Cash Taxes on EBIT	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331
Profit after Taxes	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Net cash flows</b>	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899
Discount rate	7,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,71	0,66	0,61	0,57	0,53	0,49	0,45	0,42	0,39	0,36	0,34	0,31	0,29	0,27	0,25	0,23
<b>Present value of Net Cash Flow</b>	461.968	881.162	1.167.601	3.122.708	4.747.070	4.648.428	3.790.001	3.547.333	3.319.550	3.105.760	2.905.123	2.716.851	2.540.199	2.374.471	2.219.008	2.073.191	1.936.441	1.808.208	1.687.979	1.575.270
PV of Net Cash Flows	50.628.322,7																			
PV of Terminal Value	20.150.564,9																			
<b>Equity Value</b>	70.778.887,6																			

# 15% JESSICA scenario (0%) Enterprise and Equity PV

## I. Enterprise Value

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734.294	1.523.669	2.281.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109	
<b>- Operating costs</b>	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
<b>EBITDA</b>	<b>541.857</b>	<b>1.115.635</b>	<b>1.619.593</b>	<b>4.732.610</b>	<b>7.756.793</b>	<b>8.181.724</b>	<b>7.118.688</b>	<b>7.189.323</b>	<b>7.259.058</b>	<b>7.327.797</b>	<b>7.395.442</b>	<b>7.461.889</b>	<b>7.527.030</b>	<b>7.590.752</b>	<b>7.652.935</b>	<b>7.713.456</b>	<b>7.772.184</b>	<b>7.828.985</b>	<b>7.883.717</b>	<b>7.936.230</b>	
<b>- Depreciation</b>	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>EBIT</b>	<b>310.857</b>	<b>645.760</b>	<b>1.051.231</b>	<b>3.343.511</b>	<b>5.479.893</b>	<b>5.747.149</b>	<b>4.684.113</b>	<b>4.754.749</b>	<b>4.824.484</b>	<b>4.893.223</b>	<b>4.960.868</b>	<b>5.027.315</b>	<b>5.092.456</b>	<b>5.156.177</b>	<b>5.218.361</b>	<b>5.278.881</b>	<b>5.337.610</b>	<b>5.394.411</b>	<b>5.449.142</b>	<b>5.501.656</b>	
<b>- Cash Taxes on EBIT</b>	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331	
<b>Profit after Taxes</b>	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325	
<b>+ Depreciation</b>	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>Cash flow from operations</b>	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	
<b>- Change in working capital</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Capital expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	479.685	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	94.569.361
<b>WACC</b>	7,2 %																				
<b>Discount Period</b>	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
<b>Present Value Factor:</b>	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,34	0,32	0,29	0,27	0,26	0,26
<b>Present value of Net Cash Flow</b>	463.235	888.433	1.183.703	3.183.162	4.865.553	4.790.621	3.927.393	3.696.121	3.477.784	3.271.678	3.077.134	2.893.523	2.720.246	2.556.739	2.402.468	2.256.927	2.119.637	1.990.146	1.868.026	1.752.872	24.249.618
<b>PV of Net Cash Flows</b>	53.385.399,4																				
<b>PV of Terminal Value</b>	24.249.618,2																				
<b>Enterprise Value</b>	77.635.017,5																				

## II. Equity value

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734.294	1.523.669	2.281.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109	
<b>- Operating costs</b>	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
<b>EBITDA</b>	<b>541.857</b>	<b>1.115.635</b>	<b>1.619.593</b>	<b>4.732.610</b>	<b>7.756.793</b>	<b>8.181.724</b>	<b>7.118.688</b>	<b>7.189.323</b>	<b>7.259.058</b>	<b>7.327.797</b>	<b>7.395.442</b>	<b>7.461.889</b>	<b>7.527.030</b>	<b>7.590.752</b>	<b>7.652.935</b>	<b>7.713.456</b>	<b>7.772.184</b>	<b>7.828.985</b>	<b>7.883.717</b>	<b>7.936.230</b>	
<b>- Depreciation</b>	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>+ Financial income</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Financial costs</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>EBIT</b>	<b>310.857</b>	<b>645.760</b>	<b>1.051.231</b>	<b>3.343.511</b>	<b>5.479.893</b>	<b>5.747.149</b>	<b>4.684.113</b>	<b>4.754.749</b>	<b>4.824.484</b>	<b>4.893.223</b>	<b>4.960.868</b>	<b>5.027.315</b>	<b>5.092.456</b>	<b>5.156.177</b>	<b>5.218.361</b>	<b>5.278.881</b>	<b>5.337.610</b>	<b>5.394.411</b>	<b>5.449.142</b>	<b>5.501.656</b>	
<b>- Cash Taxes on EBIT</b>	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331	
<b>Profit after Taxes</b>	248.685	516.608	840.985	2.674.809	4.383.915	4.597.720	3.747.291	3.803.799	3.859.587	3.914.578	3.968.694	4.021.852	4.073.965	4.124.942	4.174.688	4.223.105	4.270.088	4.315.529	4.359.314	4.401.325	
<b>+ Depreciation</b>	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>+ Grant</b>	26.954.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	27.434.670	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	
<b>- Change in working capital</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Capital expenditure</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	27.434.670	986.483	1.409.347	4.063.908	6.660.814	7.032.294	6.181.865	6.238.374	6.294.161	6.349.153	6.403.269	6.456.426	6.508.539	6.559.516	6.609.263	6.657.679	6.704.662	6.750.103	6.793.888	6.835.899	77.826.595
<b>Discount rate</b>	8,8 %																				
<b>Discount Period</b>	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
<b>Present Value Factor:</b>	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,27	0,25	0,23	0,21	0,19	0,19
<b>Present value of Net Cash Flow</b>	26.303.784	869.451	1.141.853	3.026.727	4.560.303	4.425.887	3.576.513	3.317.788	3.077.175	2.853.429	2.645.391	2.451.983	2.272.195	2.105.091	1.949.796	1.805.494	1.671.425	1.546.883	1.431.207	1.323.782	15.071.240
<b>PV of Net Cash Flows</b>	72.356.157,5																				
<b>PV of Terminal Value</b>	15.071.240,2																				
<b>Equity Value</b>	87.427.397,7																				

## 15% JESSICA scenario (2,07%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109	
<b>- Operating costs</b>	192.437	406.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
<b>EBITDA</b>	<b>541.857</b>	<b>1.115.635</b>	<b>1.619.593</b>	<b>4.732.610</b>	<b>7.756.793</b>	<b>8.181.724</b>	<b>7.118.688</b>	<b>7.189.323</b>	<b>7.259.058</b>	<b>7.327.797</b>	<b>7.395.442</b>	<b>7.461.889</b>	<b>7.527.030</b>	<b>7.590.752</b>	<b>7.652.935</b>	<b>7.713.456</b>	<b>7.772.184</b>	<b>7.828.985</b>	<b>7.883.717</b>	<b>7.936.230</b>	
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>EBIT</b>	<b>310.857</b>	<b>645.760</b>	<b>1.051.231</b>	<b>3.343.511</b>	<b>5.479.893</b>	<b>5.747.149</b>	<b>4.684.113</b>	<b>4.754.749</b>	<b>4.824.484</b>	<b>4.893.223</b>	<b>4.960.868</b>	<b>5.027.315</b>	<b>5.092.456</b>	<b>5.156.177</b>	<b>5.218.361</b>	<b>5.278.881</b>	<b>5.337.610</b>	<b>5.394.411</b>	<b>5.449.142</b>	<b>5.501.656</b>	
- Cash Taxes on EBIT	62.171	129.152	210.246	668.702	1.095.979	1.149.430	936.823	950.950	964.897	978.645	992.174	1.005.463	1.018.491	1.031.235	1.043.672	1.055.776	1.067.522	1.078.882	1.089.828	1.100.331	
<b>Profit after Taxes</b>	<b>248.685</b>	<b>516.608</b>	<b>840.985</b>	<b>2.674.809</b>	<b>4.383.915</b>	<b>4.597.720</b>	<b>3.747.291</b>	<b>3.803.799</b>	<b>3.859.587</b>	<b>3.914.578</b>	<b>3.968.694</b>	<b>4.021.852</b>	<b>4.073.965</b>	<b>4.124.942</b>	<b>4.174.688</b>	<b>4.223.105</b>	<b>4.270.088</b>	<b>4.315.529</b>	<b>4.359.314</b>	<b>4.401.325</b>	
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>Cash flow from operations</b>	<b>479.685</b>	<b>986.483</b>	<b>1.409.347</b>	<b>4.063.908</b>	<b>6.660.814</b>	<b>7.032.294</b>	<b>6.181.865</b>	<b>6.238.374</b>	<b>6.294.161</b>	<b>6.349.153</b>	<b>6.403.269</b>	<b>6.456.426</b>	<b>6.508.539</b>	<b>6.559.516</b>	<b>6.609.263</b>	<b>6.657.679</b>	<b>6.704.662</b>	<b>6.750.103</b>	<b>6.793.888</b>	<b>6.835.899</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>479.685</b>	<b>986.483</b>	<b>1.409.347</b>	<b>4.063.908</b>	<b>6.660.814</b>	<b>7.032.294</b>	<b>6.181.865</b>	<b>6.238.374</b>	<b>6.294.161</b>	<b>6.349.153</b>	<b>6.403.269</b>	<b>6.456.426</b>	<b>6.508.539</b>	<b>6.559.516</b>	<b>6.609.263</b>	<b>6.657.679</b>	<b>6.704.662</b>	<b>6.750.103</b>	<b>6.793.888</b>	<b>6.835.899</b>	<b>94.569.361</b>
<b>WACC</b>	7,2 %																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,34	0,32	0,29	0,27	0,26	0,26
<b>Present value of Net Cash Flow</b>	<b>463.235</b>	<b>888.433</b>	<b>1.183.703</b>	<b>3.183.162</b>	<b>4.865.553</b>	<b>4.790.621</b>	<b>3.927.393</b>	<b>3.696.121</b>	<b>3.477.784</b>	<b>3.271.678</b>	<b>3.077.134</b>	<b>2.893.523</b>	<b>2.720.246</b>	<b>2.556.739</b>	<b>2.402.468</b>	<b>2.256.927</b>	<b>2.119.637</b>	<b>1.990.146</b>	<b>1.868.026</b>	<b>1.752.872</b>	<b>24.249.618</b>
<b>PV of Net Cash Flows</b>	<b>53.385.399,4</b>																				
<b>PV of Terminal Value</b>	<b>24.249.618,2</b>																				
<b>Enterprise Value</b>	<b>77.635.017,5</b>																				

### II. Equity value

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>+ Operating income</b>	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.448	16.551.994	16.883.034	17.220.695	17.565.109	
<b>- Operating costs</b>	192.437	406.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879	
<b>EBITDA</b>	<b>541.857</b>	<b>1.115.635</b>	<b>1.619.593</b>	<b>4.732.610</b>	<b>7.756.793</b>	<b>8.181.724</b>	<b>7.118.688</b>	<b>7.189.323</b>	<b>7.259.058</b>	<b>7.327.797</b>	<b>7.395.442</b>	<b>7.461.889</b>	<b>7.527.030</b>	<b>7.590.752</b>	<b>7.652.935</b>	<b>7.713.456</b>	<b>7.772.184</b>	<b>7.828.985</b>	<b>7.883.717</b>	<b>7.936.230</b>	
- Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
<b>+ Financial income</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>- Financial costs</b>	239.129	229.356	219.380	209.196	198.895	188.197	177.369	168.318	155.037	143.523	131.771	119.775	107.531	95.033	82.277	69.257	55.967	42.403	28.567	14.425	
<b>EBIT</b>	<b>71.728</b>	<b>416.405</b>	<b>831.851</b>	<b>3.134.313</b>	<b>5.281.088</b>	<b>5.558.952</b>	<b>4.506.744</b>	<b>4.588.432</b>	<b>4.669.447</b>	<b>4.749.700</b>	<b>4.829.097</b>	<b>4.907.540</b>	<b>4.984.925</b>	<b>5.061.144</b>	<b>5.136.083</b>	<b>5.209.624</b>	<b>5.281.643</b>	<b>5.352.008</b>	<b>5.420.585</b>	<b>5.487.231</b>	
- Cash Taxes on EBIT	14.346	83.281	166.370	628.863	1.056.210	1.111.790	901.349	917.686	933.889	949.940	965.819	981.508	996.985	1.012.229	1.027.217	1.041.925	1.056.329	1.070.402	1.084.117	1.097.446	
<b>Profit after Taxes</b>	<b>57.382</b>	<b>333.124</b>	<b>665.481</b>	<b>2.507.451</b>	<b>4.224.871</b>	<b>4.447.162</b>	<b>3.605.395</b>	<b>3.670.745</b>	<b>3.735.557</b>	<b>3.799.760</b>	<b>3.863.278</b>	<b>3.926.032</b>	<b>3.987.940</b>	<b>4.048.915</b>	<b>4.108.867</b>	<b>4.167.699</b>	<b>4.225.314</b>	<b>4.281.607</b>	<b>4.336.468</b>	<b>4.389.785</b>	
+ Depreciation	231.000	469.875	568.362	1.389.099	2.276.899	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	2.434.574	
+ Grant	26.954.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>27.243.367</b>	<b>802.999</b>	<b>1.233.842</b>	<b>3.896.549</b>	<b>6.501.770</b>	<b>6.881.736</b>	<b>6.039.970</b>	<b>6.105.320</b>	<b>6.170.132</b>	<b>6.234.334</b>	<b>6.297.852</b>	<b>6.360.607</b>	<b>6.422.515</b>	<b>6.483.490</b>	<b>6.543.441</b>	<b>6.602.274</b>	<b>6.659.888</b>	<b>6.716.181</b>	<b>6.771.043</b>	<b>6.824.359</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>27.243.367</b>	<b>802.999</b>	<b>1.233.842</b>	<b>3.896.549</b>	<b>6.501.770</b>	<b>6.881.736</b>	<b>6.039.970</b>	<b>6.105.320</b>	<b>6.170.132</b>	<b>6.234.334</b>	<b>6.297.852</b>	<b>6.360.607</b>	<b>6.422.515</b>	<b>6.483.490</b>	<b>6.543.441</b>	<b>6.602.274</b>	<b>6.659.888</b>	<b>6.716.181</b>	<b>6.771.043</b>	<b>6.824.359</b>	<b>77.695.215</b>
<b>Discount rate</b>	<b>8,8 %</b>																				
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50	19,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,27	0,25	0,23	0,21	0,19	0,19
<b>Present value of Net Cash Flow</b>	<b>26.120.366</b>	<b>707.734</b>	<b>999.660</b>	<b>2.902.081</b>	<b>4.451.414</b>	<b>4.331.132</b>	<b>3.494.420</b>	<b>3.247.025</b>	<b>3.016.537</b>	<b>2.801.827</b>	<b>2.601.841</b>	<b>2.415.593</b>	<b>2.242.163</b>	<b>2.080.693</b>	<b>1.930.378</b>	<b>1.790.468</b>	<b>1.660.263</b>	<b>1.539.109</b>	<b>1.426.394</b>	<b>1.321.548</b>	<b>15.045.798</b>
<b>PV of Net Cash Flows</b>	<b>71.080.646,0</b>																				
<b>PV of Terminal Value</b>	<b>15.045.798,2</b>																				
<b>Equity Value</b>	<b>86.126.444,1</b>																				

## Baseline scenario Financing Cash Flows

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	734,294	1,523,669	2,261,993	6,849,133	11,322,195	11,969,396	13,578,400	13,849,969	14,126,968	14,409,507	14,697,697	14,991,651	15,291,484	15,597,314	15,909,260	16,227,446	16,551,994	16,883,034	17,220,695	17,565,109	
- Operating costs	192,437	408,034	642,400	2,116,523	3,565,402	3,787,672	6,459,713	6,660,645	6,867,910	7,081,710	7,302,255	7,529,762	7,764,454	8,006,562	8,256,325	8,513,990	8,779,810	9,054,049	9,336,978	9,628,879	
<b>EBITDA</b>	<b>541,857</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>	
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Grants	38,507,121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from financing operations</b>	<b>-38,507,121</b>	<b>39,048,978</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>

IRR	34.64%
MIRR	13.40%

## JESSICA scenario (0%) Financing Cash Flows

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	734,294	1,523,669	2,261,993	6,849,133	11,322,195	11,969,396	13,578,400	13,849,969	14,126,968	14,409,507	14,697,697	14,991,651	15,291,484	15,597,314	15,909,260	16,227,446	16,551,994	16,883,034	17,220,695	17,565,109	
- Operating costs	192,437	408,034	642,400	2,116,523	3,565,402	3,787,672	6,459,713	6,660,645	6,867,910	7,081,710	7,302,255	7,529,762	7,764,454	8,006,562	8,256,325	8,513,990	8,779,810	9,054,049	9,336,978	9,628,879	
<b>EBITDA</b>	<b>541,857</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>	
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial Payment	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	1,925,356	
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from financing operations</b>	<b>-38,507,121</b>	<b>-1,383,499</b>	<b>-809,721</b>	<b>-305,763</b>	<b>2,807,254</b>	<b>5,831,437</b>	<b>6,256,368</b>	<b>5,193,332</b>	<b>5,263,967</b>	<b>5,333,702</b>	<b>5,402,441</b>	<b>5,470,086</b>	<b>5,536,533</b>	<b>5,601,674</b>	<b>5,665,396</b>	<b>5,727,579</b>	<b>5,788,100</b>	<b>5,846,828</b>	<b>5,903,629</b>	<b>5,958,361</b>	<b>6,010,874</b>

IRR	10.77%
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## JESSICA scenario (2,07%) Financing Cash Flows

Net cash flows																				Exit	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	734,294	1,523,669	2,261,993	6,849,133	11,322,195	11,969,396	13,578,400	13,849,969	14,126,968	14,409,507	14,697,697	14,991,651	15,291,484	15,597,314	15,909,260	16,227,446	16,551,994	16,883,034	17,220,695	17,565,109	
- Operating costs	192,437	408,034	642,400	2,116,523	3,565,402	3,787,672	6,459,713	6,660,645	6,867,910	7,081,710	7,302,255	7,529,762	7,764,454	8,006,562	8,256,325	8,513,990	8,779,810	9,054,049	9,336,978	9,628,879	
<b>EBITDA</b>	<b>541,857</b>	<b>1,115,635</b>	<b>1,619,593</b>	<b>4,732,610</b>	<b>7,756,793</b>	<b>8,181,724</b>	<b>7,118,688</b>	<b>7,189,323</b>	<b>7,259,058</b>	<b>7,327,797</b>	<b>7,395,442</b>	<b>7,461,889</b>	<b>7,527,030</b>	<b>7,590,752</b>	<b>7,652,935</b>	<b>7,713,456</b>	<b>7,772,184</b>	<b>7,828,985</b>	<b>7,883,717</b>	<b>7,936,230</b>	
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	797,097	764,520	731,267	697,327	662,684	627,323	591,231	554,392	516,790	478,410	439,235	399,250	358,436	316,778	274,258	230,857	186,558	141,342	95,190	48,082	
- Financial Payment	1,573,810	1,606,388	1,639,640	1,673,581	1,708,224	1,743,584	1,779,676	1,816,515	1,854,117	1,892,498	1,931,672	1,971,658	2,012,471	2,054,129	2,096,650	2,140,050	2,184,350	2,229,566	2,275,718	2,322,825	
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from financing operations</b>	<b>-38,507,121</b>	<b>-1,829,051</b>	<b>-1,255,272</b>	<b>-751,315</b>	<b>2,361,703</b>	<b>5,385,885</b>	<b>5,810,816</b>	<b>4,747,780</b>	<b>4,818,416</b>	<b>4,888,151</b>	<b>4,956,890</b>	<b>5,024,535</b>	<b>5,090,982</b>	<b>5,156,123</b>	<b>5,219,844</b>	<b>5,282,028</b>	<b>5,342,548</b>	<b>5,401,277</b>	<b>5,458,078</b>	<b>5,512,809</b>	<b>5,565,323</b>

IRR	10,01%
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## Municipality scenario Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109		
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879		
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712	3.850.712		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	0	-3.308.855	-2.735.077	-2.231.119	881.898	3.906.081	4.331.012	3.267.976	3.338.611	3.408.346	3.477.085	3.544.730	3.611.177	3.676.318	3.740.040	3.802.223	3.862.744	3.921.472	3.978.273	4.033.004	4.085.518	92.343.036

IRR 29,24%

## JESSICA scenario (0%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109		
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879		
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607	577.607		
+ Grants	26.954.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-38.507.121	26.919.235	538.029	1.041.986	4.155.003	7.179.186	7.604.117	6.541.081	6.611.717	6.681.451	6.750.191	6.817.836	6.884.283	6.949.424	7.013.145	7.075.328	7.135.849	7.194.578	7.251.378	7.306.110	7.358.623	92.343.036

IRR 23,07%

## JESSICA scenario (2,07%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	734.294	1.523.669	2.261.993	6.849.133	11.322.195	11.969.396	13.578.400	13.849.969	14.126.968	14.409.507	14.697.697	14.991.651	15.291.484	15.597.314	15.909.260	16.227.446	16.551.994	16.883.034	17.220.695	17.565.109		
- Operating costs	192.437	408.034	642.400	2.116.523	3.565.402	3.787.672	6.459.713	6.660.645	6.867.910	7.081.710	7.302.255	7.529.762	7.764.454	8.006.562	8.256.325	8.513.990	8.779.810	9.054.049	9.336.978	9.628.879		
EBITDA	541.857	1.115.635	1.619.593	4.732.610	7.756.793	8.181.724	7.118.688	7.189.323	7.259.058	7.327.797	7.395.442	7.461.889	7.527.030	7.590.752	7.652.935	7.713.456	7.772.184	7.828.985	7.883.717	7.936.230		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	239.129	229.356	219.380	209.198	198.805	188.197	177.369	166.318	155.037	143.523	131.771	119.775	107.531	95.033	82.277	69.257	55.967	42.403	28.557	14.425		
- Financial Payment	472.143	481.916	491.892	502.074	512.467	523.075	533.903	544.955	556.235	567.749	579.502	591.497	603.741	616.239	628.995	642.015	655.305	668.870	682.715	696.847		
+ Grants	26.954.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-38.507.121	26.785.569	404.363	908.321	4.021.338	7.045.520	7.470.452	6.407.415	6.478.051	6.547.786	6.616.525	6.684.170	6.750.617	6.815.758	6.879.480	6.941.663	7.002.183	7.060.912	7.117.713	7.172.444	7.224.958	92.343.036

IRR 22,65%

# Calculations for 1.4 Case Study: Construction of an open broadband electronic communication network in the municipalities Dobrna, Laško, Store and Vojnik

## Baseline scenario Enterprise and Equity PV

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.348.082	1.378.151	1.410.985	1.441.305
- Operating costs	0	0	326.476	333.006	339.696	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	429.648	445.987	463.817	483.147	504.077	526.607
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	865.949	868.754	884.265	894.904	906.908	919.698
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-637.815	-571.422	-505.688	-439.396	-372.742	-305.675	-238.585	-171.861	-105.061	-38.545	29.967	97.831	166.090
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-637.815	-571.422	-505.688	-439.396	-372.742	-305.675	-238.585	-171.861	-105.061	-38.545	29.967	97.831	
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	865.949	868.754	884.265	894.904	906.908	919.698
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	717.135	747.410	777.261	806.686	835.695	864.289	892.468	920.232
WACC	8.6 %																			
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50
Present Value Factor	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.30	0.28	0.26	0.24	0.22	0.20
Present value of Net Cash Flow	0	0	126.151	166.187	224.616	279.354	286.854	279.687	284.574	287.776	275.100	265.207	232.704	155.586	119.055	79.299	32.854	37.788	41.893	44.615
PV of Net Cash Flows																				
PV of Terminal Value																				
Enterprise Value																				

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.348.082	1.378.151	1.410.985	1.441.305	
- Operating costs	0	0	326.476	333.006	339.696	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	429.648	445.987	463.817	483.147	504.077	526.607	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	865.949	868.754	884.265	894.904	906.908	919.698	
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-637.815	-571.422	-505.688	-439.396	-372.742	-305.675	-238.585	-171.861	-105.061	-38.545	29.967	97.831		
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-637.815	-571.422	-505.688	-439.396	-372.742	-305.675	-238.585	-171.861	-105.061	-38.545	29.967	97.831		
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
+ Grant	9.628.229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from operations	9.628.229	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	865.949	868.754	884.265	894.904	906.908		
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net cash flows	9.628.229	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	717.135	747.410	777.261	806.686	835.695	864.289	892.468	920.232	
Discount rate	8.6 %																				
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
Present Value Factor	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.30	0.28	0.26	0.24	0.22	0.20	
Present value of Net Cash Flow	9.238.182	0	126.151	166.187	224.616	279.354	286.854	279.687	284.574	287.776	275.100	265.207	232.704	155.586	119.055	79.299	32.854	37.788	41.893	44.615	
PV of Net Cash Flows																					
PV of Terminal Value																					
Equity Value																					

## JESSICA scenario (0%) Enterprise and Equity PV

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.478	333.008	339.686	346.459	353.389	360.456	367.665	375.019	382.519	390.170	481.649	734.998	869.648	1.028.967	1.217.476	1.217.476	1.217.476	1.217.476
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	184.574	252.967	323.701	353.993	392.644	428.991	205.087	104.806	-25.369	-182.537	-150.468	-117.654	-87.314
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	41.017	20.961	0	0	0	0	0
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	147.659	202.374	258.961	283.194	314.115	343.193	164.069	83.845	-25.369	-182.537	-150.468	-117.654	-87.314
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	160.675	193.489	223.829
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	160.675	193.489	223.829
WACC	4.5 %																			
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50
Present Value Factor	0.98	0.94	0.90	0.86	0.82	0.79	0.75	0.72	0.69	0.66	0.63	0.60	0.58	0.55	0.53	0.51	0.48	0.46	0.44	0.42
Present value of Net Cash Flow	0	0	139.003	190.366	267.478	345.825	369.162	374.181	395.785	416.077	413.490	414.395	377.995	262.729	208.997	144.715	62.328	74.526	85.892	95.092
PV of Net Cash Flows	4.638.035,3																			
PV of Terminal Value	2.118.960,0																			
Enterprise Value	6.756.995,3																			

Net cash flows																					Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305	
- Operating costs	0	0	326.478	333.008	339.686	346.459	353.389	360.456	367.665	375.019	382.519	390.170	481.649	734.998	869.648	1.028.967	1.217.476	1.217.476	1.217.476	1.217.476	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829	
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	184.574	252.967	323.701	353.993	392.644	428.991	205.087	104.806	-25.369	-182.537	-150.468	-117.654	-87.314	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	41.017	20.961	0	0	0	0	0	
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	147.659	202.374	258.961	283.194	314.115	343.193	164.069	83.845	-25.369	-182.537	-150.468	-117.654	-87.314	
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143	
+ Grant	4.623.955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	4.623.955	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	160.675	193.489	223.829	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	4.623.955	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	160.675	193.489	223.829	
Discount rate	16,2 %																				
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
Present Value Factor	0.93	0.80	0.69	0.59	0.51	0.44	0.38	0.33	0.28	0.24	0.21	0.18	0.15	0.13	0.11	0.10	0.08	0.07	0.06	0.05	
Present value of Net Cash Flow	4.290.272	0	106.671	131.406	166.082	193.152	185.467	169.098	160.888	152.141	136.002	122.604	100.597	62.894	45.004	28.031	10.860	11.680	12.109	12.059	
PV of Net Cash Flows	6.097.015,8																				
PV of Terminal Value	74.618,9																				
Equity Value	6.171.634,7																				

## JESSICA scenario (2,07%) Enterprise and Equity PV

Net cash flows																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305	
- Operating costs	0	0	326.478	333.008	339.686	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	428.648	442.697	457.146	471.995	487.244	502.893	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	856.949	872.044	888.936	906.156	924.721	944.412	
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-637.815	-571.422	-504.688	-438.396	-372.746	-307.671	-243.341	-179.891	-117.747	-56.874	3.181	64.767	152.519	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	91.017	95.291	98.620	101.004	102.442	102.935	102.487	
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-606.830	-520.829	-439.948	-367.597	-302.247	-236.872	-172.644	-109.600	-49.127	1.177	67.911	167.452	254.964	
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	714.481	739.586	761.149	779.429	794.525	806.671	814.915	819.427	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	714.481	739.586	761.149	779.429	794.525	806.671	814.915	819.427	
WACC	5.7 %																				
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
Present Value Factor	0.97	0.92	0.87	0.82	0.78	0.74	0.70	0.66	0.63	0.59	0.56	0.53	0.50	0.47	0.45	0.42	0.40	0.38	0.36	0.34	
Present value of Net Cash Flow	0	0	135.104	182.931	254.122	324.839	342.835	343.563	359.286	373.432	386.910	393.551	401.865	411.356	421.524	432.071	442.798	453.606	464.495	475.466	486.519
PV of Net Cash Flows	4.156.718,1																				
PV of Terminal Value	1.340.015,3																				
Enterprise Value	5.496.733,4																				

Net cash flows																					Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305	
- Operating costs	0	0	326.478	333.008	339.686	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	428.648	442.697	457.146	471.995	487.244	502.893	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	800.135	836.230	856.949	872.044	888.936	906.156	924.721	944.412	
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial costs	103.708	99.470	95.143	90.727	86.220	81.619	76.923	72.130	67.236	62.245	57.146	51.845	46.335	41.215	35.893	30.038	24.273	18.390	12.395	6.256	
EBIT	-103.708	-99.470	-1.134.826	-1.063.555	-955.133	-836.164	-780.667	-712.444	-635.729	-548.567	-461.660	-375.115	-289.070	-203.825	-119.480	-35.442	-206.810	-168.858	-130.039	-93.570	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	22.489	37.145	52.291	59.369	68.140	78.471	89.774	102.625	116.500	131.000	146.825	163.600	180.925	
Profit after Taxes	-103.708	-99.470	-1.134.826	-1.063.555	-955.133	-836.164	-780.667	-712.444	-635.729	-548.567	-461.660	-375.115	-289.070	-203.825	-119.480	-206.810	-168.858	-130.039	-93.570		
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	
+ Grant	4.623.955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	4.520.246	-99.470	59.984	131.255	239.677	358.646	414.143	482.376	521.004	581.586	609.897	644.980	671.028	700.240	731.442	764.622	799.777	836.906	876.019	917.127	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	4.520.246	-99.470	59.984	131.255	239.677	358.646	414.143	482.376	521.004	581.586	609.897	644.980	671.028	700.240	731.442	764.622	799.777	836.906	876.019	917.127	
Discount rate	16,2 %																				
Discount Period	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	17.50	18.50	19.50	
Present Value Factor	0.93	0.80	0.69	0.59	0.51	0.44	0.38	0.33	0.28	0.24	0.21	0.18	0.15	0.13	0.11	0.10	0.08	0.07	0.06	0.05	
Present value of Net Cash Flow	4.194.048	-79.452	41.247	77.699	122.143	157.344	196.414	240.337	290.132	346.787	410.312	480.717	558.912	645.907	741.712	847.247	963.532	1091.577	1232.392	1386.847	
PV of Net Cash Flows	5.609.890,3																				
PV of Terminal Value	72.533,4																				
Equity Value	5.682.423,7																				

# Municipality scenario Enterprise and Equity PV

## I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	429.648	445.147	461.146	477.145	493.144	509.143
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-633.815	-571.422	-509.688	-447.396	-385.103	-322.810	-260.517	-198.224	-135.931	-73.638	-11.345	50.958	113.265
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-633.815	-571.422	-509.688	-447.396	-385.103	-322.810	-260.517	-198.224	-135.931	-73.638	-11.345	50.958	113.265
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
WACC	6,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor	0,97	0,91	0,85	0,80	0,75	0,70	0,65	0,61	0,57	0,54	0,50	0,47	0,44	0,41	0,39	0,36	0,34	0,32	0,30	0,28
Present value of Net Cash Flow	0	0	131.724	176.557	242.794	307.229	320.980	318.419	329.633	339.157	329.874	323.559	288.856	196.498	152.984	103.675	43.702	-19.851	-87.491	-160.678
PV of Net Cash Flows																				
PV of Terminal Value																				
Enterprise Value																				

## II. Equity value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	401.649	414.998	429.648	445.147	461.146	477.145	493.144	509.143
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	35.893	34.426	32.929	31.401	29.841	28.248	26.623	24.964	23.271	21.543	19.779	17.978	16.140	14.265	12.350	10.396	8.401	6.365	4.286	2.165
EBIT	-35.893	-34.426	-1.072.612	-1.004.229	-898.754	-782.793	-730.367	-633.815	-551.422	-489.139	-426.846	-364.553	-302.260	-240.117	-178.224	-116.331	-54.438	7.457	68.564	136.671
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Profit after Taxes	-35.893	-34.426	-1.072.612	-1.004.229	-898.754	-782.793	-730.367	-633.815	-551.422	-489.139	-426.846	-364.553	-302.260	-240.117	-178.224	-116.331	-54.438	7.457	68.564	136.671
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	-35.893	-34.426	122.198	190.581	296.056	412.017	464.443	500.109	556.178	614.148	639.792	672.153	641.424	463.801	385.108	275.378	120.205	-68.730	-297.739	-577.530
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	-35.893	-34.426	122.198	190.581	296.056	412.017	464.443	500.109	556.178	614.148	639.792	672.153	641.424	463.801	385.108	275.378	120.205	-68.730	-297.739	-577.530
Discount rate	11,5 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor	0,95	0,85	0,76	0,68	0,61	0,55	0,49	0,44	0,40	0,35	0,32	0,29	0,26	0,23	0,21	0,18	0,17	0,15	0,13	0,12
Present value of Net Cash Flow	-33.989	-29.232	93.042	130.118	181.250	226.185	228.627	220.752	220.140	217.973	203.617	191.818	164.139	106.425	79.239	50.808	19.887	-10.196	-39.607	-88.890
PV of Net Cash Flows																				
PV of Terminal Value																				
Equity Value																				

## 15% JESSICA scenario (0%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
* Operating income	0	0	481.604	554.888	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	184.574	252.967	323.701	353.993	392.644	428.991	205.087	104.806	-25.369	-182.537	-373.508	-604.596	-886.508
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	41.017	20.961	0	0	0	0	0
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	147.659	202.374	258.961	283.194	314.115	343.193	164.069	83.845	-25.369	-182.537	-373.508	-604.596	-886.508
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
WACC	6,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,70	0,65	0,61	0,57	0,54	0,50	0,47	0,44	0,41	0,39	0,36	0,34	0,32	0,30	0,28
Present value of Net Cash Flow	0	0	131.724	176.557	242.794	307.229	320.980	318.419	329.633	339.157	329.874	323.559	288.856	196.498	152.984	103.675	43.702	-19.851	-87.491	-160.678
PV of Net Cash Flows																				
PV of Terminal Value																				
Enterprise Value																				

### II. Equity value

Net cash flows																				Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
* Operating income	0	0	481.604	554.888	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	184.574	252.967	323.701	353.993	392.644	428.991	205.087	104.806	-25.369	-182.537	-373.508	-604.596	-886.508
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	41.017	20.961	0	0	0	0	0
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	147.659	202.374	258.961	283.194	314.115	343.193	164.069	83.845	-25.369	-182.537	-373.508	-604.596	-886.508
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	372.421	372.421	372.421	372.421	372.421	311.143	311.143	311.143	311.143	311.143	311.143	311.143	311.143
+ Grant	4.045.960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	4.045.960	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	4.045.960	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
Discount rate	11,5 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,95	0,85	0,76	0,68	0,61	0,55	0,49	0,44	0,40	0,35	0,32	0,29	0,26	0,23	0,21	0,18	0,17	0,15	0,13	0,12
Present value of Net Cash Flow	3.831.283	0	118.114	151.557	199.519	241.693	241.732	229.567	227.509	224.090	208.653	195.922	167.443	109.043	81.272	52.726	21.277	-9.252	-39.037	-68.632
PV of Net Cash Flows																				
PV of Terminal Value																				
Equity Value																				

# 15% JESSICA scenario (2,07%) Enterprise and Equity PV

## I. Enterprise Value

Net cash flows																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
EBIT	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-184.574	252.967	323.701	353.993	392.644	428.991	205.087	104.806	-25.369	-182.537	-373.508	-604.596	-886.508
- Cash Taxes on EBIT	0	0	0	0	0	0	0	36.915	50.593	64.740	70.799	78.529	85.798	41.017	20.961	0	0	0	0	0
Profit after Taxes	0	0	-1.039.683	-972.828	-868.913	-754.545	-703.744	-147.659	202.374	258.961	283.194	314.115	343.193	164.069	83.845	-25.369	-182.537	-373.508	-604.596	-886.508
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
Cash flow from operations	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	0	0	155.127	221.982	325.897	440.265	491.066	520.080	574.795	631.382	655.615	686.536	654.336	475.212	394.988	285.774	128.606	-62.365	-293.453	-575.365
WACC	6,8 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,70	0,65	0,61	0,57	0,54	0,50	0,47	0,44	0,41	0,39	0,36	0,34	0,32	0,30	0,28
Present value of Net Cash Flow	0	0	131.724	176.557	242.794	307.229	320.980	318.419	329.633	339.157	329.874	323.559	288.856	196.498	152.984	103.675	43.702	-19.851	-87.491	-160.678
PV of Net Cash Flows	3.337.620,7																			
PV of Terminal Value	-2.376.804,9																			
Enterprise Value	960.815,9																			

## II. Equity value

Net cash flows																				Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365
- Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Financial costs	35.893	34.426	32.929	31.401	29.841	28.248	26.623	24.964	23.271	21.543	19.779	17.978	16.140	14.285	12.350	10.396	8.401	6.365	4.286	2.165
EBIT	-35.893	-34.426	-1.072.612	-1.004.229	-898.754	-782.793	-730.367	-159.610	229.696	302.158	334.214	374.666	412.851	190.822	92.456	-35.765	-190.938	-379.873	-608.882	-888.673
- Cash Taxes on EBIT	0	0	0	0	0	0	0	31.922	45.939	60.432	66.843	74.933	82.570	88.164	18.491	0	0	0	0	0
Profit after Taxes	-35.893	-34.426	-1.072.612	-1.004.229	-898.754	-782.793	-730.367	-127.688	183.757	241.727	267.371	299.732	330.281	152.658	73.965	-35.765	-190.938	-379.873	-608.882	-888.673
+ Depreciation	0	0	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810	1.194.810
+ Grant	4.045.960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow from operations	4.010.067	-34.426	122.198	190.581	296.056	412.017	464.443	500.109	556.178	614.148	639.792	672.153	641.424	463.801	385.108	275.378	120.205	-68.730	-297.739	-577.530
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flows	4.010.067	-34.426	122.198	190.581	296.056	412.017	464.443	500.109	556.178	614.148	639.792	672.153	641.424	463.801	385.108	275.378	120.205	-68.730	-297.739	-577.530
Discount rate	11,5 %																			
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	15,50	16,50	17,50	18,50	19,50
Present Value Factor:	0,95	0,85	0,76	0,68	0,61	0,55	0,49	0,44	0,40	0,35	0,32	0,29	0,26	0,23	0,21	0,18	0,17	0,15	0,13	0,12
Present value of Net Cash Flow	3.797.294	-29.232	93.042	130.118	181.250	226.185	228.627	220.752	220.140	217.973	203.617	191.818	164.139	106.425	79.239	50.808	19.887	-10.196	-39.607	-68.890
PV of Net Cash Flows	5.983.388,2																			
PV of Terminal Value	-597.979,4																			
Equity Value	5.385.408,8																			

## Baseline scenario Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.804	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.685	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.217.476	1.217.476	1.217.476	1.217.476	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Grants	9.628.229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from financing operations	-1.931.657	9.628.229	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829	2.604.391
MIRR	18,78%																					

## JESSICA scenario (0%) Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.804	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.685	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.217.476	1.217.476	1.217.476	1.217.476	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial Payment	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	250.503	
+ Grants	4.623.955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from financing operations	-1.925.877	4.373.452	-250.503	-95.375	-28.521	75.395	189.763	240.564	306.492	374.885	445.620	475.911	514.562	489.631	265.727	165.446	35.271	-121.897	-89.828	-57.014	-26.674	2.604.391
MIRR	10,31%																					

## JESSICA scenario (2,07%) Financing Cash Flows

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.804	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.685	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.217.476	1.217.476	1.217.476	1.217.476	
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	160.675	193.489	223.829		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial Payment	103.708	99.470	95.143	90.727	86.220	81.619	76.923	72.130	67.238	62.245	57.148	51.945	46.635	41.215	35.683	30.036	24.273	18.390	12.385	6.256		
+ Grants	4.623.955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from financing operations	-1.925.877	4.315.482	-308.472	-153.345	-86.490	17.425	131.793	182.594	248.523	316.916	387.650	417.941	456.593	431.662	207.757	107.477	-22.699	-179.866	-147.797	-114.983	-84.643	2.604.391
MIRR	10,41%																					

## Municipality Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670		
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	35.893	34.426	32.929	31.401	29.841	28.248	26.623	24.964	23.271	21.543	19.779	17.978	16.140	14.265	12.350	10.396	8.401	6.365	4.286	2.165		
- Financial Payment	70.869	72.336	73.833	75.362	76.922	78.514	80.139	81.798	83.491	85.220	86.984	88.784	90.622	92.498	94.413	96.367	98.362	100.398	102.476	104.597		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-9.825.904	-106.762	-106.762	48.365	115.219	219.135	333.503	384.304	450.233	518.626	589.360	619.651	658.302	633.372	409.467	309.187	179.011	21.843	-169.127	-400.215	-682.127	-6.694.729

IRR	#DN/0!
MIRR	-0,35%

## 15% JESSICA scenario (0%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670		
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial Payment	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699	86.699		
+ Grants	4.045.960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-5.779.943	3.939.261	-86.699	68.428	135.283	239.198	353.566	404.367	470.296	538.689	609.423	639.714	678.366	653.435	429.531	329.250	199.074	41.907	-149.064	-380.152	-662.064	-6.694.729

IRR	#NUM!
MIRR	5,94%

## 15% JESSICA scenario (2,07%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Exit	
+ Operating income	0	0	481.604	554.988	665.563	786.725	844.455	917.451	993.054	1.071.141	1.108.933	1.155.234	1.201.784	1.251.228	1.285.597	1.314.741	1.346.082	1.378.151	1.410.965	1.441.305		
- Operating costs	0	0	326.476	333.006	339.666	346.459	353.389	360.456	367.665	375.019	382.519	390.170	461.649	734.998	869.648	1.028.967	1.217.476	1.440.516	1.704.418	2.016.670		
EBITDA	0	0	155.127	221.982	325.897	440.265	491.066	556.995	625.388	696.122	726.414	765.065	740.134	516.230	415.949	285.774	128.606	-62.365	-293.453	-575.365		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	35.893	34.426	32.929	31.401	29.841	28.248	26.623	24.964	23.271	21.543	19.779	17.978	16.140	14.265	12.350	10.396	8.401	6.365	4.286	2.165		
- Financial Payment	70.869	72.336	73.833	75.362	76.922	78.514	80.139	81.798	83.491	85.220	86.984	88.784	90.622	92.498	94.413	96.367	98.362	100.398	102.476	104.597		
+ Grants	4.045.960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-5.779.943	3.939.198	-106.762	48.365	115.219	219.135	333.503	384.304	450.233	518.626	589.360	619.651	658.302	633.372	409.467	309.187	179.011	21.843	-169.127	-400.215	-682.127	-6.694.729

IRR	#DN/0!
MIRR	5,78%

## Calculations for 1.5 Case Study: Biogas power plant on the waste water treatment plant Loke

### Baseline scenario Enterprise and Equity PV

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>EBIT</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>Cash flow from operations</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
<b>WACC</b>	7,7 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,96	0,89	0,83	0,77	0,72	0,67	0,62	0,57	0,53	0,49	0,46	0,43	0,40	0,37	0,34	0,34
<b>Present value of Net Cash Flow</b>	<b>21.870</b>	<b>20.716</b>	<b>19.623</b>	<b>18.587</b>	<b>17.606</b>	<b>15.928</b>	<b>14.391</b>	<b>12.986</b>	<b>11.701</b>	<b>10.527</b>	<b>9.455</b>	<b>8.476</b>	<b>7.584</b>	<b>6.770</b>	<b>6.029</b>	<b>78.475</b>
<b>PV of Net Cash Flows</b>	<b>202.249,4</b>															
<b>PV of Terminal Value</b>	<b>78.474,7</b>															
<b>Enterprise Value</b>	<b>280.724,1</b>															

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	12.025	11.528	10.998	10.434	9.833	9.194	8.512	7.787	7.014	6.191	5.315	4.381	3.387	2.328	1.201	
<b>EBIT</b>	<b>-22.663</b>	<b>-21.712</b>	<b>-20.720</b>	<b>-19.683</b>	<b>-18.601</b>	<b>-18.596</b>	<b>-18.562</b>	<b>-18.496</b>	<b>-18.395</b>	<b>-18.258</b>	<b>-18.080</b>	<b>-17.859</b>	<b>-17.590</b>	<b>-17.272</b>	<b>-16.898</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-22.663</b>	<b>-21.712</b>	<b>-20.720</b>	<b>-19.683</b>	<b>-18.601</b>	<b>-18.596</b>	<b>-18.562</b>	<b>-18.496</b>	<b>-18.395</b>	<b>-18.258</b>	<b>-18.080</b>	<b>-17.859</b>	<b>-17.590</b>	<b>-17.272</b>	<b>-16.898</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>10.670</b>	<b>11.621</b>	<b>12.614</b>	<b>13.650</b>	<b>14.732</b>	<b>14.737</b>	<b>14.771</b>	<b>14.837</b>	<b>14.938</b>	<b>15.075</b>	<b>15.253</b>	<b>15.475</b>	<b>15.743</b>	<b>16.062</b>	<b>16.435</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>10.670</b>	<b>11.621</b>	<b>12.614</b>	<b>13.650</b>	<b>14.732</b>	<b>14.737</b>	<b>14.771</b>	<b>14.837</b>	<b>14.938</b>	<b>15.075</b>	<b>15.253</b>	<b>15.475</b>	<b>15.743</b>	<b>16.062</b>	<b>16.435</b>	
<b>Discount rate</b>	<b>9,1 %</b>															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,96	0,88	0,80	0,74	0,67	0,62	0,57	0,52	0,48	0,44	0,40	0,37	0,34	0,31	0,28	0,28
<b>Present value of Net Cash Flow</b>	<b>10.213</b>	<b>10.192</b>	<b>10.136</b>	<b>10.050</b>	<b>9.939</b>	<b>9.109</b>	<b>8.366</b>	<b>7.699</b>	<b>7.102</b>	<b>6.567</b>	<b>6.088</b>	<b>5.659</b>	<b>5.275</b>	<b>4.931</b>	<b>4.623</b>	<b>50.573</b>
<b>PV of Net Cash Flows</b>	<b>115.949,4</b>															
<b>PV of Terminal Value</b>	<b>50.573,2</b>															
<b>Equity Value</b>	<b>166.522,6</b>															

## JESSICA scenario (0%) Enterprise and Equity PV

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>EBIT</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>Cash flow from operations</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
															350.211	
WACC	5,0 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,98	0,93	0,88	0,84	0,80	0,76	0,73	0,69	0,66	0,63	0,60	0,57	0,54	0,52	0,49	0,49
<b>Present value of Net Cash Flow</b>	<b>22.144</b>	<b>21.504</b>	<b>20.883</b>	<b>20.279</b>	<b>19.693</b>	<b>18.264</b>	<b>16.919</b>	<b>15.651</b>	<b>14.458</b>	<b>13.335</b>	<b>12.279</b>	<b>11.285</b>	<b>10.351</b>	<b>9.474</b>	<b>8.850</b>	<b>171.768</b>
<b>PV of Net Cash Flows</b>	<b>235.170,0</b>															
<b>PV of Terminal Value</b>	<b>171.767,8</b>															
<b>Enterprise Value</b>	<b>406.937,9</b>															
<b>Net cash flows</b>																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	3.750	3.541	3.327	3.107	2.882	2.651	2.414	2.172	1.923	1.668	1.407	1.139	865	584	295	
<b>EBIT</b>	<b>-14.388</b>	<b>-13.725</b>	<b>-13.048</b>	<b>-12.356</b>	<b>-11.649</b>	<b>-12.053</b>	<b>-12.464</b>	<b>-12.881</b>	<b>-13.304</b>	<b>-13.735</b>	<b>-14.172</b>	<b>-14.617</b>	<b>-15.068</b>	<b>-15.527</b>	<b>-15.993</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-14.388</b>	<b>-13.725</b>	<b>-13.048</b>	<b>-12.356</b>	<b>-11.649</b>	<b>-12.053</b>	<b>-12.464</b>	<b>-12.881</b>	<b>-13.304</b>	<b>-13.735</b>	<b>-14.172</b>	<b>-14.617</b>	<b>-15.068</b>	<b>-15.527</b>	<b>-15.993</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>18.945</b>	<b>19.608</b>	<b>20.285</b>	<b>20.977</b>	<b>21.684</b>	<b>21.280</b>	<b>20.870</b>	<b>20.453</b>	<b>20.029</b>	<b>19.598</b>	<b>19.161</b>	<b>18.717</b>	<b>18.265</b>	<b>17.806</b>	<b>17.340</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>18.945</b>	<b>19.608</b>	<b>20.285</b>	<b>20.977</b>	<b>21.684</b>	<b>21.280</b>	<b>20.870</b>	<b>20.453</b>	<b>20.029</b>	<b>19.598</b>	<b>19.161</b>	<b>18.717</b>	<b>18.265</b>	<b>17.806</b>	<b>17.340</b>	
																172.172
Discount rate	10,1 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,95	0,87	0,79	0,71	0,65	0,59	0,54	0,49	0,44	0,40	0,37	0,33	0,30	0,27	0,25	0,25
<b>Present value of Net Cash Flow</b>	<b>18.057</b>	<b>16.979</b>	<b>15.959</b>	<b>14.993</b>	<b>14.080</b>	<b>12.553</b>	<b>11.185</b>	<b>9.958</b>	<b>8.860</b>	<b>7.876</b>	<b>6.996</b>	<b>6.208</b>	<b>5.504</b>	<b>4.875</b>	<b>4.313</b>	<b>42.823</b>
<b>PV of Net Cash Flows</b>	<b>158.396,7</b>															
<b>PV of Terminal Value</b>	<b>42.822,9</b>															
<b>Equity Value</b>	<b>201.219,6</b>															

Exit

## JESSICA scenario (2,07%) Enterprise and Equity PV

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.080	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>EBIT</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>Cash flow from operations</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
															300.759	
WACC	5,9 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,97	0,92	0,87	0,82	0,77	0,73	0,69	0,65	0,62	0,58	0,55	0,52	0,49	0,46	0,44	0,44
<b>Present value of Net Cash Flow</b>	<b>22.058</b>	<b>21.252</b>	<b>20.477</b>	<b>19.729</b>	<b>19.009</b>	<b>17.492</b>	<b>16.077</b>	<b>14.756</b>	<b>13.525</b>	<b>12.377</b>	<b>11.307</b>	<b>10.311</b>	<b>9.384</b>	<b>8.521</b>	<b>7.719</b>	<b>131.639</b>
PV of Net Cash Flows	223.993,6															
PV of Terminal Value	131.638,7															
<b>Enterprise Value</b>	<b>355.632,3</b>															

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.080	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	15.775	15.069	14.325	13.541	12.715	11.845	10.927	9.959	8.937	7.859	6.722	5.521	4.252	2.912	1.496	
<b>EBIT</b>	<b>-26.413</b>	<b>-25.253</b>	<b>-24.046</b>	<b>-22.790</b>	<b>-21.483</b>	<b>-21.247</b>	<b>-20.976</b>	<b>-20.668</b>	<b>-20.319</b>	<b>-19.926</b>	<b>-19.487</b>	<b>-18.998</b>	<b>-18.455</b>	<b>-17.855</b>	<b>-17.194</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-26.413</b>	<b>-25.253</b>	<b>-24.046</b>	<b>-22.790</b>	<b>-21.483</b>	<b>-21.247</b>	<b>-20.976</b>	<b>-20.668</b>	<b>-20.319</b>	<b>-19.926</b>	<b>-19.487</b>	<b>-18.998</b>	<b>-18.455</b>	<b>-17.855</b>	<b>-17.194</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>6.920</b>	<b>8.080</b>	<b>9.287</b>	<b>10.543</b>	<b>11.851</b>	<b>12.086</b>	<b>12.357</b>	<b>12.666</b>	<b>13.015</b>	<b>13.407</b>	<b>13.846</b>	<b>14.335</b>	<b>14.878</b>	<b>15.478</b>	<b>16.139</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>6.920</b>	<b>8.080</b>	<b>9.287</b>	<b>10.543</b>	<b>11.851</b>	<b>12.086</b>	<b>12.357</b>	<b>12.666</b>	<b>13.015</b>	<b>13.407</b>	<b>13.846</b>	<b>14.335</b>	<b>14.878</b>	<b>15.478</b>	<b>16.139</b>	
															160.249	
Discount rate	10,1 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,95	0,87	0,79	0,71	0,65	0,59	0,54	0,49	0,44	0,40	0,37	0,33	0,30	0,27	0,25	0,25
<b>Present value of Net Cash Flow</b>	<b>6.596</b>	<b>6.997</b>	<b>7.306</b>	<b>7.535</b>	<b>7.695</b>	<b>7.130</b>	<b>6.623</b>	<b>6.167</b>	<b>5.757</b>	<b>5.388</b>	<b>5.055</b>	<b>4.755</b>	<b>4.483</b>	<b>4.237</b>	<b>4.014</b>	<b>39.857</b>
PV of Net Cash Flows	89.739,6															
PV of Terminal Value	39.857,4															
<b>Equity Value</b>	<b>129.596,9</b>															

Exit

## Municipality scenario Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>EBIT</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>Cash flow from operations</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	261.331
<b>WACC</b>	<b>6,7 %</b>															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,97	0,91	0,85	0,80	0,75	0,70	0,65	0,61	0,57	0,54	0,50	0,47	0,44	0,41	0,39	0,39
<b>Present value of Net Cash Flow</b>	<b>21.966</b>	<b>20.989</b>	<b>20.055</b>	<b>19.163</b>	<b>18.311</b>	<b>16.710</b>	<b>15.230</b>	<b>13.863</b>	<b>12.601</b>	<b>11.436</b>	<b>10.361</b>	<b>9.370</b>	<b>8.457</b>	<b>7.616</b>	<b>6.842</b>	<b>101.379</b>
<b>PV of Net Cash Flows</b>	<b>212.967,8</b>															
<b>PV of Terminal Value</b>	<b>101.378,9</b>															
<b>Enterprise Value</b>	<b>314.346,7</b>															

### II. Equity value

Net cash flows																Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	3.750	3.541	3.327	3.107	2.882	2.651	2.414	2.172	1.923	1.668	1.407	1.139	865	584	295	
<b>EBIT</b>	<b>-14.388</b>	<b>-13.725</b>	<b>-13.048</b>	<b>-12.356</b>	<b>-11.649</b>	<b>-12.053</b>	<b>-12.464</b>	<b>-12.881</b>	<b>-13.304</b>	<b>-13.735</b>	<b>-14.172</b>	<b>-14.617</b>	<b>-15.068</b>	<b>-15.527</b>	<b>-15.993</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-14.388</b>	<b>-13.725</b>	<b>-13.048</b>	<b>-12.356</b>	<b>-11.649</b>	<b>-12.053</b>	<b>-12.464</b>	<b>-12.881</b>	<b>-13.304</b>	<b>-13.735</b>	<b>-14.172</b>	<b>-14.617</b>	<b>-15.068</b>	<b>-15.527</b>	<b>-15.993</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>18.945</b>	<b>19.608</b>	<b>20.285</b>	<b>20.977</b>	<b>21.684</b>	<b>21.280</b>	<b>20.870</b>	<b>20.453</b>	<b>20.029</b>	<b>19.598</b>	<b>19.161</b>	<b>18.717</b>	<b>18.265</b>	<b>17.806</b>	<b>17.340</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>18.945</b>	<b>19.608</b>	<b>20.285</b>	<b>20.977</b>	<b>21.684</b>	<b>21.280</b>	<b>20.870</b>	<b>20.453</b>	<b>20.029</b>	<b>19.598</b>	<b>19.161</b>	<b>18.717</b>	<b>18.265</b>	<b>17.806</b>	<b>17.340</b>	197.419
<b>Discount rate</b>	<b>8,8 %</b>															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,30
<b>Present value of Net Cash Flow</b>	<b>18.164</b>	<b>17.282</b>	<b>16.435</b>	<b>15.624</b>	<b>14.846</b>	<b>13.393</b>	<b>12.074</b>	<b>10.877</b>	<b>9.792</b>	<b>8.808</b>	<b>7.916</b>	<b>7.108</b>	<b>6.377</b>	<b>5.714</b>	<b>5.116</b>	<b>58.240</b>
<b>PV of Net Cash Flows</b>	<b>169.525,6</b>															
<b>PV of Terminal Value</b>	<b>58.240,5</b>															
<b>Equity Value</b>	<b>227.766,1</b>															

## 15% JESSICA scenario (0%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>EBIT</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-10.638</b>	<b>-10.184</b>	<b>-9.721</b>	<b>-9.249</b>	<b>-8.768</b>	<b>-9.402</b>	<b>-10.049</b>	<b>-10.709</b>	<b>-11.381</b>	<b>-12.067</b>	<b>-12.765</b>	<b>-13.477</b>	<b>-14.203</b>	<b>-14.943</b>	<b>-15.698</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
<b>Cash flow from operations</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
															243.977	
<b>WACC</b>	7,2 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,36
<b>Present value of Net Cash Flow</b>	<b>21.917</b>	<b>20.848</b>	<b>19.831</b>	<b>18.865</b>	<b>17.945</b>	<b>16.303</b>	<b>14.792</b>	<b>13.404</b>	<b>12.129</b>	<b>10.959</b>	<b>9.884</b>	<b>8.899</b>	<b>7.995</b>	<b>7.168</b>	<b>6.411</b>	<b>88.686</b>
<b>PV of Net Cash Flows</b>	<b>207.349,6</b>															
<b>PV of Terminal Value</b>	<b>88.685,8</b>															
<b>Enterprise Value</b>	<b>296.035,4</b>															

### II. Equity value

Net cash flows																Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	6.500	6.231	5.945	5.640	5.315	4.970	4.601	4.209	3.791	3.347	2.873	2.368	1.831	1.259	649	
<b>EBIT</b>	<b>-17.138</b>	<b>-16.416</b>	<b>-15.666</b>	<b>-14.889</b>	<b>-14.083</b>	<b>-14.372</b>	<b>-14.651</b>	<b>-14.918</b>	<b>-15.173</b>	<b>-15.413</b>	<b>-15.638</b>	<b>-15.846</b>	<b>-16.034</b>	<b>-16.202</b>	<b>-16.347</b>	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Profit after Taxes</b>	<b>-17.138</b>	<b>-16.416</b>	<b>-15.666</b>	<b>-14.889</b>	<b>-14.083</b>	<b>-14.372</b>	<b>-14.651</b>	<b>-14.918</b>	<b>-15.173</b>	<b>-15.413</b>	<b>-15.638</b>	<b>-15.846</b>	<b>-16.034</b>	<b>-16.202</b>	<b>-16.347</b>	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	175.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Cash flow from operations</b>	<b>191.195</b>	<b>16.918</b>	<b>17.667</b>	<b>18.444</b>	<b>19.250</b>	<b>18.961</b>	<b>18.683</b>	<b>18.415</b>	<b>18.161</b>	<b>17.920</b>	<b>17.695</b>	<b>17.488</b>	<b>17.299</b>	<b>17.132</b>	<b>16.987</b>	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash flows</b>	<b>191.195</b>	<b>16.918</b>	<b>17.667</b>	<b>18.444</b>	<b>19.250</b>	<b>18.961</b>	<b>18.683</b>	<b>18.415</b>	<b>18.161</b>	<b>17.920</b>	<b>17.695</b>	<b>17.488</b>	<b>17.299</b>	<b>17.132</b>	<b>16.987</b>	
																193.393
<b>Discount rate</b>	<b>8,8 %</b>															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,30
<b>Present value of Net Cash Flow</b>	<b>183.314</b>	<b>14.911</b>	<b>14.314</b>	<b>13.737</b>	<b>13.180</b>	<b>11.934</b>	<b>10.809</b>	<b>9.794</b>	<b>8.879</b>	<b>8.054</b>	<b>7.310</b>	<b>6.641</b>	<b>6.039</b>	<b>5.498</b>	<b>5.011</b>	<b>57.053</b>
<b>PV of Net Cash Flows</b>	<b>319.423,4</b>															
<b>PV of Terminal Value</b>	<b>57.052,8</b>															
<b>Equity Value</b>	<b>376.476,1</b>															

## 15% JESSICA scenario (2,07%) Enterprise and Equity PV

### I. Enterprise Value

Net cash flows																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
EBITDA	22.695	23.149	23.612	24.084	24.566	23.931	23.284	22.624	21.952	21.267	20.568	19.856	19.130	18.390	17.636	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
EBIT	-10.638	-10.184	-9.721	-9.249	-8.768	-9.402	-10.049	-10.709	-11.381	-12.067	-12.765	-13.477	-14.203	-14.943	-15.698	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	-10.638	-10.184	-9.721	-9.249	-8.768	-9.402	-10.049	-10.709	-11.381	-12.067	-12.765	-13.477	-14.203	-14.943	-15.698	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
Cash flow from operations	22.695	23.149	23.612	24.084	24.566	23.931	23.284	22.624	21.952	21.267	20.568	19.856	19.130	18.390	17.636	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	22.695	23.149	23.612	24.084	24.566	23.931	23.284	22.624	21.952	21.267	20.568	19.856	19.130	18.390	17.636	243.977
WACC	7,2 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,97	0,90	0,84	0,78	0,73	0,68	0,64	0,59	0,55	0,52	0,48	0,45	0,42	0,39	0,36	0,36
Present value of Net Cash Flow	21.917	20.848	19.831	18.865	17.945	16.303	14.792	13.404	12.129	10.959	9.884	8.899	7.995	7.168	6.411	88.686
PV of Net Cash Flows	207.349,6															
PV of Terminal Value	88.685,8															
Enterprise Value	296.035,4															

### II. Equity value

Net cash flows																Exit
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984	
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348	
EBITDA	22.695	23.149	23.612	24.084	24.566	23.931	23.284	22.624	21.952	21.267	20.568	19.856	19.130	18.390	17.636	
- Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Financial income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Financial costs	8.053	7.694	7.317	6.919	6.499	6.057	5.589	5.096	4.575	4.025	3.444	2.830	2.181	1.494	768	
EBIT	-18.691	-17.879	-17.038	-16.168	-15.267	-15.459	-15.839	-15.805	-15.957	-16.092	-16.209	-16.307	-16.384	-16.437	-16.466	
- Cash Taxes on EBIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Profit after Taxes	-18.691	-17.879	-17.038	-16.168	-15.267	-15.459	-15.839	-15.805	-15.957	-16.092	-16.209	-16.307	-16.384	-16.437	-16.466	
+ Depreciation	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	33.333	
+ Grant	175.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow from operations	189.643	15.455	16.295	17.165	18.066	17.874	17.694	17.528	17.377	17.241	17.124	17.026	16.949	16.896	16.868	
- Change in working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Capital expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net cash flows	189.643	15.455	16.295	17.165	18.066	17.874	17.694	17.528	17.377	17.241	17.124	17.026	16.949	16.896	16.868	192.038
Discount rate	8,8 %															
Discount Period	0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50	14,50
Present Value Factor:	0,96	0,88	0,81	0,74	0,68	0,63	0,58	0,53	0,49	0,45	0,41	0,38	0,35	0,32	0,30	0,30
Present value of Net Cash Flow	181.825	13.621	13.202	12.784	12.369	11.250	10.237	9.322	8.495	7.749	7.074	6.466	5.917	5.422	4.976	56.653
PV of Net Cash Flows	310.710,5															
PV of Terminal Value	56.653,1															
Equity Value	367.363,6															

## Baseline scenario Financing Cash Flows

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	12.025	11.528	10.998	10.434	9.833	9.194	8.512	7.787	7.014	6.191	5.315	4.381	3.387	2.328	1.201		
- Financial Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-315.000	10.670	11.621	12.614	13.650	14.732	14.737	14.771	14.837	14.938	15.075	15.253	15.475	15.743	16.062	16.435	249.661

IRR 3,30%

## JESSICA scenario (0%) Financing Cash Flows

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	3.750	3.541	3.327	3.107	2.882	2.651	2.414	2.172	1.923	1.668	1.407	1.139	865	584	295		
- Financial Payment	8.365	8.574	8.788	9.008	9.233	9.464	9.701	9.943	10.192	10.447	10.708	10.976	11.250	11.531	11.819		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-200.000	10.580	11.034	11.497	11.969	12.451	11.816	11.169	10.509	9.837	9.152	8.453	7.741	7.015	6.275	5.521	249.661

IRR 5,83%  
MIRR 5,60%

## JESSICA scenario (2,07%) Financing Cash Flows

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	15.775	15.069	14.325	13.541	12.715	11.845	10.927	9.959	8.937	7.859	6.722	5.521	4.252	2.912	1.496		
- Financial Payment	8.365	8.574	8.788	9.008	9.233	9.464	9.701	9.943	10.192	10.447	10.708	10.976	11.250	11.531	11.819		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-165.000	-1.445	-494	499	1.535	2.617	2.622	2.656	2.722	2.823	2.961	3.138	3.360	3.628	3.947	4.320	249.661

IRR 3,63%  
MIRR 3,78%

## Municipality scenario Financing Cash Flows

### III. Financing Cash Flow

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	3.750	3.541	3.327	3.107	2.882	2.651	2.414	2.172	1.923	1.668	1.407	1.139	865	584	295		
- Financial Payment	8.365	8.574	8.788	9.008	9.233	9.464	9.701	9.943	10.192	10.447	10.708	10.976	11.250	11.531	11.819		
+ Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-250.000	10.580	11.034	11.497	11.969	12.451	11.816	11.169	10.509	9.837	9.152	8.453	7.741	7.015	6.275	5.521	249.661

IRR	3,79%
MIRR	4,65%

## 15% JESSICA scenario (0%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	6.500	6.231	5.945	5.640	5.315	4.970	4.601	4.209	3.791	3.347	2.873	2.368	1.831	1.259	649		
- Financial Payment	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000		
+ Grants	175.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-150.000	186.195	11.918	12.667	13.444	14.250	13.961	13.683	13.415	13.161	12.920	12.695	12.488	12.299	12.132	11.987	249.661

IRR	44,16%
MIRR	13,26%

## 15% JESSICA scenario (2,07%) Financing Cash Flows

### III. Financing Cash Flow

Net cash flows															Exit		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
+ Operating income	51.000	52.020	53.060	54.122	55.204	55.182	55.160	55.138	55.116	55.094	55.072	55.050	55.028	55.006	54.984		
- Operating costs	28.305	28.871	29.449	30.037	30.638	31.251	31.876	32.514	33.164	33.827	34.504	35.194	35.898	36.616	37.348		
<b>EBITDA</b>	<b>22.695</b>	<b>23.149</b>	<b>23.612</b>	<b>24.084</b>	<b>24.566</b>	<b>23.931</b>	<b>23.284</b>	<b>22.624</b>	<b>21.952</b>	<b>21.267</b>	<b>20.568</b>	<b>19.856</b>	<b>19.130</b>	<b>18.390</b>	<b>17.636</b>		
+ Financial interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
+ Financial Reimbursement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Financial interest charges	8.053	7.694	7.317	6.919	6.499	6.057	5.589	5.096	4.575	4.025	3.444	2.830	2.181	1.494	788		
- Financial Payment	4.315	4.404	4.496	4.589	4.684	4.781	4.879	4.980	5.084	5.189	5.296	5.406	5.518	5.632	5.749		
+ Grants	175.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
- Loss on sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cash flow from financing operations	-150.000	185.327	11.050	11.799	12.577	13.383	13.094	12.815	12.548	12.293	12.053	11.828	11.620	11.432	11.264	11.119	249.661

IRR	42,91%
MIRR	13,10%