



JESSICA
JOINT EUROPEAN SUPPORT FOR SUSTAINABLE
INVESTMENT IN CITY AREAS

EVALUATION STUDY



Final Report
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Client:

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JESSICA Task Force

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1 EXECUTIVE SUMMARY

With the JESSICA initiative, the European Commission has developed a new approach for supporting urban development projects using European Structural Fund resources: an urban development fund containing ERDF resources and related cofinancing awards loans, guarantees and equity to such projects. Because the funding extended by the fund must be repaid, it can be used several times and therefore exercise greater leverage on private capital invested in urban development projects compared with 'lost grant-funding'. However, the projects must generate sufficient recycling of funding, which requires projects to have a different structure than previously. Consequently, a combination of existing grant-funding and the new instruments offered by an urban development fund is possible and even expressly desirable. The JESSICA initiative does not seek to replace the urban development fund, but to supplement it with new instruments.

The implementation of the JESSICA initiative in the EU Member States is supported jointly by the European Investment Bank (EIB) and the European Commission (DG Regio). The EIB supports the development of JESSICA structures and provides financial resources as well as know-how for the implementation of urban development funds. It can also make contributions to the cofinancing of the ERDF funding invested in the urban development fund and take on the management of JESSICA Holding Funds.

In 2008, with the 'Molkenmarkt' project, the Land of Berlin undertook an initial trial to implement an urban development fund with a feasibility study. After a decision was taken not to pursue this approach because of a political reassessment, at the beginning of 2009 the Land decided, after further consultations with the EIB, to carry out this feasibility study, which was initiated and supported by the EIB using European Commission funding.

By setting up an urban development fund, the Land of Berlin expects to be better able to meet the major urban development challenges (demographic change, urban-rural migration, diminishing economic growth, declining property market). The focus is sustainable economic management, i.e. supported projects must be integrated into a long-term guide plan and be as self-supporting as possible. On the basis of the initial findings of the study on the 'Molkenmarkt' project, the aim is now, adopting a broader, demand-oriented approach, to explore the effective establishment of an urban development fund in Berlin. The Investitionsbank Berlin (IBB), as a possible co-financier, and the EIB have been, and continue to be, involved in the development process headed up by the Senate Administration for Urban Development, in addition to the various other Senate Administrations (particularly the Senate Administration for the Economy, Technology and Women's Issues as the competent ERDF managing authority).

In this feasibility study the framework conditions for the implementation of the JESSICA initiative in Berlin were formulated on the basis of selected project types, with examples of specific projects. The identified project types cover the vast majority of Berlin's urban development projects.

A general analysis of the framework conditions for the market for urban development projects in Berlin and the identification of possible legal questions accompany the examination, from an urban development and a financial point of view, of the example projects which might be implemented under the urban development fund. A definitive formulation of the further potential of Berlin is carried out on the basis of a summary assessment of added value.

The relevant activities on the Berlin market for urban development projects cover not only the area of the Land of Berlin, but also display strong reciprocal links with the surrounding area of Brandenburg. Because of this close inter-regional linkage of urban-planning, economic and spatial development, the two Länder have developed a joint model which lays down the developmental scope and builds on existing successful cooperation in science and leading-edge technology, the film and media industry, and the healthcare sector. The joint spatial planning policy and regional development plan also formed the basis for the formulation of the 2010 Urban Development Plan for the City of Berlin, which laid down the main planning aims for the city as a whole:

- Increasing Berlin's economic strength and competitiveness,
- Maintaining and developing a city with a social and a functional mix,
- Maintaining and strengthening Berlin as a green and ecological city,
- Seeing the region as a whole.

In order to achieve these aims, new financing models for urban development are specifically to be used. Alongside the conventional spatial planning instruments, an integrated urban development plan, as required by the ERDF regulation as an eligibility criterion, also takes the form of a number of informal large and small-scale planning concepts, which can become binding following a Senate decision. In addition, the Operational Programme (ERDF) for the current programming period explicitly requires the existence of integrated planning concepts as a condition for eligibility under Priority axis 3, i.e. also for grant-funding and not only for potential support under the urban development fund.

The Operational Programme (ERDF) for the current programming period establishes the following priority axes:

- Priority axis 1 – Promotion of business competitiveness and start-ups (approx. EUR 293 million): Strengthening the innovative capacity, adaptability and productivity of the private sector
- Priority axis 2 – Innovation and knowledge-based economy (approx. EUR 284 million): Utilising knowledge and creativity as an engine for economic and social development
- Priority axis 3 – Integrated urban development (approx. EUR 183 million): Developing new potential through social integration
- Priority axis 4 – Environment (approx. EUR 80 million): Developing new potential through environmental change

If resources are contributed to the urban development fund under the priority axes, the projects to be supported by the urban development fund in the future must be classified substantively under the relevant priority axis.

In the market analysis for Berlin, the following project types were identified, which can be classified substantively under the central themes of ERDF support and are regularly the focus of urban development in Berlin.

- Transfer institutions between research and industry – commercial use of results of research, linking scientific research and marketable products
- Key investment projects in the areas of expertise of the Berlin-Brandenburg region – Motor function in the fields biotechnology, biomedical engineering, information and communication technology, transport systems technology, optical technologies, and the healthcare/life science cluster on the basis of their high macroeconomic potential for growth
- Cultural industries and centres of creativity – Cultural networks as an economic and social basis for integrated urban development
- Cross-sectional typology of brownfield land development – Central problem of urban development; generally can be classified under one of the three abovementioned points

On the basis of the identified project typologies, five projects were selected as examples for the feasibility study, with reference to which it is shown that the urban development fund approach is reasonable in terms of sustainability and public finance:

- With the Research Centre for Engineering and Information Technology the Technische Universität Berlin will be given additional offices and laboratories for tuition and research and classrooms for internal and external students from business and industry. It is to act as an incubator for high-tech business start-ups. The total investment volume is EUR 26 million, and the financing share for the urban development fund is 75% (loan).
- In the Adlershof business park, a Proton Treatment Centre is being built, where cancer patients will be treated using particle therapy. The procedure is innovative and still relatively new, but has already become part of clinical practice. The investment in the construction of the building will be covered completely by the investors, but there is still a funding shortfall for the operating company. In total, around EUR 110 million will be invested in the project at the Adlershof site. The urban development fund grant equity amounting to EUR 9.5 million (50% of the upfront costs).
- As part of the reprofiling of the University of Applied Sciences, a Research Institute for Culture and Information Technology is to be built at Oberschöneweide with exhibition space, office space, conference rooms and an incubation centre. The investment for the application-oriented institute, which is intended to bring tuition, research and commercial implementation in the creative industries under a single

roof, amounts to EUR 8.5 million; EUR 3.5 million will be covered by the urban development fund in the form of a loan.

- Tempelhof airport was closed in autumn 2008, and the redundant land is to be used to link the surrounding urban districts having regard to the need for sustainable development. Commercial use for future-oriented technologies is planned in the south-western area; however, the area must still be developed. The development costs for the first construction phase examined in the feasibility study are estimated at EUR 6.7 million, 10% of which will be covered by the urban development fund as a loan.
- The central development focus in the Europacity district is the Art Cube, in which exhibition space and offices for galleries and other arts-related services are to be developed. As a beacon project, it will give positive impetus for development of other projects in the Europacity district. Investment costs are estimated at around EUR 19.5 million, with an equity participation by the urban development fund covering 50%.

In order to enable an assessment of a financial model of the urban development fund on the basis of the described projects, a number of assumptions first had to be defined:

- In principle, the urban development fund utilises all possible funding instruments (loans, guarantees and equity). In the specific case of the five example projects, however, only loans (three quarters of the total fund investment) and equity (one quarter of the total fund investment) are awarded.
- The urban development fund begins its activity in 2010 and is given capital contributions of EUR 20 million in ERDF funding and EUR 20 million in national cofinancing. The cofinancing is provided completely in the form of a loan from the IBB at an interest rate of 3.75% p.a.
- In order to cover short-term peak demand, interim financing can be provided at fund level at an interest rate of 5.0%.
- Free remaining funding is invested at fund level at an interest rate of 2.0%.
- Fund management costs are estimated at 0.9% for total outstanding loans and 1.4% for outstanding equity capital.
- The life of the urban development fund is estimated at 25 years.
- The default rate is estimated at 10% for loans and 20% for equity participations.
- The urban development fund extends loans at an interest rate of 2.75%, whilst for the provision of equity there is a pari-passu sharing of the current profits.

Under these conditions, after repayment of the IBB loan (=national cofinancing for the ERDF), the urban development fund generates a total surplus of EUR 17.164 million (85.8% of the deployed ERDF funding), i.e. after 25 years, EUR 37.164 million is available for urban development projects, corresponding to a nominal annual growth rate of 2.5%. Assuming an annual inflation rate of up to 2.0%, it can be seen that there is also real capital maintenance,

combined with minimal capital appreciation. At the same time, all the public interests at project level are implemented. If it is assumed that the urban development fund is established on a sustainable basis and invests free residual funding directly in new projects (at 2.75%), there is even a surplus of EUR 24.6 million (123%) after 25 years.

In the course of the development process for the Berlin urban development fund, a number of legal questions were raised, concerning in particular management costs and the consequences of investing ERDF funding from several priority axes in the urban development fund. These were identified in the course of the feasibility study and are being dealt with in a parallel legal report commissioned by the EIB for the Länder, which will be completed in spring 2010.

The results of the exemplary fund assessment demonstrate, in addition to the material profitability of an urban development fund (implementation of public urban-development interests with the integration of private capital), its financial profitability. Despite the financing costs incurred for the provision of cofinancing for the ERDF funding contributed to the urban development fund, on the basis of a conservative assessment the urban development fund generates a surplus enabling real capital maintenance. Based on the investment of EUR 20 million in ERDF funding, after 25 years the Land of Berlin has around EUR 37 million at its disposal for urban development purposes, without the need for further resources to be contributed into the fund from the regional budget. Furthermore, this study has identified opportunities for further optimisation of the implementation of the Berlin urban development fund, which can be examined and taken into account by the future fund management.

On the basis of these clear findings, it can be confirmed that the use of JESSICA instruments for the purpose of sustainable urban development is profitable and therefore to be recommended. In addition to the capital appreciation resulting from the activities of the urban development fund, the set of instruments, which are broader than just grant-funding, offer a broader range of funding possibilities and generate new project types. The financing offered by the urban development fund makes it easier for project promoters to raise third-party capital on the market and firmly strengthens the implementation of important urban development projects through the inclusion of the private sector. This is also clear from the selected model portfolio: With the development of the site of the former Tempelhof airport, a new use is made of the most important area of brownfield land at present; the same applies to the Art Cube in the Europacity district, which strengthens the cultural industries as an area of expertise. The university research projects at the Technische Universität and at the University of Applied Sciences have direct industry links and have effects on urban planning, the labour market and employment. The Proton Treatment Centre helps to strengthen the healthcare sector as an area of expertise, but also has considerable potential for creating sustainable jobs and for developing a spatially significant urban district.

On the basis of this feasibility study it is recommended that the Land of Berlin establish an urban development fund offering the entire range of funding instruments (loans, guarantees and equity). After the clarification of the legal questions and a declaration of political intent, the funding agreement can be concluded between the fund management and the ERDF

managing authority and the urban development fund can begin its work. Funds recycled into the urban development fund can then be utilised in the broader content of urban development, as it is no longer subject to the restrictions under the ERDF regulations and the Operational Programme. In establishing an urban development fund, the Land of Berlin would be one of the first regions in the EU to utilise this funding instrument for sustainable urban development.

2 INTRODUCTION

With the JESSICA initiative, the European Commission has developed new approaches for supporting urban development projects using Structural Fund resources. In the 2007-2013 programming period funding can also be provided through loans, guarantees and equity; only grant-funding was previously possible. The European funding is paid into an urban development fund, which then allows individual projects to be supported using the abovementioned instruments. Urban development funds may be set up as a separate block of finance within an existing financial institution or as an independent legal entity.

Using these new instruments offers many advantages. Multiple use can now be made of the funding which was previously disbursed as 'lost' grant-funding, since repayments can be made to the funds using the new instruments ('recycling'). In addition, the public sector can be involved in adding value to successful projects. Furthermore, revenue can be generated from interest on the capital contributed to the urban development funds if the capital cannot be invested directly in projects. That revenue can then also be used to benefit urban development projects. By providing public capital through urban development funds it is possible to achieve a higher private contribution to investment financing (higher public leveraging) and to integrate the extensive know-how of project developers, investors and banks, and thus to implement large-scale urban development projects which would place excessive demands on individual actors.

At the same time it must be examined whether the new instruments can also be used to achieve the previous support aims (not yet explored) and whether the financial disadvantage potentially created through the need to involve other institutions (such as banks and fund managers) can be justified by greater successes in achieving support aims.

Nevertheless, urban development funds are suitable only for supporting specific projects which are relevant to urban development. Such projects must allow sufficient recycling in order to be able to utilise the loans, guarantees and equity received. It is not necessary to identify the fund projects or specific project expenditure when the fund is launched. However, a business plan must be drawn up for the fund highlighting the sustainable land development and projected recycling of capital.

The JESSICA initiative is intended to link the duties and questions connected with an integrated urban development policy with new forms of financing for implementing urban development projects. During implementation, relevant economic questions relate to the efficiency of the individual instruments and the organisational framework for the support, the extent to which the projects contribute to integrated urban development, the interaction between participants, and changes to political processes and governance structures.

The development and implementation of the JESSICA initiative in the EU Member States is supported by the European Investment Bank (EIB) together with the European Commission (DG Regio). This means that there is not only financial assistance and advice in relation to the development of JESSICA initiatives, but also a quick link between the European

Commission and the national managing authorities. The EIB can take on the role of disseminating best practice, since it has experience of financing projects throughout Europe. Moreover, the EU regulations also allow the EIB to be given the task of managing a holding fund. In addition, under its terms of reference, the EIB also offers other means of financing which can generate further leverage in JESSICA models, both at fund level and at project level.

2.1 Framework conditions

The philosophy and objectives of the JESSICA initiative have been discussed in detail by experts, although there are still uncertainties over practical implementation. The form of the financial support for projects has been fundamentally changed through the use of the instruments, which also has repercussions for processes and organisational forms. The processes and procedures are not yet completely clear to the relevant actors.

In Germany the approach adopted and the possibilities for using urban development funds have been openly explored both in EIB feasibility studies and expert studies and as part of an ExWoSt (Experimental Housing and Urban Development) research initiative, which has done the groundwork for possible implementation.

The experience from model projects and the examples of best practice (including those from elsewhere in Europe) serve as the basis for developments in Germany. In particular, it is being considered to what extent and using what interfaces fund structures can supplement existing mechanisms for financing urban development. It is therefore also being examined which organisational structures are suitable for which participating actors, what contribution can be made to the implementation process by regional development banks and the Kreditanstalt für Wiederaufbau, and how urban development funds can be integrated into existing development practice.

In 2008, with the 'Molkenmarkt' project, the Land of Berlin, together with the Investitionsbank Berlin (IBB), had launched a trial to implement an urban development fund, which, however, collapsed after an EIB feasibility study had been conducted, primarily because of a political reassessment of the project to be supported. In 2009 a new approach was then to be developed, with several pilot projects as the basis for an urban development fund.

In order to support the 'Berlin Urban Development Fund', the EIB commissioned the preparation of this feasibility study at the beginning of the operation, using European Commission funding. The EIB study offers active assistance to the key actors in Berlin by jointly formulating a JESSICA model fund and summarises the findings of the individual analyses during conceptualisation and the feasibility/added value of the model fund. In return, the study is then to be published at European level in order to move forward the thematic discussion in the EU Member States.

2.2 Background

Urban development in Berlin is being influenced to a great extent by demographic change, problems of urban-rural migration, diminishing economic growth and the declining property market, and thus Berlin's competitive position compared with other European metropolises. Urban development initiatives in Berlin therefore concentrate on developing the multi-centre development cores with multi-functional uses.

Against the background of the strained budget situation in the Land, top priority must be given to sustainable economic management. For investments in urban development, this means that the supported projects must be integrated into a long-term guide plan and be as self-supporting as possible. Projects which are eligible for support under the JESSICA initiative must be based on this long-term approach and not cause any further financial burden on the public sector as a result of repayment of funding. On account of the approach taken by the fund, more than one project can even be supported with the same funding.

The Land of Berlin first showed interest in the JESSICA initiative in 2008 with the Molkenmarkt/Klosterviertel city-centre regeneration project, and the report was submitted to the actors involved in April 2008 and discussed by them. Subsequently, the Berlin authorities decided to shift the focus of the JESSICA activities from this individual project and to develop a broader approach. That approach was to include, in addition to regeneration of city-centre land, investment in research and development and energy efficiency, but was also open to other areas of activity.

Despite the critical discussion of the JESSICA report on the Molkenmarkt/Klosterviertel project, the Berlin administrative authorities and the other project actors confirmed their interest in such a broad approach to implementing the JESSICA initiative. In March 2009 the Senate Administration for the Economy, Technology and Women's Issues and the Senate Administration for Urban Development, together with the IBB and the EIB, decided to support a follow-up study. Adopting a broader, demand-oriented approach, this EIB feasibility study is to explore the effective establishment of an urban development fund in Berlin.

2.3 Development process for the Berlin urban development fund

The development process for the Berlin urban development fund was overseen primarily by the Senate Administrations of the City of Berlin (the Senate Administration for Urban Development taking the lead) and the Investitionsbank Berlin (IBB). A.ST. Steinebach was commissioned by the European Investment Bank to produce this feasibility study and, together with the Senate Administration for Urban Development, organised the regular meetings of the Steering Group.

The first draft of the final report of this feasibility study should allow the Berlin Senate Administration to take a decision on possible fund contributions from the Operational Programme on the basis of the identified areas of application and pilot projects. Alongside the preparation of this feasibility study, legal questions were passed on to the experts

commissioned by the EIB to draft a legal report on the implementation of urban development funds in Germany. On the basis of the initial preliminary findings of that report, it was possible to establish the appropriate outline for the Berlin feasibility study.

After an ambitious start to the development process in May 2009, the phase of the theoretical groundwork has now been completed with the final report for the feasibility study. The collection of relevant data for potential projects to be supported by the urban development fund proved to be a fruitful process, as there was considerable interest in the new funding opportunities and projects were put forward to the experts. Even though not all the projects considered were eligible under the ERDF regulation, those projects were examples of a number of project types which are essentially eligible. The quality of the data provided following intensive individual consultations easily allowed projects to be financially evaluated with regard to suitability for an initial investment by an urban development fund in Berlin. Thus, in September 2009 it was possible to coordinate with the Steering Group a first exemplary project portfolio for the Berlin urban development fund. On the basis of the findings of the present feasibility study, a decision will be taken in the next few months on the effective establishment of an urban development fund in Berlin.

2.4 Scope of the feasibility study

In this feasibility study it was intended, on the basis of selected project types, with examples of specific projects, to formulate the framework conditions for the implementation of an urban development fund. The projects were initially the subject of preliminary discussions based on the knowledge of the Berlin authorities, and the information was developed in direct contacts with the respective project participants.

Subsequently it had to be clarified from a financial point of view how a combination of projects with varying degrees of profitability could produce an overall balanced risk spread and what terms had to be applied in the case of lending. Furthermore, it was necessary to identify the critical mass of the urban development fund, to define the possible types of fund contributions and to estimate leverage with regard to third parties.

20.05.09	Working Group meeting: launch, EIB introduction
03.06.09 - 03.07.09	Talks with mentors and other contacts to identify suitable project proposals: Mr Schulgen, Mr Bott, Mr Arndt, Senate Administration for Urban Development; Mrs Quehenberger, Dr Reiß, Mr Seifert, IBB; Mr Weißert, Mrs Fischer, Senate Administration for the Economy, Technology and Women's Issues; Mr Rothe, Mr Zillert, Senate Administration for Science, Education and Research; Mrs Weiß, Senate Administration for Health, Environment and Consumer Protection
25.06. / 26.06.09	Preliminary discussions on individual suitable projects: Prof. Heine, Prof. Atzorn, University of Applied Sciences /

	Mr Schmitz, Mr Bielfeldt, Dr Merkel, WISTA and Adlershof project
07.07.09	Working Group meeting: Presentation of model projects
15.07. - 23.07.09	<p>In-depth project-related consultations</p> <p>Research Centre for Engineering and Information Technology (15.7.) - Mr Rieseberg, Mrs Heffter, TU Bauabt.; Mr Arndt, Senate Administration for Urban Development; Mr Weißert, Senate Administration for the Economy, Technology and Women's Issues; Mr Seifert, IBB</p> <p>Proton Treatment Centre (21.7.) - Mr Rehr-Zimmermann, prothep-berlin; Mrs Teuber, Senate Administration for the Economy, Technology and Women's Issues; Dr Reiß, Mr Hoffmann, IBB</p> <p>Research Centre for Engineering and Information Technology (22.7.) -Prof. Heine, Prof. Atzorn, Prof. Sieck, University of Applied Sciences; Mrs Karger, Mrs Riedel, Mr Szillat, Senate Administration for Science, Education and Research; Mrs Walther, Mr Lassak, Mrs Georgiew, Senate Administration for the Economy, Technology and Women's Issues; Dr Reiß, IBB</p> <p>Tempelhof (23.7.) - Mr Schmitz, Mr Bielfeldt, WISTA; Mr Steindorf, Dr Merkel, Adlershof Projekt; Mr Schulgen, Mrs Schade, Senate Administration for Urban Development</p> <p>Heidestr. (17.7.+18.8.) - Mr Thomsen, Mrs Petersen, Mrs Breitbarth, Mrs Uhlmann, Vivico; Mr Schulgen, Mr Nagel, Mr Künzel, Mr Eichhorn, Senate Administration for Urban Development; Mr Seifert, IBB</p>
15.7. and 21.7.09	<p>Other dates for identification of projects and urban development fund philosophy</p> <p>15.7. - Presentation to regular meeting with economic discussions on districts</p> <p>21.7. - Talks with State Secretary Mr Heuer, Mrs Sternberg, Mrs Fischer, Senate Administration for the Economy, Technology and Women's Issues</p>
16.09.09	Working Group meeting: Financial analysis
06.11.09	Working Group meeting: Discussion of final report
04.12.09	Working Group meeting: Discussion of management fee

Figure 1: Consultation process

The study therefore encompassed the following working stages:

1. Analysis of framework conditions and the market for urban development projects in Berlin: evaluation of planning and administrative criteria and Operational Programme
2. Identification of possible uses of JESSICA at project level: presentation of project types and potential model projects and compilation of project portfolio
3. Fund conception and fund analysis: structure, drafting of business plan and evaluation of leverage
4. Legal analysis: identification of possible legal problems and integration into the process of the EIB legal report
5. Summary report: SWOT analysis, study of added value and identification of further potential for Berlin

In the course of the development process for this feasibility study, a total of five working group meetings have been held thus far (see [Figure 1](#)) and there have been several in-depth discussions with the project participants.

3 URBAN DEVELOPMENT IN BERLIN: FRAMEWORK CONDITIONS AND MARKET

This chapter will examine more closely the planning and administrative criteria in relation to urban development projects and the use of JESSICA instruments and the starting points for JESSICA as regards the market for urban development projects.

3.1 The Operational Programme for the City of Berlin (ERDF 2007-2013)

3.1.1 Initial situation

With the Operational Programme, the Land of Berlin lays down the strategic guidelines for funding under the European Regional Development Fund (ERDF) and the European Social Fund (ESF). In order to achieve synergies in using assistance from both funds and to optimise use, a 'Berlin General Strategy for More Growth and Employment' was drawn up and adopted by the Berlin Senate in 2006. It forms the strategic basis for the organisation of the operational programmes for the ERDF and the ESF and focuses on positively shaping future developments in the face of a difficult economic situation, many structural weaknesses, and unsatisfactory trends by exploiting the considerable strengths in the fields of science and culture.

Berlin's socioeconomic situation is suffering definite problems. The gross domestic product has not grown since the 1990s and remains at the same level; over the same period, despite some fluctuations, employment has seen a downward trend and the number of unemployed continues to rise. Productivity has been steadily weaker than the national trend, although an increase can be observed in the last few years. Nevertheless, Berlin's productivity is still well below the national average; furthermore, in 2005 Berlin recorded the lowest productivity gains of all the Länder. Broken down by individual sector, the following observations can be made in relation to the last few years:

The continual decline in industrial employment has led to productivity gains in this sector. In the corporate services sector there was below-average growth in output, although Berlin has historically been underrepresented in this regard (above all as regards value-added financial services). In the case of private services, a positive trend has been observed. The driving force is tourism, where the numbers of jobs and businesses continues to rise.

Berlin has a high proportion of skilled workers. The proportion of university graduates in the overall population is higher than in any other Land. The same applies to the labour supply in science and technology: 56% of the working population are trained and/or employed in those sectors. The processing industry accounts for only a small proportion of the Berlin economy, at around one tenth. On the other hand, private and public services are strongly represented in Berlin and the proportion of those employed in the sector is well

above the national average. Corporate services are also higher than average in this regard, although there is still further potential for development. In the cultural sector, in particular media and information and communication technologies, Berlin leads the way nationally and occupies third place among European metropolitan regions.

The regional innovation system in Berlin is well advanced, but there are still many opportunities for further development. Berlin has four large universities which are seeing growth in the number of sponsored places and which are being supplemented by a number of non-university research institutions. Nevertheless, there are fewer than average high-tech companies on the Berlin market. Knowledge-intensive high-tech services, on the other hand, are disproportionately high.

The Senate Administration, together with the key partners, has adopted a coherent innovation strategy which forms the strategic basis for the funding approach and covers the following sectors:

- biotechnology,
- biomedical engineering,
- information and communication technology (media),
- transport systems technology,
- optical technologies.

The healthcare/life sciences cluster (combination of technology providers and users) and the cultural industry (culture and creativity) also play an important role for Berlin's economy. The latter offer considerable local potential for innovation. Integrated urban development processes can be applied to existing and expandable cultural networks. This cluster is also an influential factor in Berlin's tourist image and occupies a key role in improving educational levels.

The situation in the social urban development sector highlights different development trends in the east and west and in the centre and periphery. In some areas of western Berlin close to the city centre, the high proportion of foreign nationals, unemployment and large numbers of social welfare recipients are responsible for a mixture of problems connected with integration and unemployment. In large housing estates in the eastern periphery, social problems (unemployment, low incomes) predominate above all for families with children where there are lower proportions of foreign nationals. Another increasingly explosive issue is the social integration of young people against the background of rising youth employment, increasing violent tendencies and problems with integrating immigrants.

An overview of the initial situation in Berlin is given in [Figure 2](#) below.

Strengths/Development opportunities	Weaknesses/Development threats
Industry	
<ul style="list-style-type: none"> • Very high proportion of skilled labour • Slightly above-average capital gearing in new construction • High number of start-ups in consumer-oriented services • High proportion of self-employed persons • Good general infrastructure provision as an industrial location • Strong cultural/tourist potential 	<ul style="list-style-type: none"> • Weak productivity with low growth • Low investment ratio, decline in equipment investments • Capital gearing trend weak since 2000 • Low capital gearing for equipment • Industrial and corporate services underrepresented • Overall less dynamism in business start-ups • Selective infrastructure deficits
Knowledge	
<ul style="list-style-type: none"> • Very good provision of universities and non-university research institutions • Very high number of R&D jobs at universities and non-university research institutions • Very high proportions of R&D jobs against all jobs and R&D spending against turnover • High R&D intensity in processing industry (partly as a result of industrial contraction processes) • High number of knowledge-intensive services • High number of institutions with knowledge and technology transfer • Strong culture and creativity • Very high penetration with broadband and internet connections 	<ul style="list-style-type: none"> • Low absolute number of enterprises in leading-edge industrial technology and higher-grade technology • Access to knowledge and technology transfer partially non-transparent, cooperation links more individual/arbitrary than systematic/strategic • Comparatively few patent applications with recent downward trend • Fragmented, mainly low-networked structure in the cultural industries
Environment and sustainable urban development	
<ul style="list-style-type: none"> • Population largely stable, comparatively low fall in employment • Strong environmental sector – research landscape 	<ul style="list-style-type: none"> • Water quality, energy efficiency, use of renewable energies, nature conservation

Figure 2: Development opportunities and threats (Source: Land of Berlin)

3.1.2 Framework conditions for future development

Berlin's future development is affected by social megatrends. Globalisation and international division of labour result in continual processes of change on local economic markets. Even though the demographic growth trends have not yet been felt fully in Berlin (even slight population growth in Berlin in the near future), individual aspects are already clearly evident (increasing population ageing, growing number of immigrants with a migration background). Furthermore, Berlin is highly integrated with the surrounding Land of Brandenburg, and there is therefore ongoing coordination on key policy areas. With the eastward enlargement of the European Union, Berlin moved from the periphery to the geographical centre of the EU, as a result of which it has special importance as the interface between the 'old' and the 'new' Member States.

After analysing the results achieved in the 2000-2006 programming period, the following initiatives can therefore be undertaken:

- Extension of areas of expertise through disproportionate use of funding and stronger focus on innovation
- Utilisation of potential of broad support, with innovation as the central criterion
- Resolution of main structural problems through infrastructure investment
- More systematic organisation of support for start-ups
- Support for districts where social and economic problems are concentrated
 - Conversion measures to adapt local infrastructure and to increase efficiency of public services
 - Development of integrated district-related action plans
 - Partnership-based programme implementation (authorities, public, industry)
 - Mobilisation and participation of local residents and programme management in the field.

At European and national level, the Lisbon strategy and the cohesion strategy provide the relevant framework. The National Strategic Framework Plan fixes three ERDF-related priorities for the objective of 'Regional Competitiveness and Employment' which applies to Berlin:

- Promotion of knowledge-based and innovation-oriented development
- Strengthening of the entrepreneurial base
- Reduction of regional disparities and expansion of specific potentials through sustainable regional development

On this basis it is possible to devise strategic approaches to future development in the various sectors. In the regional economy it is necessary to:

- Modernise businesses through the use of innovative financial engineering instruments for SMEs and encourage commercial investments in support of innovation, with a view to increasing productivity,
- Give a greater international focus to the regional economy and gain support in the development of new markets,
- Support start-ups in the innovation sector selectively, and
- Avoid infrastructure-related development bottlenecks.

In the regional innovation systems, cooperation between science and industry will be stepped up, with a greater focus on higher-grade and leading-edge technology. Specifically, it is necessary to:

- Expand existing R&D capacities in businesses (in particular SMEs),
- Support cooperation and knowledge transfer between industry and science,
- Proactively translate knowledge potential into marketable products,
- Simplify access to available knowledge and lifelong learning.

Sustainable urban development is to be achieved through integrated development plans, accompanied by supporting infrastructure measures.

3.1.3 Objective system and regional development strategy under the Operational Programme (ERDF)

The use of ERDF funding will be strategically targeted at increasing the adaptability of Berlin’s economy, applying knowledge and creativity as an engine for change, and developing new potential through environmental development and social integration. The basic points are as follows:

- Increasing the competitiveness of Berlin’s businesses by the improving the responsiveness of SMEs and compensating for the disadvantages in the city’s basic infrastructure
- Improving innovative capabilities
- Strengthening clusters and areas of expertise (healthcare, communication, media, culture, mobility)

ERDF general aim: Improve the international competitiveness of businesses and the city			
Strategic aim: Strengthen innovative capacity, adaptability and productivity of SMEs	Strategic aim: Utilise knowledge and creativity as an engine for economic and social development	Strategic aim: Develop new potential through social integration	Strategic aim: Develop new potential through environmental development
Priority axis 1: Promotion of business competitiveness and start-ups	Priority axis 2: Innovation and knowledge-based economy	Priority axis 3: Integrated urban development	Priority axis 4: Environment
Specific aim: More investment for innovation and employment Action field: Investment and productivity	Specific aim: More R&D in business Action field: Support for innovation and technology	Specific aim: Develop local potential through integrated approaches Action field: Integrated urban development	Specific aim: Maintain the ecological attractiveness of the city Action field: Support focus on environmental protection
Specific aim: Facilitate business start-ups Action field: Support for start-ups	Specific aim: Support structural change to knowledge-based economy Action field: Support for information society and knowledge-based economy		
Specific aim: Facilitate access to new markets Action field: Market development and international orientation	Specific aim: Facilitate technology transfer through better networking Action field: Support for technology transfer		
Specific aim: Eliminate infrastructure-related development bottlenecks for SMEs Action field: Corporate infrastructures			

Figure 3: Aims and levels of action in the Operational Programme (Source: Land of Berlin)

In the light of the general aim of the programme (improving Berlin's international competitiveness and attractiveness), the following four strategic objectives and priority axes emerge:

- Strengthening the innovative capacity, adaptability and productivity of the private sector

Priority axis 1: Promoting business competitiveness and start-ups

- Utilising knowledge and creativity as an engine for economic and social development

Priority axis 2: Innovation and knowledge-based economy

- Developing new potential through social integration

Priority axis 3: Integrated urban development

- Developing new potential through environmental change

Priority axis 4: Environment

All priority axes correspond to the thematic priorities in the National Strategic Framework Plan and are geared to international orientation and cooperation. The allocation of funding places an emphasis on the first two priority axes, to each of which one third of the ERDF funding is allocated. The reason for this emphasis was the considerable challenges faced in Priority axis 1 and the particular impulse for growth which Priority 2 is intended to provide. Around one fifth of the available funds are earmarked for Priority axis 3, and around one tenth for Priority axis 4.

An overview of the aims, levels of action and priority axes is given in [Figure 3](#).

There is no geographical delimitation of the programme in principle. Only in the Priority axis 3 were local delimitations chosen, based on socioeconomic disparities and specific opportunities for development.

An overview of the allocation of the ERDF funding to the different priority axes is given in [Figure 4](#).

	Gemeinschaftsbeteiligung	Nationaler Beitrag	Nationale Mittel		Finanzmittel insgesamt	Kofinanzierungssatz in %	Zur Information	
			Einzelstaatliche öffentliche Mittel	Einzelstaatliche private Mittel			EIB-Beteiligung	Andere Finanzmittel
			(c)	(d)				
(a)	(b)=(c)+(d)	(c)	(d)	(e)=(a)+(b)	f) = (a)/(e)			
Prioritätsachse 1	293.010.000,00	293.010.000,00	275.429.400,00	17.580.600,00	586.020.000,00	50	0	0
Prioritätsachse 2	284.520.810,00	284.520.810,00	267.449.560,00	17.071.250,00	569.041.620,00	50	0	0
Prioritätsachse 3	182.657.000,00	182.657.000,00	171.697.580,00	10.959.420,00	365.314.000,00	50	0	0
Prioritätsachse 4	80.402.000,00	80.402.000,00	75.577.880,00	4.824.120,00	160.804.000,00	50	0	0
Prioritätsachse 5	35.000.000,00	35.000.000,00	35.000.000,00	0	70.000.000,00	50	0	0
Insgesamt	875.589.810,00	875.589.810,00	825.154.420,00	50.435.390,00	1.751.179.620,00	50	0	0

Figure 4: Budget allocations for the different priority axes (Source: Land of Berlin)

Key:

Prioritätsachse = Priority axis
 Gemeinschaftsbeteiliging = Community participation
 Nationaler Beitrag = National contribution
 Nationale Mittel = National funding
 Einzelstaatliche öffentliche Mittel = National public funding
 Einzelstaatliche private Mittel = National private funding
 Finanzmittel insgesamt = Total financial resources
 Kofinanzierungssatz in % = Cofinancing rate as a %
 Zur Information = For information
 EIB-Beteiligung = EIB participation
 Andere Finanzmittel = Other funding

3.1.3.1 Priority axis 1: Promoting business competitiveness and start-ups

Within the first priority axis the abovementioned challenges are to be countered with four action fields.

More than half the funding is programmed to assist business investment activity, primarily with loans (SME funds) and grant-funding. The aim in this sector is essentially to improve productivity, to support structural change, to simplify financing of growth and to implement innovations.

With less than five percent, business start-ups are supported through grants, advice and events. In addition to dealing with financing problems for start-ups, priority is given to passing on know-how, with a focus on adapting to permanent structural change and on the innovative capacity of the regional economy.

On the same level, SMEs are also promoted in connection with the development of new markets. They receive grants and assistance with forming networks in central and eastern Europe. Support is given, for example, to joint presences at trade fairs, formation of clusters of companies and cooperation with research institutions.

More than one third of funding goes to building and upgrading infrastructure of particular economic importance, including educational infrastructure, preservation and valorisation of cultural heritage, and development and expansion of industrial land. It is planned to employ various instruments:

- Joint Federal Government/Länder scheme for 'improving the regional economic structure' (improving innovation- and start-up-oriented locations, forming clusters, regional management, vocational training)
- Visualisation of identity- and image-building capacities of cultural heritage

3.1.3.2 Priority axis 2: Innovation and knowledge-based economy

In the second priority axis the use of information and communication technologies is particularly important.

Slightly more than half of the programmed funding in this priority axis is used to promote research and development in businesses. The aim is to improve the technology and knowledge base and to strengthen innovative power in promising fields in businesses. Depending on the innovation phase, funding is allocated as a grant, an interest-subsidised loan and/or as equity. To that end, an innovation-oriented venture capital fund and a similar fund for creative enterprises are also being used and accompanying coaching and upskilling measures are being extended.

The transition from the information society to the knowledge-based economy will be facilitated by making better use of the available potential for knowledge and creativity. This means, first, that the dissemination and use of information and communication technologies is increased (including publicity work, internet portals, sectoral initiatives) and, secondly, that the social application of knowledge is improved (investments in start-up and competence centres, particularly in the cultural industries). However, support for academic education, e.g. in higher education institutions, is ruled out.

Technology transfer is to be supported through the selective promotion of networks and transfers in connection with Berlin's areas of expertise, the establishment of a Berlin future fund for innovative pilot projects, and the provision of start-up financing for the formation of new clusters and networks to enable technology transfer and exchange of know-how.

Innovative financing methods are also to be used (experimental approach). The appropriations earmarked for that purpose are to be used for pilot actions and could 'be implemented on a wider basis in subsequent years of the Operational Programme' (Chapter 5.2). This is a specific starting point for a further innovative financing model like the urban development fund (Priority axis 3).

3.1.3.3 Priority axis 3: Integrated urban development

As part of integrated schemes, the specific potential of individual areas should be intentionally developed and strengthened (economic urban development with local and small specific differences, social urban development in concentrated problem locations). There are to be visible reductions in social disparities, youth unemployment and unemployment among foreign nationals, with a view to improving social integration. The integrated urban development initiatives in the Zukunftsinitiative Stadtteil (Future Initiative for Urban Districts - ZIS - comprising the elements Social City, Urban Renewal, Urban Reconstruction, Education in Districts and Urban Centres) will be supplemented by activities at local level (alliances for employment, measures to improve performance of schools).

90% of the funding to be used to support comprehensive local development strategies is earmarked for the ZIS. The main points are:

- Support for the local economy and employment,
- Support for active citizenship,
- Improvement of provision of and access to public services,
- Improvement of quality of the urban environment, and

- Dissemination of media skills in the education and training systems.

This is intended to make it more possible to achieve life opportunities, paying special attention to education and life-long learning. Alongside the conventional instruments of grant-funding, innovative financial engineering instruments (JESSICA initiative) will also be used.

The choice of eligible areas is made on the basis of the results of socioeconomic and urban planning studies and has been confirmed by a Senate decision. There are 50-60 possible eligible areas, each with 5 000-25 000 inhabitants. Local development strategies are being formulated for each of these areas (SWOT analysis, definition of priorities, description of operations). The action 'Economically beneficial measures in district alliances' is not geographically limited, on the other hand.

3.1.3.4 Priority axis 4: Environment

In Priority axis 4 there are various support priorities which are intended, above all, to take account of the needs for action on water, climate and noise.

With the priority 'Rehabilitation of the physical environment and risk prevention' the aim is to remove soil pollution and contamination from land, to offer further support to rain water management, to encourage the extension of sewage works technology, and to set up in the medium to long term an integrated waste water management system.

The development of innovative environmental technologies is intended to benefit the competitive situation of Berlin's SMEs and research institutions, and also to increase energy efficiency and the effectiveness of renewable energies and to develop new applications. New storage technologies will also be developed.

As regards climate protection, renewable energies and energy efficiency, the use of modern measurement and control technologies and insulation is to be encouraged in order to reduce primary energy consumption in the supported measures by at least 30%.

Environmental, transport and mobility management systems will also be set up to promote 'cleaner transport' and the maintenance and expansion of existing nature conservation areas and nature reserves.

3.1.4 Sustainability in the Operational Programme (ERDF) and coherence with other support schemes

Sustainability takes on special importance in the Operational Programme as a horizontal aim. The social development process, which is characterised by technical innovation, international competition, social disintegration and global environmental problems, is to be shaped in such a way that sufficient consideration is given to economic, ecological and social concerns.

In addition to the substantive focus of the different priority axes, the use of their instruments is also based on the principles of sustainability. Thus, revolving instruments (loans, equity, guarantees) are to be used where they can provide suitable funding. Those resources are

therefore available on a sustainable basis and can also be used beyond the current programming period.

As has already been mentioned at the beginning of the chapter, the use of ERDF funding in the 2007-2013 programming period has been closely coordinated with the use of ESF funding. [Figure 5](#) gives an overview of the way in which both support measures interlink thematically with one another.

Combination and delimitation of ESF and ERDF intervention measures		
Priority axis 1 Business competitiveness and start-ups (ERDF) Adaptability and competitiveness (ESF)		
1. General delimitation ERDF: Financial assistance for businesses and infrastructure (real capital) ESF: Personal skills, advice		
2. Delimitation in relevant fields	ERDF	ESF
Competitiveness of businesses	Promotion of investments, market development, infrastructure	Advanced training of employees, advice and coaching for start-ups and entrepreneurs
Business start-ups	Financial assistance, company advice	Personal advice, coaching
Priority axis 2 Innovation and knowledge-based economy (ERDF) Improvement of human resources (ESF)		
1. General delimitation ERDF: Financing of R&D, concentrated support for technology-oriented businesses and start-ups ESF: Skills, advice to graduates		
2. Delimitation in relevant fields	ERDF	ESF
Promotion of R&D and innovations	Financing (business R&D and applied research), technology-oriented companies, integrated support (financing and advice), infrastructure Subject-specific coaching and advice for established technology-oriented companies	Qualification of graduates, further training for individuals
Business start-ups	Technology-oriented start-ups: integrated support (financing and advice)	Start-ups from higher education institutions: qualification and advice, grants to higher education institutions
Knowledge and technology transfer	Innovation networks, joint projects, transfer institutions	Qualification in the academic sector, research assistant
Priority axis 3 Integrated urban development (ERDF) Improvement of access to employment/social integration of disadvantaged groups (ESF)		
1. General delimitation Coordination in integrated, participatory local overall plans ERDF: comprehensive approach, social and environmental infrastructure, local economy ESF: in particular professional integration		
2. Delimitation in relevant fields	ERDF	ESF
Integrated urban development	Integrated small-scale plans, local economy, infrastructure Financing of structures for active citizenship in districts, e.g. by providing equipment, premises or services for volunteer coordination or mobilisation	Social and professional integration of disadvantaged persons, qualification of individuals active on a voluntary basis, e.g. training for specific voluntary activities
District alliances	Area-specific measures	Model employment projects

[Figure 5:](#) Relationship between ERDF and ESF in Berlin (Source: Land of Berlin)

Berlin's urban and economic area has strong links with the Land of Brandenburg; for that reason both Länder have operated a joint spatial planning policy and regional development plan since 1996. Like the abovementioned Operational Programme (ERDF) of the Land of Berlin, the Brandenburg General Strategy also has the primary objective of 'improving regional competitiveness', with the following focuses:

- Promotion of business investment and innovation processes
- Development of innovation-, technology- and training-oriented infrastructures,

- Corporate, tourist and transport infrastructures,
- Environment and urban development.

As a result, a high degree of coverage of both Länder's activities can be achieved in relation to the planned measures.

3.2 The model of the Berlin-Brandenburg capital region

Based on the existing close links in terms of urban planning, economic and spatial development, the Länder of Berlin and Brandenburg have formulated a joint model. Building on the successful cooperation in science and leading-edge technology, the film and media industries, and the healthcare sector, the joint model is intended to help secure jobs and create employment, to offer all residents equal opportunities and to ensure that the administration is close to the public and efficient.

The geographical polycentricity of Brandenburg will be used to enhance prospects for rural areas. Economic development will be geographically concentrated and housing and transport development is to be combined so that the existing strengths can be reinforced in all areas. The cities, as spatial anchors, will also utilise new forms of cooperation and stronger networks of transport chains to provide mobility and public services in rural areas. Rural areas will be assisted in developing new fields of economic activity, primarily in tourism and the use of renewable raw materials and energies.

In addition to intra-regional networking, encouragement is also to be given to international orientation. Linguistic and inter-cultural competences will be further developed and young people will be encouraged to be involved in the region on a long-term basis. Berlin's status as a metropolis will improve the competitiveness of the region as a whole and there will be joint national and international publicity for the region.

Regional development is concentrated on the theme of 'knowledge'. Life-long learning is to be promoted, as is education for people with migration backgrounds with a view to their better integration. Assistance for education, science and research can further raise the level of qualification of the local population and support the formation of knowledge-based enterprises emanating from higher education establishments and research institutions.

The economy of the Berlin-Brandenburg region is being geared more heavily to innovation and flexibility. By way of a central joint infrastructure project, Berlin-Brandenburg International (BBI) airport will create new potential for the capital region. Development will focus on forward-looking sectors and geographical centres. SMEs and business start-ups will benefit from special assistance, as will the expansion of sustainable energy supply based on regenerative energy sources.

Art and culture, creativity and innovation are to be given a higher profile as badges for the region, highlighting the way in which artistic elements are supplemented by natural and architectural diversity.

In order to raise further the quality of life in the regions, particular assistance will be given to families with children, security will be guaranteed as a key element of life, a sound environment will be preserved, and potential to create a joint healthcare region will be utilised. Urban areas and rural regions will further improve their qualities in this regard.

Furthermore, all opportunities for State cooperation are to be fully utilised and red-tape will continue to be cut. Public services will also be offered increasingly on the Internet and volunteering and active citizenship will be increased.

3.3 Integrated urban development plan in Berlin

An integrated urban development policy – as highlighted in the Leipzig Charter – is regarded as an important instrument in the implementation of sustainable urban development. In the legal bases for the JESSICA initiative, the use of urban development funds is closely linked to integrated urban development planning. At European level, there are no binding requirements for the content of integrated urban development plans, but there is a uniform understanding in this regard. The plans should agree on the geographical areas, time frame and subjects covered by various fields of action and specialist plans and link them up by defining aims and appropriate instruments for achieving those aims. The plans should contain statements on economic, social and environmental sustainability and specific urban planning concerns. In the Member States this is formulated on the basis of relevant planning systems and traditions.

Berlin's system of spatial planning is multi-faceted. In addition to the abovementioned joint model of the Länder of Berlin and Brandenburg, there is also a joint spatial planning policy and regional development plan, which, together with the regional development programme for the Länder of Berlin and Brandenburg, define common spatial planning principles and objectives.

With the production of an 'Urban Development Plan for the City of Berlin for 2020', the main strategic planning objectives were laid down for the city as a whole. The guiding principles are priority for safeguarding and developing existing stock and preventing the use of new extensive land, and reactive problem management. The following key urban development aims were therefore defined:

- Increasing Berlin's economic strength and competitiveness,
- Maintaining and developing a city with a social and a functional mix,
- Maintaining and strengthening Berlin as a green and ecological city,
- Seeing the region as a whole.

New urban development financing models are taking on increasing importance, partly in order to be able to develop alternative sources of financing. Dialogue, implementation and target groups are also becoming increasingly important in strategic planning.

For urban areas which are undergoing considerable changes because of persistent structural change or as a result of a particular developmental dynamic, additional planning concepts

(guide plans) were drawn up. They are intended to offer a survey of the medium- to long-term prospects of the area in question. They are informal plans, but, following a Senate decision, are binding on the administration and must be taken into account in formal planning. In Berlin there are currently four guide plans: city centre (connected city-centre concept which links together and connects the two city centres which have been separated for decades), western area (employment focus for Spandau-Charlottenburg-Reinickendorf), south-eastern area (from the city centre to Schönefeld airport, including Köpenick old town and the new Schöneeweide centre) and north-eastern area.

Furthermore, on a smaller scale there are other informal, integrated planning concepts. The workshop-based moderation procedure 'Northern City Periphery Strategies' can be cited as an example, based on certain objectives of the 2020 urban development concept (developing building stock, utilising strengths and opportunities, assets of the city centre, more than the heart, safeguarding the strengths of the city centre). It was implemented for the areas of Lehrter Straße/Fritz-Schloß-Park, Heidestraße and Schering AG/BEWAG land, which are characterised by a stagnating population trend, low economic growth, a development vacuum in a prime location and neighbourhood, and actors with limited scope for action. Future development opportunities were thus demonstrated and relevant strategic recommendations were made.

Seen as a whole, it is clear that the City of Berlin is actively pursuing an integrated urban development plan, as provided for as a criterion for eligibility under the ERDF regulation. In its Operational Programme (ERDF) for the current programming period, the City of Berlin even required that explicitly integrated planning concepts exist or must be drawn up for areas which are to be supported under Priority axis 3. However, the existence of an integrated urban development plan for support measures from the other priority axes also follows from the interaction between the multi-faceted formal and informal guide plans. Ultimately, however, the support policies for JESSICA are defined on a binding basis by a Senate decision.

3.4 Summary market analysis and description of possible role of JESSICA in Berlin

The Land of Berlin will derive benefits from using an urban development fund under the JESSICA initiative, particularly in terms of

- achieving interest-rate effects rather than unilateral grant-funding, and
- reducing equity finance and more efficient funding.

Urban development projects which would not really be eligible under traditional support programmes can be funded. The project partners seek to optimise their project (efficient funding) having regard to the fund management, and private proportional financing is made possible, as is the implementation of a higher total number of projects. In addition, there is greater networking of projects in the urban development fund, which results in greater efficiency and professionalism.

In the pilot project selection phase for the Berlin urban development fund, it became clear that the majority of the project ideas were not purely publicly initiated (and thus geared to grant-funding). The benefits resulting from the combination of private and public investment and the corresponding recycling of funding have not yet generally been seen.

Thus private initiators and investors, universities and research institutions showed particular interest in the instrument of the urban development fund. In Berlin there is an opportunity to implement, rather than large-scale development measures, smaller and thus more manageable project ideas, which are largely expected to be efficient. The relevant target groups are predominantly in the creative industries, culture and science. In these areas new project initiatives are continually being created, which often fail because the necessary bank financing cannot be secured as result of the risk or the expected profitability. On the other hand, grant-based funding is not readily available for project initiators, because eligibility conditions are presumably or actually not satisfied. At the same time, the actors are willing to 'pay back' possible financial support, for example on the basis of a fund model.

Against the background of urban development, there is an attempt in the abovementioned target groups to explore trends, including redeveloping and revitalising ailing building structures. From the development of individual projects there often comes an impetus which results in entire districts being upgraded ('upcoming areas'). These initiatives by the promoters, which are in some cases high-risk, are therefore to be regarded as sustainable and are to be supported.

Similar effects can be expected in the areas around universities and research institutions. Business start-ups emanating from the university and higher education sector are to be regarded as one of the most promising sources of positive labour market effects in Berlin. Following the identification of projects for the urban development fund, the impression created is that the interface between industry and higher education, on the one hand, and the spinning-off of innovative economic enterprises, on the other, have a high affinity with and suitability for financing models like an urban development fund. Those activities too promise immediate positive effects for the affected urban districts. Further economic promotion measures can also be linked in with these pioneering applications.

4 SPECIFIC MEANS OF INTERVENTION FOR JESSICA INSTRUMENTS: PROJECT LEVEL

On the basis of the provisions of the relevant European regulations and the specific characteristics of the JESSICA intervention instruments, only certain project types are eligible for support through an urban development fund, by reference to which specific model projects are selected. The different project types can be categorised as land development projects and land use projects.

In the land development sphere the following project types can be identified:

- *Land and area developments:*

For conventional redevelopment, for example office and commercial space, trading estates and/or technology centres, guarantees can help to secure third-party financing and reduced-rate loans reduce the proportion of third-party financing. In the case of less profitable recycling of brownfield land, equity capital can encourage the formation of 'social development companies'.

- *Project development (structural engineering) – new construction:*

Like area development, new construction of buildings which are important to urban development provides for the use of JESSICA instruments: whilst equity can be granted for the formation of a project development company and reduced-rate loans reduce the proportion of third-party financing, guarantees can cover third-party financing, as always, but also a possible shortfall in revenue after the completion of the development.

As regards land use, the following project types can be identified:

- *Temporary acquisition models*

For the necessary purchase and subsequent resale of land and buildings, the formation of a temporary acquisition company can be supported with equity capital, and the renovation of land and buildings can be realised with the aid of reduced-rate loans and guarantees.

- *Energy improvements for building stock*

Reduced-rate loans and guarantees are also suitable for supporting energy improvement measures in the private/commercial sector and the public sector.

- *Preservation and improvement of natural and cultural heritage*

As with support for new project developments in this area, investments in existing concert halls, art museums, leisure centres etc. can also be supported by means of reduced-rate loans, with a view to reducing the proportion of third-party, and guarantees, with a view to securing third-party financing and covering a shortfall in revenue after the completion of the development.

- *Environmental upgrading and improvement of infrastructure networks*

Reduced-rate loans and guarantees are again suitable for supporting energy efficiency, new energies, supply and waste disposal systems (gas, water, electricity, rubbish) and public transport.

- *Integration of additional uses and services in existing public building stock*

As has been described in the last two points, the integration of supplementary uses can also be supported by means of reduced-rate loans and guarantees.

4.1 Substantive differentiation of project types eligible for support through the Berlin urban development fund

In this feasibility study it was possible to differentiate substantively, for the Land of Berlin, several project types which are characteristic of the local market for urban development projects and which are eligible for support through an urban development fund. They can all be categorised in the core thematic areas for ERDF support.

4.1.1 Transfer institutions between research and industry

The Land of Berlin has four large universities and a number of non-university research institutions, such as Fraunhofer, Max-Planck and the Leibniz Association, and therefore possesses good basic conditions as a location for innovation. However, there are still deficits in connection with the commercial use of the results of research, with the result that the regional innovation system still has room for improvement. Particular importance is therefore attached to transfer institutions, which create a link between scientific research and marketable products. Innovation parks, technology and start-up centres or similar establishments require assistance in order to cover the risks in the initial development of a new business segment or the introduction of a new product onto the market, which are generally also connected with the risks of setting up a new business.

The means of intervention available to the urban development consist not only in dealing with financing problems (equity ratio, securities, capital costs) but also in building structures for transmitting know-how on the basis of the proximity to higher education institutions and research institutions, on the one hand, and similarly structured (new) businesses, on the other. At the same time, this also ensures constant urban development in those locations.

4.1.2 Key investment projects in the areas of expertise of the Berlin-Brandenburg region

In the Land of Berlin, biotechnology, biomedical engineering, information and communication technology, transport systems technology and optical technologies, as well as the healthcare/life science cluster, represent the main areas of expertise as far as innovation is concerned. They are characterised by high macroeconomic growth potential and considerable scientific expertise and may also act as an engine for the commercial development of new land.

Through targeted support for key investment projects in these areas of expertise, the urban development fund can push forward the further development of land in the immediate vicinity and the formation of clusters. The financial implementation of the project development is often of less interest here (private investors and commercial banks are generally interested in financing for their own benefit) than the safeguarding of operation in the first few years immediately after the completion of the development. The fund can itself take a shareholding in the business by means of equity participations or it can provide financing in the form of guarantees and loans.

4.1.3 Cultural industries and centres of creativity

The cultural industries are also an important economic sector for the Land of Berlin and, because of their specific functions, they play a special role in Berlin's economic and social development. They offer considerable local opportunities for innovation and shape local development processes in which the multi-faceted cultural networks form the basis for integrated urban development. In addition, they represent an important factor in the capital region's tourist image and are an important basis for economic development in that sector.

Centres of culture and creativity will not only strengthen the cultural industries and promote the formation of clusters. They increasingly also act as a development pole for the revitalisation of urban spaces, with their innovation potential highlighted and others benefiting from planned uses in connection with land development. The urban development fund can support the development and operation of the centres with its entire range of instruments.

4.1.4 Cross-sectional typology of brownfield land development

A central problem of urban development for Berlin – as for many other German towns, cities and municipalities – is dealing with city-centre brownfield land. Not just high-prestige large-scale projects like the former Tempelhof airport, but also empty factory or unused rail facilities, are often of interest from an urban development point of view. A marketable development of land and buildings in order to revitalise an area often fails because of high upfront costs of development, such as clearance, land reclamation and realignment of boundaries.

The instruments of the urban development fund can, on the one hand, utilise its advantageous terms in financing projects to reduce upfront costs and to push development ahead. On the other hand, at the same time it can participate in taking advantage of the available potential for upgrading and thus ensure that resources are recycled into the fund more quickly. The only restriction in this regard is the requirement that only up to 10% of the project funding may be used for the acquisition of land. However, because of the costs of land clearance and reclamation, which can often be expected to be high, this point will probably be less crucial.

Future uses are important in so far as they comply with eligibility requirements laid down by the ERDF regulation and the Operational Programme. These can be purely land

developments or full project developments (including construction of buildings). Because of the special importance of the other identified project types, however, it must be assumed that a brownfield land project which is eligible for support under the urban development fund can also be classified under one of the abovementioned project types (cross-sectional approach to brownfield land development).

4.2 Presentation and evaluation of model projects

Several projects are presented below which were discussed within the Steering Group with regard to support through the Berlin urban development fund because they were specific examples of the above project types, partially satisfied the conditions laid down by the ERDF eligibility rules, recycling could be expected and the project promoters had shown some interest in support through JESSICA instruments. An overview of criteria that are relevant for project selection can be seen in Annex 1 – Generic list of criteria for selecting projects for urban development fund. A representative and exemplary assessment of the identified general project types is to be carried out on the basis of the specific analyses of the projects with regard to the financial viability of the Berlin urban development fund.

A total of five projects were identified to serve as the basis for a fund model and were included in the portfolio as model projects:

- Charlottenburg Research Centre for Engineering and Information Technology
- Adlershof Proton Treatment Centre
- Oberschöneweide Research Institute for Culture and Information Technology
- Development of business parks at Tempelhofer Feld
- Heidestraße Art Cube (Europacity)

Furthermore, information was collected on other projects coming under the identified project types whose participants showed interest in support through a Berlin urban development fund. At the time of the feasibility study, the content of those projects was not yet sufficiently advanced as to permit an evaluation in terms of funding structure, or the project ideas had been submitted at short notice and an assessment was not therefore possible. The other projects are nevertheless listed in the report ('Pipeline projects') and should be examined in greater depth once the urban development fund has been set up. The expansion of the project portfolio is dependent on the project volume of the urban development fund and on the first funding recycled from the initial projects.

4.2.1 Research Centre for Engineering and Information Technology

4.2.1.1 Project description

The Technische Universität Berlin (TU) realises an average annual construction volume of EUR 30 million. Parts of the TU campus in the City West area are in need of modernisation in the light of their structural condition; the infrastructure must be urgently improved. The area

is of high urban-planning/functional value with the result that an urban master plan was drawn up on the basis of the city-centre guide plan for this sector. The master plan envisages an urban development which further opens up the area to science and research, links it with the adjacent city and creates potential synergies with industry and culture. The desired development is realised through small-scale construction measures and cautious development of open spaces.



Figure 6: Excerpt from the master plan for the UNI Campus West, with the Research Centre for Engineering and Information Technology building complex highlighted (Source: Senate Administration for Urban Development and TU Berlin)

The TU is to be concentrated, in terms of tuition and research, areas of excellence and industrial cooperation activities, at the Charlottenburg campus. The focus will be joint initiation and coordination of research projects, together with industry and business as important external donors. Such a focus is to be created in the engineering and information technology sectors, as the Berlin centre for artificial intelligence. At present there are neither premises nor the necessary technical equipment. The operation's scientific and economic aim is to bring together in one centre method developers and users of artificial intelligence in order to eliminate, through a highly interdisciplinary approach and physical proximity, the previously existing disadvantage whereby too much time passes between the development of powerful new methods and their application in the different disciplines.

With the Research Centre for Engineering and Information Technology, in addition to offices and laboratories for tuition and research, there will also be classrooms for internal and external students from business and industry in order to allow knowledge to be transmitted in physical proximity to the research, with demonstration facilities and its own studies. The Berlin Centre for Artificial Intelligence will also act as an incubator for high-tech business start-ups working in the fields of artificial intelligence and diagnostic technology.

4.2.1.2 Eligibility under the ERDF rules and the Operational Programme

The project comes under Article 5(1) of Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 6 July 2006 on the ERDF, '*innovation and the knowledge economy, including through the creation and strengthening of efficient regional innovation economies, systemic relations between the private and public sectors, universities and technology centres which take into account local needs*', since the new research centre supports the translation of innovation into marketable products. Support through the urban development fund will probably not be possible because the bulk of the project concerns teaching facilities and such use is not eligible for funding. However, it is still possible to detach individual smaller subprojects where there is a direct link to economic development, which could therefore claim support from the urban development fund.

For the Research Centre for Engineering and Information Technology project itself, however, this means, on account of the considerable time pressure, that financing through the urban development fund is ruled out and alternative financing models must be found.

Under the current Operational Programme for Berlin, the Research Centre for Engineering and Information Technology project is to be classified under Priority axis 2, strand 3 ('*Innovation networks and technology transfer*'); there are other links to Priority axis 1, strand 4 ('*Infrastructure for innovation*') and to urban development under Priority axis 3. The project fits in with the guidelines existing for City-West and is an important part of the master plan for the TU site. It therefore satisfies the requirements for integrated urban development.

4.2.1.3 Description of participants in the project

In addition to the competent Senate Administrations, the main participants come from the Technische Universität.

4.2.1.4 Description of project development process

In summer 2009 an architectural competition was concluded with the result that construction can ideally begin in spring 2010. Construction is to be completed by the end of 2012 when the first users are to move into the building (the current lease agreements expire then).

Research Centre for Engineering and Information Technology

Project type:	Research-industry transfer institution
Use:	Offices, laboratories, lecture theatres
Property development:	New construction
Participants:	Technische Universität Berlin
Timetable:	Spring 2010 – end of 2012
Total investment:	EUR 26 million

Figure 7: Project data for the Research Centre for Engineering and Information Technology

4.2.2 Adlershof Proton Treatment Centre



Figure 8: Site plan for the Proton Treatment Centre (Source: Site plan for Berlin Adlershof – City for Science, Business and Media, WISTA-Management GmbH)

4.2.2.1 Project description

The Berlin-Brandenburg region is regarded as the leading science-based healthcare region in Germany ('Healthcare City Berlin'). The sector accounts for a large number of jobs in the region and there is close cooperation with Berlin's universities and local research institutes.

In the Adlershof area one of the most modern industrial parks in Europe stretches over around 420 ha. Since 1990 more than EUR 1.5 billion has been invested, with the result that the area already has networked infrastructure and attractive links.

The Proton Treatment Centre is in keeping with the region's structural-policy objective and is intended to provide an impulse for further healthcare development in the Adlershof location. Specialist cooperation has already been initiated or is being sought with the science campus of Humboldt University, the Berlin Elektronenspeicherring-Gesellschaft für

Synchrotronstrahlung (BESSY II) and with a view to the supply of radio nucleotides for diagnostic purposes.

In the Proton Treatment Centre cancer patients will be treated using particle therapy (radiotherapy). The procedure is still relatively new, but has already become part of clinical practice as a result of confirmed successful results. At the Adlershof site (13 000 m²), 120 skilled jobs and 50 other directly connected jobs are to be created. In addition, there are already plans for an extension as a residential building for patients. There will be 4 000 treatments each year.

Whilst the investment in the construction of the Proton Treatment Centre (around EUR 100 million net) will be covered by the investors, the operating company requires funding from the urban development fund to bridge the initial period of partial operation.

4.2.2.2 Eligibility under the ERDF rules and the Operational Programme

The project comes under Article 5(1) of Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 6 July 2006 on the ERDF, *'innovation and the knowledge economy, including through the creation and strengthening of efficient regional innovation economies, systemic relations between the private and public sectors, universities and technology centres which take into account local needs'*, since proton treatment can be regarded as an innovation in medical technology, there is cooperation with universities, and the Adlershof site will be further strengthened as a healthcare cluster by the project.

Under the current Operational Programme for Berlin, the project is to be classified under Priority axis 2, strand 1 (*'Innovation promotion in business'*). The project is also supported by the joint model for the Länder of Berlin and Brandenburg. There is a separate development concept for the Adlershof site, which is gradually being implemented by WISTA-Management GmbH and Adlershof Projekt GmbH. The Proton Treatment Centre would offer an important impetus for further businesses locating in the northern part of the WISTA site.

In order to avoid problems under the law on State aid in connection with support for this purely privately sponsored project, financing comes through the urban development fund on the same terms as financing through the private partners.

Nevertheless, there is still no detailed business plan to demonstrate the economic viability of the project, with the result that present it is probably not suitable as an initial project for the implementation phase for the urban development fund, since recycled funding cannot (yet) be expected from the project.

4.2.2.3 Description of participants in the project

The project was initiated by Klaus Kesting (medical chemical products, Kesting-Fischer-Stiftung), Prof. Dr Ulrich Meier (Director of the Clinic for Neurosurgery at the Unfallkrankenhaus Berlin), Dr Rainer Plaß (engineer and founder of businesses in the environmental, supply and disposal technology fields) and Dr Michael Rehr-Zimmermann. Some of these are also confirmed as investors, together with, among others, the Vivantes

Netzwerk für Gesundheit GmbH and the Universitätsklinikum Mannheim gGmbH (UMM). Vivantes and UMM are also close cooperation partners in the Proton Treatment Centre at medical level, as is Charité Berlin.

4.2.2.4 Description of project development process

The project is at the end of the planning phase, a project company has already been formed, and the land has already been purchased for around EUR 2.3 million in autumn 2008. In addition, a significant proportion of the necessary equity is already available. Construction is to begin in spring 2010 and will last for up to two and half years. From the beginning of 2012 treatment can begin to be offered in sections, with a transition to full operation at the end of 2013.

Adlershof Proton Treatment Centre

Project type:	Key investment in an area of expertise
Use:	Healthcare sector
Property development:	New construction
Participants:	University clinics, private individuals
Timetable:	Autumn 2008 – end of 2013
Total investment:	EUR 110 million

Figure 9: Project data for the Adlershof Proton Treatment Centre

4.2.3 Research Institute for Culture and Information Technology



Figure 10: View onto the campus – proposed location (Source: University of Applied Sciences)

4.2.3.1 Project description

The University of Applied Sciences is the largest and most diverse higher technical college in Berlin. From autumn 2009, four disciplines (engineering sciences, information technology,

business science, design) will be concentrated on the Wilhelminenhof campus in Oberschöneeweide in order to create the physical and organisational conditions for high-quality tuition. As part of the reprofiling of the University of Applied Sciences, research functions are to be carried out alongside tuition. Particularly in the field of applied research, however, a comparable infrastructure must still be created. Large sponsored teams have so far had to be accommodated in rented premises and with cooperation partners. There are also no premises available for spin-offs by successful teams of researchers and developers and for their establishment. For this reason, an application-oriented Research Institute for Culture and Information Technology is to be developed on the Wilhelminenhof campus.

The development of the Research Institute for Culture and Information Technology is regarded as a first impulse towards creative industries, which were identified as core development areas, alongside energy technology, at the Schöneeweide conference. There are already plans for a subsequent expansion towards energy technology. This will make a substantial contribution to structural development in the Schöneeweide district.

Specifically, the following uses are planned for the Research Institute for Culture and Information Technology: multi-function and exhibition space (max. 600 m²), office space (max. 800 m²), group and conference rooms (200 m²), incubation centre for spin-offs (max. 400 m²). For the total investments of EUR 6.5-8.5 million, in addition to the required resources from urban development fund, support is also planned under the Joint Federal Government/Länder scheme, from ERDF grant-funding and in the form of assets from the parties and mass organisations of the former GDR.

4.2.3.2 Eligibility under the ERDF rules and the Operational Programme

The project comes under Article 5(1) of Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 6 July 2006 on the ERDF, *'innovation and the knowledge economy, including through the creation and strengthening of efficient regional innovation economies, systemic relations between the private and public sectors, universities and technology centres which take into account local needs'*, since the new research institute promotes the translation of innovation into marketable products.

Support through the urban development fund will probably not be possible because, like the Research Centre for Engineering and Information Technology, the bulk of the project concerns teaching facilities and such use is not eligible for funding. However, it may also be possible here to detach individual smaller subprojects where there is a direct link to economic development which could therefore claim support from the urban development fund.

Under the current Operational Programme for Berlin, the project is to be classified under Priority axis 2, strands 2 and 3 (*'Promotion of the information society and knowledge economy, in particular the cultural industries'* and *'Innovation networks and technology transfer'*). There are other links to Priority axis 1, strand 4 (*'Infrastructure for innovation'*) and to urban development under Priority axis 3. The project is also supported by the joint model for the Länder of Berlin and Brandenburg and is an important part of the guideline plan for the

south-east. The site lies on the periphery of the Oberschöne weide redevelopment area. The site is covered by the Berlin scheme for the development of high-production areas. The existing technology and business start-up centre (Spreeknäe), a short walk away, has free capacities, but they are not suitable for the Research Institute for Culture and Information Technology. After the construction of the Research Institute for Culture and Information Technology, additional needs for business locations are to be expected, which will benefit the technology and business start-up centre. The Research Institute for Culture and Information Technology satisfies the requirements for integrated urban development.

4.2.3.3 Description of participants in the project

The Research Institute for Culture and Information Technology initiative came from the relevant research group in the creative industries, composed of professors in the fields of Applied Information Technology and International Media Information and the Dean of the Design Faculty. It is supported by the administration of the University of Applied Sciences and works closely with Berlin museums (Jewish Museum Berlin, National Museums in Berlin, Berlin State Museum of Modern Art) and Berlin companies in the creative industries.

4.2.3.4 Description of project development process

By the end of October 2009 the total financing for the project should be secured, and the concept must be submitted to the competent Senate Administrations in order to receive funding. Planning and calls for tenders for building work should be concluded by the beginning of 2011 and the construction phase is estimated to end in spring 2012.

Research Institute for Culture and Information Technology

Project type:	Research-industry transfer institution
Use:	Offices, exhibitions, start-up centre
Property development:	New construction
Participants:	Higher education institutions, museums, private individuals
Timetable:	End of 2009 – spring 2012
Total investment:	EUR 8.5 million

Figure 11: Project data for the Research Institute for Culture and Information Technology

4.2.4 Tempelhofer Feld business parks

4.2.4.1 Project description

Following a Senate decision, the site of Berlin-Tempelhof airport, which was closed in autumn 2008, was made an area of special urban importance. It is to be linked with the surrounding areas and create physical links between the neighbouring urban districts. The area's central location is to be used to meet the different needs for sustainable development, creation of additional residential accommodation, and nature conservation and relaxation.

In accordance with the planning status for the master plan for Tempelhofer Feld, commercial use for future-oriented technologies is planned in the south-western area. As a result of early moves to secure support, financing for the initial development measures is in place. The project is an 'outline development' (roads and canal) of the business parks, and not a commercial development of individual plots. The first construction phase is the subject of the analysis for the urban development fund.

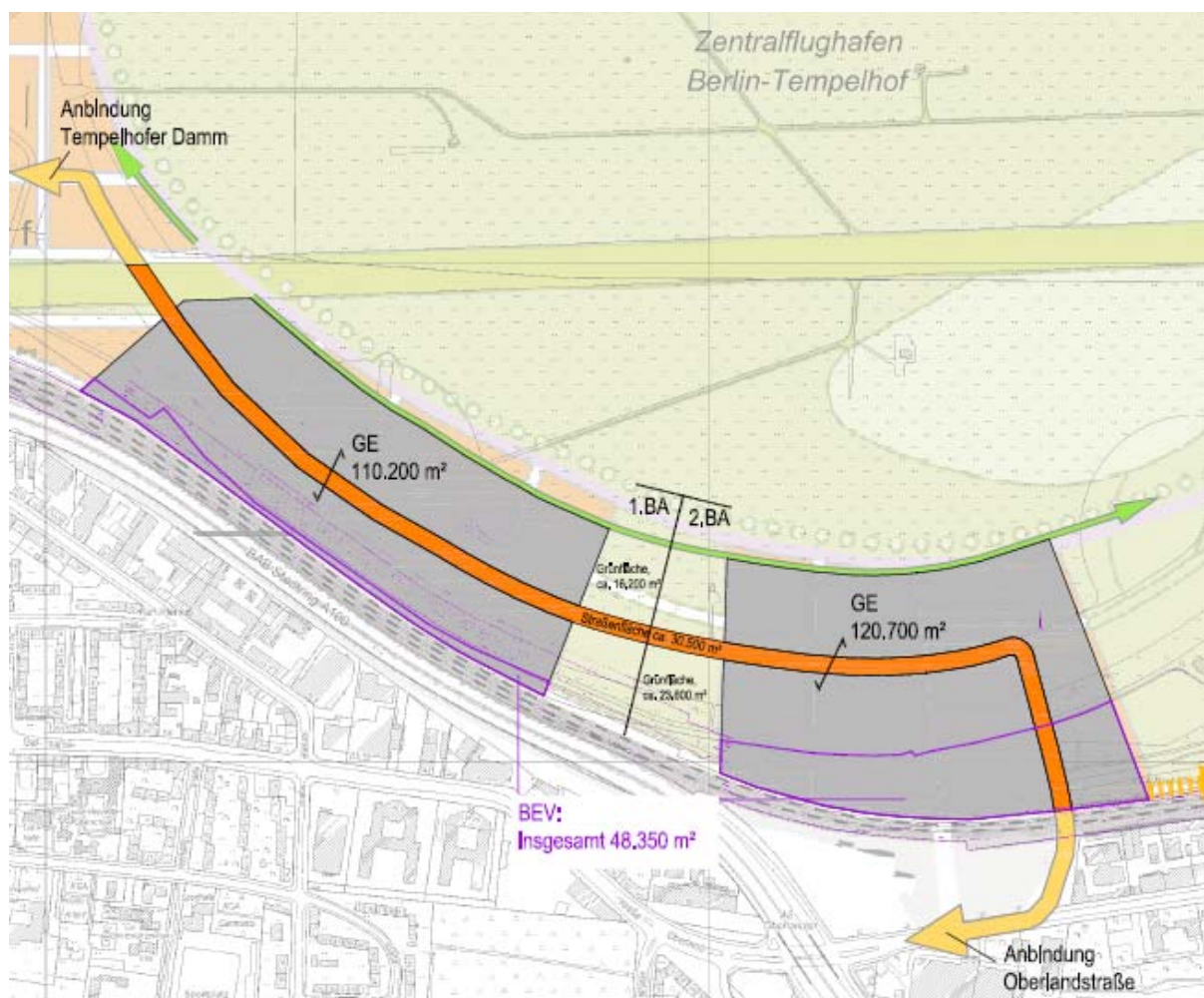


Figure 12: Business park plan for Tempelhofer Feld (Source: WISTA Management GmbH)

4.2.4.2 Eligibility under the ERDF rules and the Operational Programme

The project comes under Article 8 of Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 6 July 2006 on the ERDF '[...] brownfield redevelopment [...]', since new uses are to be identified and developed for the city-centre site of the former Tempelhof airport, which is no longer in use. Under the current Operational Programme for Berlin, the project is to be classified under Priority axis 3 ('Sustainable urban development'). The Tempelhof site – surrounded by neighbouring urban districts – offers the chance to create job opportunities, which also form an important basis for the desired social urban development. Social and urban-structural disparities can thus be reduced. The current status of the 'Tempelhofer Feld' master plan provides predominantly for industrial uses. The site was also included in the most recent modification of the land-use plan for the City of Berlin. The specific type of building use must be defined at the level of the binding development plan. The operation satisfies the requirements for integrated urban development. It would be eligible for support under the Operational Programme for Berlin only if concerned the development of a technology centre in connection with the areas of expertise.

4.2.4.3 Description of participants in the project

The land is owned by the City of Berlin. Small parts of the land on the periphery belong to Bahn-Landwirtschaft (BEV), with which negotiations must still be held. Adlershof Projekt GmbH has been commissioned under a service contract covering the first development phase to produce a general development plan with a management and marketing concept.

4.2.4.4 Description of project development process

It is calculated that development of the first construction phase will begin in 2010 and the sale of the properties will take place from 2014. The start of developments in the second construction will be in 2012; sale of those properties will then begin from 2016.

Development of Tempelhofer Feld industrial land

Project type:	Brownfield land development
Use:	Commercial
Property development:	Land development
Participants:	City of Berlin, Adlershof Projekt GmbH
Timetable:	1st phase: 2010–2014 2nd phase: 2012–2016
Total investment:	EUR 6.7 million

Figure 13: Project data for Tempelhofer Feld

4.2.5 Heidestraße Art Cube (Europacity district)

4.2.5.1 Project description

The Europacity district is one of the most important urban development areas in the City of Berlin, whose development under a master plan was decided by the Senate. The central development focus of the area is the Art Campus (south-eastern part of the Europacity district), which is intended to act as a multiplier for further development. The Art Cube is a beacon project for the Art Campus which will send a signal for the entire district.

The Art Cube is to be home to galleries and arts-related services; in total, around 2 600 m² of gross floor area is to be created for galleries and around 4 500 m² of gross floor area for offices.

4.2.5.2 Eligibility under the ERDF rules and the Operational Programme

The project comes under Article 5 of Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 6 July 2006 on the ERDF '1. enhancing regional R&TD and innovation capacities', since the city-centre site at the northern edge of the district, which is no longer used, is to be developed into a focus for the arts industry (Art Campus). Under the current Operational Programme for Berlin, the project is to be classified under Priority axis 3 ('Sustainable urban development'); there are also links to Priority axis 2, strand 2 ('Information society and knowledge economy, in particular the cultural industries'). The project is supported by the master plan for the Europacity district adopted by the Senate. It is an important part of the results of the moderation procedure on development strategies for the northern edge of the district. In the immediate vicinity of the Europacity district are disadvantaged urban areas which are to share in the development of the Europacity district. The project satisfies the requirements for integrated urban development.



Figure 14: Location of the Art Cube in the Europacity district (Source: Vivico Real Estate GmbH Berlin)

4.2.5.3 Description of participants in the project

In addition to the Land of Berlin and the competent district, Berlin-Mitte, Vivico Real Estate is acting as owner of the land and as project promoter. In the ongoing development process architects, engineers and other service companies will be commissioned and engaged.

4.2.5.4 Description of project development process

The Art Cube project is to be completed within three years, the development/pre-letting phase and the implementation phase each taking 18 months. If specific architect's plans were executed by the end of the year, project development could be started at the beginning of 2010.

Heidestraße Art Cube (Europacity)	
Project type:	Brownfield land development/cultural industries
Use:	Offices, galleries
Property development:	New construction
Participants:	City of Berlin, Vivico Real Estate
Timetable:	Spring 2010 – spring 2013
Total investment:	EUR 19.5 million

Figure 15: Project data for the Heidestraße Art Cube

4.2.6 Pipeline projects

In the first stages of the work, in addition to the five abovementioned model projects for the Berlin urban development fund, other potential pilot projects were considered and project types identified. These include the following projects:

- Charlottenburg Business Start-Up and Cooperation Centre

Immediately next to the TU Berlin and the UdK Berlin, a business start-up centre is to be set up with a view to encouraging closer cooperation and potential synergies between the technical institution and the arts institution and strengthening entrepreneurship in the creative industries. It is to be located in a nearby building owned by the Landesbank Berlin. The project data are not yet completely available. Further work needs to be done, inter alia with regard to questions in connection with ownership.

- Low-energy laboratory building for solar energy research for the Helmholtz-Zentrum Berlin at the Adlershof site

A combined laboratory and office building is to be constructed for the Helmholtz-Zentrum Berlin für Materialien und Energie (HZB) for research work in the field of solar energy/photovoltaics (six departments, around 6 000 m² in main usable floor area) at the Berlin-Adlershof site. The aims include achieving optimal energy efficiency, energy saving, resource conservation and CO₂ reduction in the course of construction and in particular operation. A key aspect is innovative applications of photovoltaics. The project data are not yet completely available. Further work needs to be done.

- Creative centres:

- Friedrichshain Cube

The currently empty boiler house of the former Berlin-Friedrichshain thermal power station is to be developed into the innovative 'Cube' performance space with the capacity to hold 2 500 people. In order to secure long-term investment it is necessary to purchase the site/building (purchase price EUR 1.6 million). The aim is to boost attractiveness and to revitalise the surrounding area, and to offer a connected incentive for investment through follow-up business. It is linked to the development of the Friedrichshain-Kreuzberg Spreerraum, which has seen increased tourist attractiveness and economic upturn (O₂-World, Eastside Gallery, former Postbahnhof). Participants include private investors (civil-law partnership) as buyers of the land and KulturKubus GmbH as developer and operator of the venue.

- betahaus

The first betahaus was opened in Berlin-Kreuzberg. Around 1 000 m² is available for innovation, creativity and professional work and is currently occupied by around 80 freelance creatives (graphic designers, programmers, photographers, architects, designers, business start-ups etc.) The betahaus is seen as a platform which meets the needs of freelance creatives and knowledge workers and broadens the opportunities available to them. Innovation and creativity is fostered in a mix of coffee shop atmosphere and concentrated working environment. The aim to offer an open, digitally networked, collaborative workspace which is flexible and serves as an incubation platform for networking, innovation and productivity for new forms of work which have their added value in projects at different locations, at different times, on a freelance basis, without fixed employment. The founding team intends to establish a national network of betahaus establishments. The prospect of opening a second betahaus in Berlin is not ruled out. However, there are currently no specific plans to do so.

Project ideas which are already substantively advanced:

- Adlershof Forum as a central information and meeting point

The forum is the central area of the Adlershof development zone, in which the two architecturally-protected former laboratory buildings are located. On the basis of the urban general concept for Adlershof, a central information and communication point is to be created close to location management offices, technology centres, non-university institutes and Humboldt-Universität. The renovation and extension of the square as a space was completed in summer 2008. The promoter is WISTA-Management GmbH as the developer and operator of the site. The project includes a new building for the catering trade, an information and events centre for Adlershof, and a shop offering products for students.

Planning for Adlershof Forum has been in the execution stage since summer 2009 following some initial delays, and construction is set to begin in 2009. Even though this project has appropriate characteristics as regard project typology, it cannot be implemented through the urban development for timing reasons. In agreement with the promoters, it was decided to remove Adlershof Forum from the group of top priority projects because implementation of the project is immediately impending.

Other project ideas:

In the course of seeking appropriate projects, certain project ideas were presented or submitted whose substantive conception or precise details in relation to utilisation structure, specific land use, participants, or other project data were not yet available or could not be provided in full, and were not examined in closer detail. Those project ideas include:

- Environmental projects
 - Small cogeneration plants/micro-power plants (examination and possible amendment of the Berlin Operational Programme necessary, including approval or authorisation by the European Commission).
- Creative projects
 - Postfuhramt

The former post office in Berlin-Mitte was used for exhibition and events after it ceased operation for postal services. After remaining vacant for a long time, in 2007 it began to be used on a temporary basis as an exhibition venue for architecture, design and photography. Rooms can be hired for events. At present there are not yet any specific statements regarding future use (possible sale/change of ownership).
- Non-central projects in the districts
 - Berlin-Steglitz bicycle park (Schlossstraße shopping street)
- Other projects
 - Hostel for alcoholics, Adlershof (possible financing from other sources)

4.3 Summary assessment of model projects

Taking an overall view of the model projects, and also in the light of the European and national efforts to set up urban development funds, it is clear that Berlin has a large number of projects which can be classified under the identified project types and which are suitable as possible model projects for an urban development fund. The state of development of those projects is also sufficiently advanced that all the relevant data for an evaluation are already available. If, however, the establishment of the urban development fund is delayed and drags into late 2010, it is to be feared that, for timing reasons, some of the projects will have to make alternative arrangements as regards sources of financing and will no longer be available for the urban development fund. Even though they are not always eligible in the light of the requirements of the ERDF regulation and the Operational Programme of the Land of Berlin, these projects are examples of the relevant project type, under which a number of other projects which do satisfy the eligibility criteria, at least at first sight, can be classified.

The five model projects support job creation. This applies directly to the Proton Treatment Centre; as a result of the project development, however, this also applies to the Research Centre for Engineering and Information Technology at the Technische Universität and the Research Institute for Culture and Information Technology at the University of Applied Sciences. In the medium term, the industrial development on the southern site of the Tempelhofer Feld will also have positive effects on the labour market.

Some operations are very central pioneering projects for the valorisation and upgrading of large urban brownfield situations. The Art Cube can take on this function for the Heidestraße location. The industrial development of the southern area of the Tempelhofer Feld should also be regarded as providing an important pioneering impetus for the development zone as a whole. For the science and industry location at Adlershof, the Proton Treatment Centre plays an important motor role for the northern part, at the edge of the country park, since industrial enterprises have thus far been slow to become established there.

The Proton Treatment Centre represents an anchor for further development in the healthcare cluster of the City of Berlin and may attract other private investment. This was also confirmed a meeting of Gesundheitsstadt e.V. in January 2009 attended by Charité, Vivantes, Unfallkrankenhaus Marzahn and others. It was confirmed that 'through the cooperation between Charité and Vivantes the Land of Berlin is supporting the Proton Treatment Centre in Adlershof. This is also consistent with the aim, laid down by the two Länder in the "Master plan for the Berlin-Brandenburg healthcare region", of establishing a proton treatment centre' (from the minutes of 8.1.2009). The project forms part of Berlin's strategy in relation to its areas of expertise.

The two projects of the Technische Universität and the University of Applied Sciences are directly attached to the city's knowledge and information potential and are specifically aimed at utilising that potential for economic development. The competitiveness of Berlin's businesses is thus supported in precisely the fields that were defined as top-level clusters for Berlin and the Berlin-Brandenburg region. The translation of innovation into marketable

products should and can be implemented on an exemplary basis as part of the operations of the Research Centre for Engineering and Information Technology (TU) and the Research Institute for Culture and Information Technology (University of Applied Sciences). The example of the Art Cube can illustrate how the creative industries can be used to give new development impulses to city-centre development. It will build on the successful developments around the Hamburger Bahnhof. This project too is capable of generating labour market effects, partly in the tourism industry.

The project promoters for the five model projects are not focussed on grant-funding to finance their projects. The promoter’s substantive approach to applying a revolving financial engineering instrument can in itself be seen as a clear indication that the projects are presumed to have economic prospects. This is examined in detail below with reference to the model projects. By inference from the identified project types it must be assumed that other projects of this nature will have similar economic prospects. Therefore, transfer institutions between research and industry, key investment projects in the areas of expertise of the Berlin-Brandenburg region, cultural institutions and centres of creativity, and brownfield land development are particularly suitable for support through the revolving financial instruments of an urban development fund, alongside the established grant-funding.

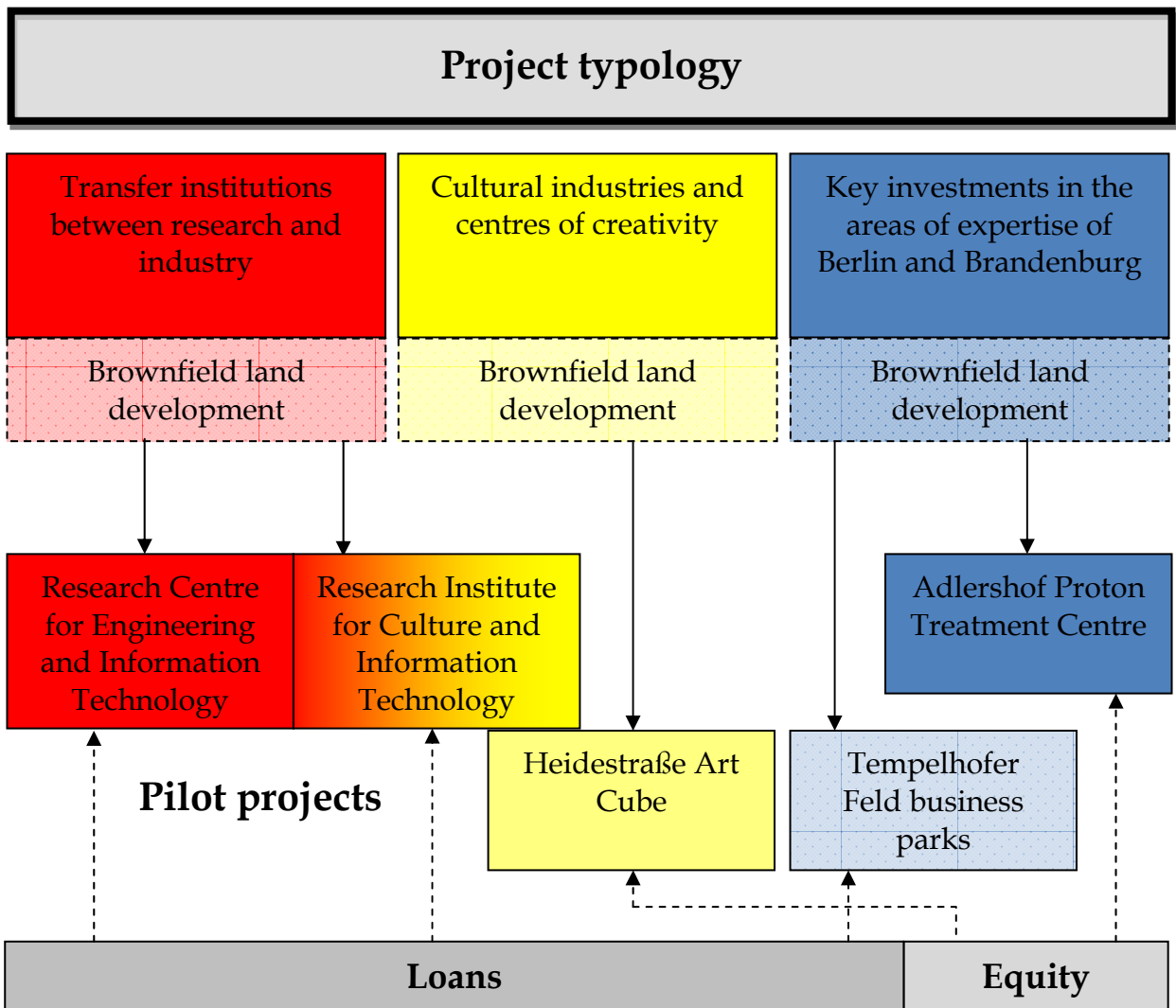


Figure 16: Project types, pilot projects and forms of financing

5 STRUCTURE OF THE BERLIN URBAN DEVELOPMENT FUND

5.1 Financial analysis of selected model projects

5.1.1 Research Centre for Engineering and Information Technology

The Research Centre for Engineering and Information Technology will, on the one hand, accommodate the Berlin Centre for Artificial Intelligence and, on the other, provide new, urgently needed offices and laboratories for research and tuition. If a new building is not constructed, the necessary space would have to be rented from a third party, as already happens at present to a certain extent. In the case of a new building there is therefore specific revenue potential which can be used for revolving financing in an urban development fund. This is a long-term construction project, as is also shown by the data below.

Against this background, the TU Berlin commissioned Zimmermann architects to ascertain the specific investment costs and occupancy costs for the Research Centre for Engineering and Information Technology. The architects concluded that in the case of a new building constructed over four years (with a planned start in 2010) there would be investment costs totalling EUR 26 million. However, because, due to savings on rent, the first returns can be expected even during the first construction phase (after two years), the cumulative net capital requirement is only EUR 22.8 million.

For the initially assumed 20-year occupancy of the building, the architects' practice estimates real rent savings of EUR 15 per sq. m, presuming an inflationary increase in rental prices of 2% per annum. This inflationary rise is also taken into consideration in the management and operating costs for the new building determined by the architects. The occupancy costs were forecast by the architects by evaluating existing buildings in relation to the relevant costs. Lastly, a calculated residual value was applied to the building after the expiry of 20 years as further revenue potential, since a longer economic occupancy must be assumed because of the quality of the new building. The architects estimated at 8.8 times the net revenues of the building (rent savings minus occupancy costs), with the result that the following trend of payment flows can be identified in the project (see [Figure 17](#)).

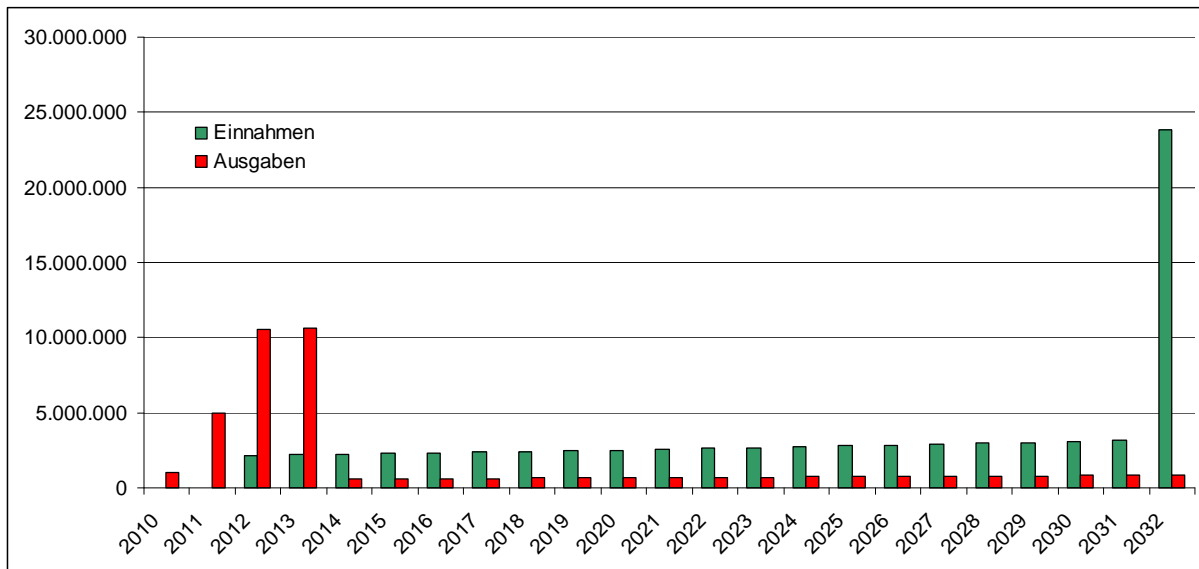


Figure 17: Business plan for the Research Centre for Engineering and Information Technology

Key: Einnahmen = Revenue, Ausgaben = Expenditure

On the basis of these assumptions, the project in question seems to be profitable, since there is a return on the project (measured by the project's internal rate of return) of around 7.35%. The return would also be (almost) commercially profitable enough. However, the long-term risk potential must be borne in mind, since the profitability of the project depends on the residual value of the building. Nevertheless, this was estimated at a relatively low level. In addition, even a 10% reduction in the residual value means that the project's profitability is still above 7%.

In principle, the periodic recycling of funds into the project as a result of rent savings allows long-term credit financing through the urban development fund. It must be borne in mind that the TU Berlin cannot be the borrower itself. A project company should be founded for the new building, to act as borrower with regard to the relevant repayment obligations. A similar approach has also been used in the past to finance the construction of the library at the TU Berlin. Because of the amount of recycled funding, full financing of the construction of the new building even appears possible with equally high redemption (redemption by annuities). However, this depends on the commercial targets of the banking partners involved, which will be examined below in relation to the fund model in Chapter 5.2.

5.1.2 Proton Treatment Centre in Adlershof

In the Proton Treatment Centre there is a fundamental separation into the investment phase and the occupancy phase. This is reflected in a separation into a holding company, which will construct the entire new building (land and project development), with a total budget of around EUR 110 million from 2009, and an operating company. The operating company is provided with the completed building by the holding company in return for payment of an annual lease (= part of the fixed operating costs). In the project in question, (only) the operating company is now to be financed, and for that reason conventional inventory financing will be used in the property occupancy phase (see [Figure 18](#)).

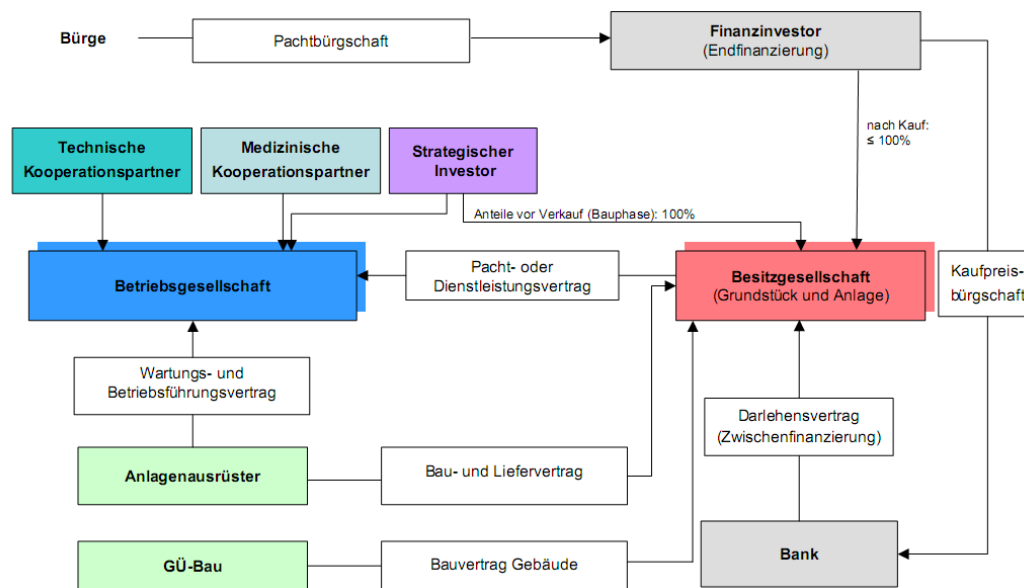


Figure 18: Investor model for the Proton Treatment Centre (divided into holding and operating company)

Key:

Bürge = Guarantor

Pachtbürgschaft = Lease guarantee

Finanzinvestor (Endfinanzierung) = Investor (end financing)

Technische Kooperationspartner = Technical cooperation partners

Medizinische Kooperationspartner = Medical cooperation partners

Strategische Investor = Strategic investor

Anteile vor Verkauf (Bauphase): 100% = Shares before sale (construction phase): 100%

Betriebsgesellschaft = Operating company

Pacht oder Dienstleistungsvertrag = Lease or service contract

Besitzgesellschaft = Operating company

Kaufpreisbürgschaft = Purchase price guarantee

Wartungs- und Betriebsführungsvertrag = Maintenance and management agreement

Darlehensvertrag (Zwischenfinanzierung) = Loan agreement (interim financing)

Anlagenausrüster = Equipment fitters

Bau- und Liefervertrag = Building and supply contract

Bauvertrag Gebäude = Contract for construction of building

The business plan for the operating company was provided by prothep-berlin (Dr Rehr-Zimmermann), which indicated, from upfront costs up to full commercial activity (2014), cumulative costs of EUR 18.96 million. This is the result of relatively high fixed operating costs (in particular for the lease, maintenance, repair, leasing of installations and building management and insurance) which, together with the variable operating costs (for labour, materials and energy), are much higher than the revenue from the medical services provided up to 2014.

However, the cash flow trend shows marked annual revenue surpluses in ongoing operation, so that it will be possible to repay financing from the fund (see [Figure 19](#)).

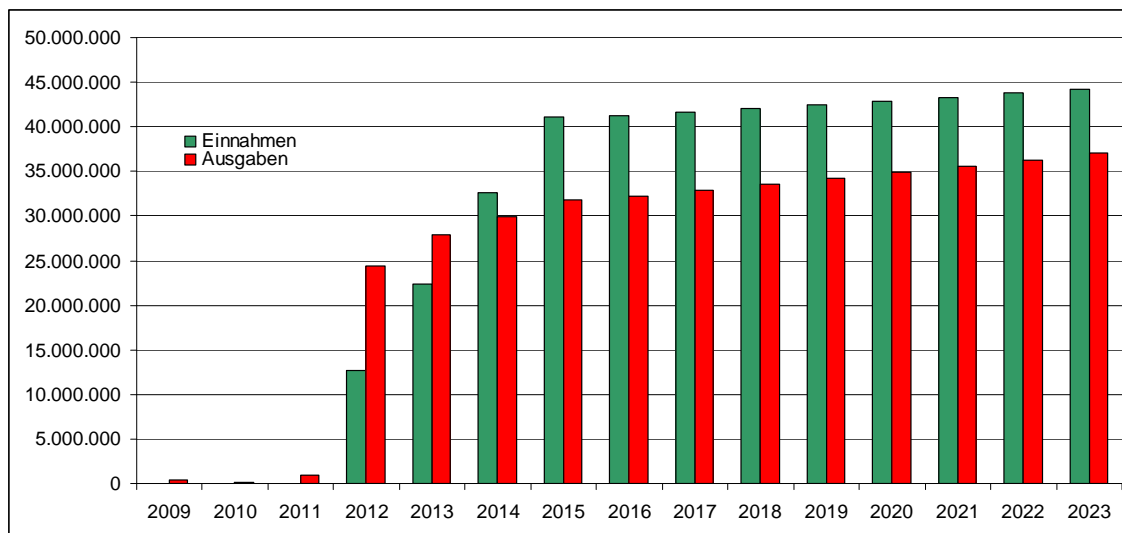


Figure 19: Business plan for the Proton Treatment Centre

Key: Einnahmen = Revenue, Ausgaben = Expenditure

On the basis of the cash flows provided, the operation and the occupancy of the building is so profitable that, even disregarding residual value revenue, an internal rate of return of 27.65% is produced as a result of the high revenue surpluses in the operating company. If, similar to the abovementioned Research Centre for Engineering and Information Technology project, a calculated residual value revenue were based on the net revenue in 2023 at around 8.8 times, further calculated revenue of more than EUR 62 million would result. A possible buyer would thus be granted a return on purchase of more than 11%. It seems likely that a much higher residual value is realistic with the onset of the net revenue in operation. However, it will not be included below in order to give a conservative assessment. Despite the high profitability in operation, it should be borne in mind that a particular feature of the project is the absence of a security for the financing of operation. The land and the building are not owned by the operating company, which inevitably creates a higher financing risk and thus a higher estimate of capital costs.

Because of the limited (and in the first few years non-existent) revenue from the operation of the company, it would seem appropriate in the present case to apply equity financing through the urban development fund; full financing or partial financing of the necessary capital sum (up to EUR 18.96 million) is also conceivable here. In the case of partial financing, a 'pari-passu' arrangement would appear reasonable, whereby the fund covers not only the relevant capital requirement on the basis of its financing share, but also has an equal interest in the surpluses from the project for the current term of financing (up to 2023). This means that in the case of a 50% participation, for example, a profit transfer is made at the same amount as the funds recycled to the urban development fund. The actual level of participation depends on the commercial targets of the banking partners involved, which will be examined below in relation to the fund model in Chapter 5.2.

5.1.3 Research Institute for Culture and Information Technology

With the Research Institute for Culture and Information Technology, the Berlin University of Applied Sciences wishes to implement the first expansion phase for a research building, with an incubator function, on its campus. As with the Research Centre for Engineering and Information Technology, the aim is to construct a new building over two years (beginning from 2010) in order to save on rents paid to third parties and to attract projects using third-party funds, a proportion of the revenue from which can be used to finance construction of the new building. There is therefore also periodic recycling of funding into the project here, allowing revolving financing by the fund. This is also long-term construction project.

The gross capital requirement for investment in construction of the new building amounts to around EUR 8.5 million and the first recycled funding in 2012 will ensure that the peak net capital requirement is only EUR 8.38 million. The investment costs and the potential revenue within the project were estimated by the University of Applied Sciences (Prof. Hans-Herwig Atzorn). However, occupancy costs have not yet been taken into account. For the planned total area of 1 500 sq. m there was a similar estimate (based on the comparable occupancy structure) as in the Research Centre for Engineering and Information Technology project, with the equivalent of EUR 4.4/sq. m per month for operation, management and maintenance of the building. The savings on rents were incorporated in the same way as the information provided by the University of Applied Sciences; at an initial level of EUR 7/sq. m they are much lower than in the case of the Research Centre for Engineering and Information Technology. The University of Applied Sciences rightly points out that much higher rents are likely in future years, which must still be studied. In addition, the project in question produces revenue by attracting projects involving third-party funding which are to be accommodated in the relevant building. The typical approach of overhead costs (of around 15%) could be used here. Based on a conservative estimate of around EUR 400 000 of turnover in third-party funds, a further annual revenue stream of EUR 60 000 can be used for financing under the fund. On this basis it is possible to derive the following business plan for the period of 20 years (in the occupancy phase) applied as for the Research Centre for Engineering and Information Technology (see [Figure 20](#)).

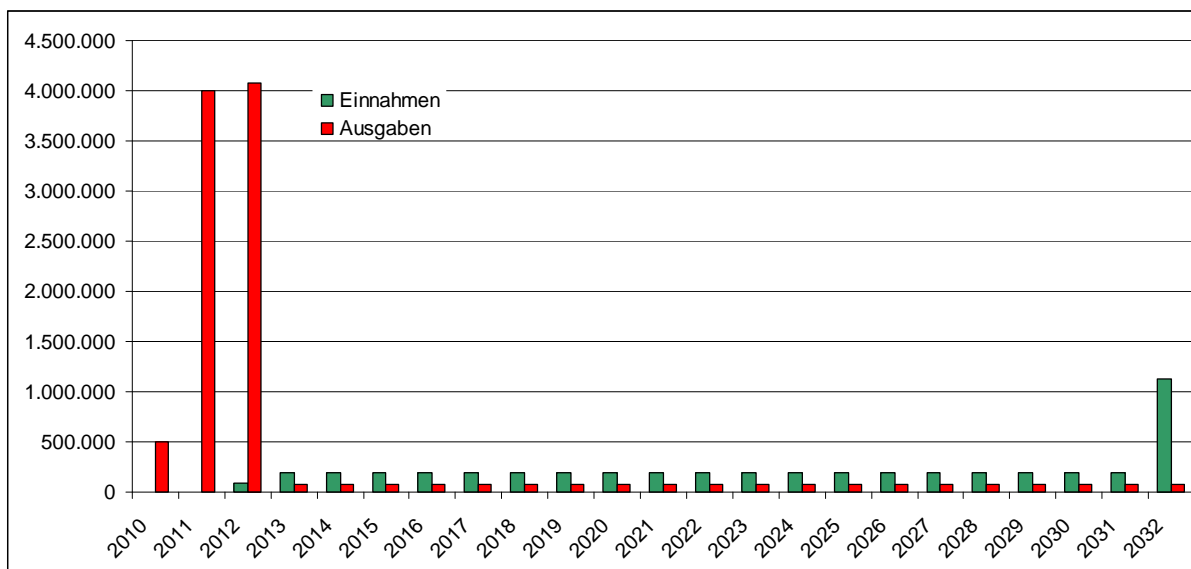


Figure 20: Business plan for the Research Institute for Culture and Information Technology

Key: Einnahmen = Revenue, Ausgaben = Expenditure

Even taking into account a similar, calculated residual value estimate of 8.8 times the net revenue in 2032 (based on the longer economic occupancy which is also likely here), there is no positive profitability for the project. The internal rate of return is in fact -6.43%. The project participants are evidently already aware of this problem as they refer not only to the likely higher savings on rental costs. These could be up to EUR 54 000 (= (EUR 10-7/sq. m) * 1 500 sq. m * 12). Rather, it is regarded as realistic that there will be additional potential revenue of up to EUR 24 000 from training events, consultancy and ground rents, from participation in spin-offs and from third-party rentals. If these additional EUR 78 000 per year were actually realised, the internal rate of return would be around -3.1%.

This shows that the project in question is undoubtedly not a commercial project. On the basis of the existing profitability structure, it is inevitably necessary for long-term credit financing through the urban development fund that no full financing is carried out. Rather, the bulk of the investment sum must be contributed to the project interest-free through equity capital or grants. This has actually been planned by the project participants, although not all financing elements have yet been secured. On the assumption that this financing can be secured by the University of Applied Sciences and it does not produce any ongoing interest and/or redemption burden, this means that only the residual financing in 2012, amounting to EUR 3 million (around 35% of the investment volume), will be lent by the urban development fund. In that case, even without the abovementioned additional revenue, there is just a positive project return of 0.22%. If, moreover, the abovementioned additional revenue of EUR 74 000 per year is generated, the cash flow trend now shows a profitability of 4.58%, so that credit financing through the urban development fund is possible in principle (see Figure 21).

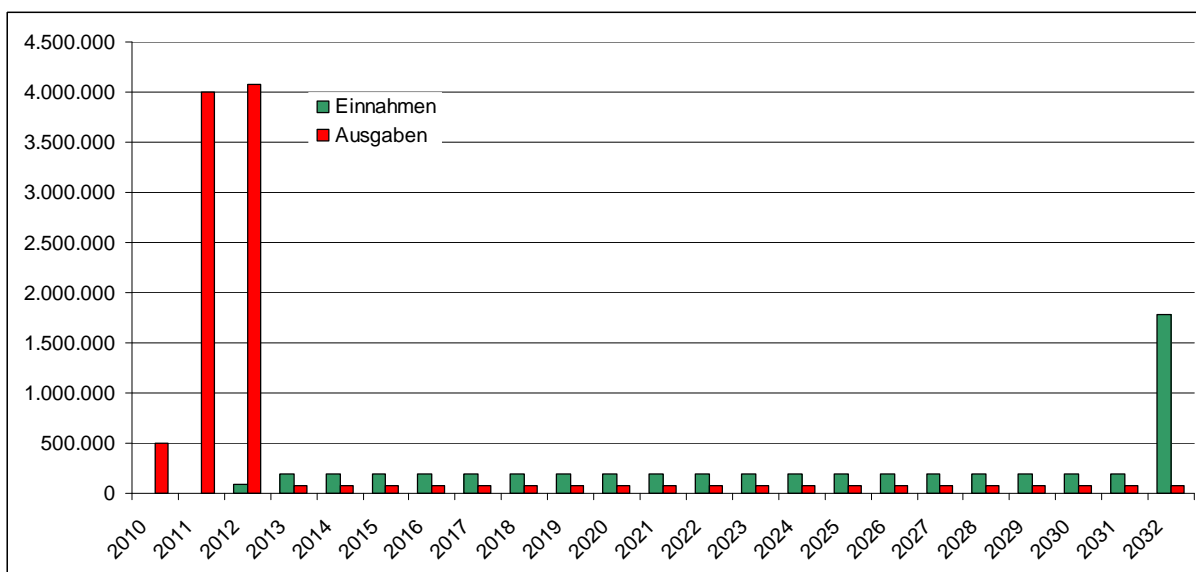


Figure 21: Business plan for the Research Institute for Culture and Information Technology (scenario: residual financing above EUR 3 million in the case of additional revenue)

Key: Einnahmen = Revenue, Ausgaben = Expenditure

5.1.4 Development of southern business parks at Tempelhofer Feld

At Tempelhofer Feld there are plans to develop two business parks covering a total of 23.1 ha. The southern business parks are to be executed in two phases from 2010. Initially, only the first construction phase is to be financed by the urban development fund. This project is typical land development where, after the planning, rehabilitation and development work has been carried out, the developed building land is sold to project developers who carry out the building development. Unlike the Research Centre for Engineering and Information Technology and the Research Institute for Culture and Information Technology projects, a short-term development project will be financed by the fund.

Adlershof Projekt GmbH estimated the expenditure for planning, rehabilitation and development of the land and the revenue from the sale of the developed land for the entire life of the project. Construction phase 1 has a duration of eight years (up to 2018), with a net capital requirement (until the first land is sold) of EUR 6.7 million. A particular feature of the project in question is that all the land is already publicly owned. There is therefore no capital required for land purchases, as far as the expenditure structure is concerned, which seems reasonable in the light of the existing 10% expenditure limit under the ERDF rules. Consequently, the following business plan can be derived for the first construction phase (see [Figure 22](#)).

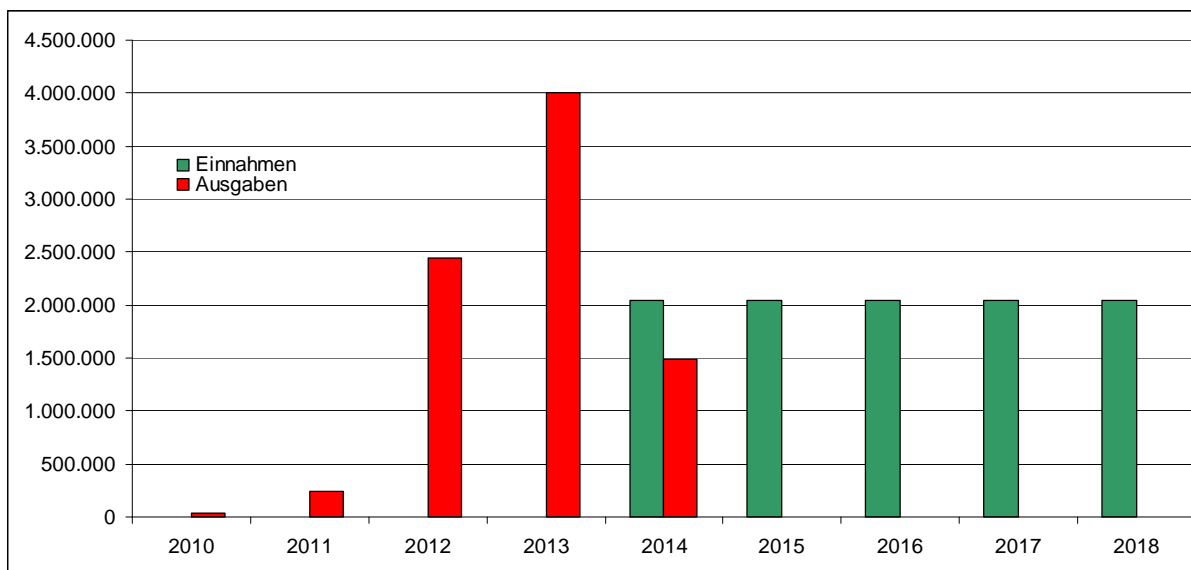


Figure 22: Business plan for the Tempelhofer Feld project – First construction phase

Key: Einnahmen = Revenue, Ausgaben = Expenditure

The fact that there are no land purchase costs means that the entire land development project is profitable, as was shown by way of example for the first construction phase. The return is 7.13%, which means that the project can be fully financed by the urban development fund.

However, because of the grant-funding under the joint Federal Government/Länder scheme planned by the project participants, amounting to 90% of the land development expenditure, full financing is not planned for the project. Instead, there is to be mixed financing, with predominantly grant-funding (outside the fund) and residual financing (amounting to 10%

of the percentage share under the Federal Government/Länder scheme) through the fund. The irregular returns from the project, which are sufficiently high, however, would be arguments in favour of equity participation by the fund, where, like the above-mentioned Proton Treatment Centre project, it would be possible for the fund to share in the project surpluses in the first construction phase from 2015. This alternative would be more profitable for the fund than a loan-based approach, particularly since the financing rate of 10% in any case significantly reduces the risk to the fund.

5.1.5 Art Cube in the Europacity district

Lastly, the development of the Art Cube in the Europacity district was proposed for the initial portfolio for the Berlin urban development fund. For this beacon project, the private project developer Vivico is to acquire the land on Heidestraße in early 2010 with a view to developing the building, to be used for galleries and offices, within two years (by the end of 2011). It is planned to sell the completed building to a private final investor after the end of the construction project. This project is therefore also a (very) short-term development since Vivico evidently does not plan to retain the property as an investment, but is adopting a trader approach.

The Vivico project development company provided the projected revenue and expenditure for the Art Cube. In early 2010 the land will be purchased, including the ancillary costs in connection with the acquisition of the land. Subsequently, EUR 16.56 million will be incurred over seven quarters, from a total investment sum of EUR 19.5 million. Because of the proceeds of the sale planned for the end of 2011, the net capital requirement for the project is only around EUR 16.1 million, as is clearly shown by the following annual payment trend (see [Figure 23](#)).

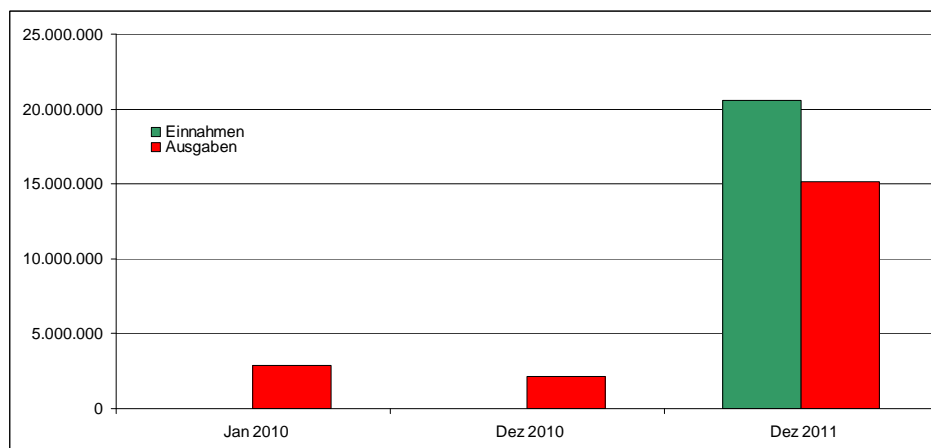


Figure 23: Business plan for the Art Cube (with developer fee)

Key: Einnahmen = Revenue, Ausgaben = Expenditure

It is necessary to draw a distinction between these construction costs and the developer fee, which Vivico has already forecast at EUR 0.778 million. This is a (fixed) remuneration for the previously planned equity provider and cannot be financed by the fund. Instead, it would seem more reasonable for profits to be distributed residually subject to the financing of the project.

Without the developer fee, the project appears to be highly profitable with a 13.43% internal rate of return. Even deducting the fixed developer fee, there is still a return of 4.3%, which means that revolving financing is essentially also possible in the form of full financing. However, it should be borne in mind that the profitability of the project is a consequence of the high proceeds of the sale of the developed Art Cube. Not only were rents of EUR 15-16/sq. m applied to the office space, but also the multiplier at a value of 17.5 is much higher than in all the other projects indicated by Vivico. This is a consequence of the locational benefits of the completed Art Cube.

Against this background, financing from the fund seems conceivable only as partial financing, otherwise the project development risks are too high, particularly if the fixed developer fee is accepted by the fund management. Furthermore, because of the revenue structure (in the form of a single payment from the proceeds of the sale), equity participation is the only option. In that case, it should be agreed to share the risk (e.g. a reduction to a 50% participation) in the case of a 'pari-passu' profit distribution arrangement at the end of 2011. Otherwise, problems could arise in connection with the rules on State aid if, for example, the private developer is favoured by means of a distribution of profits which is higher and/or more secure by reference to the capital participation.

5.2 Derivation of a financial model for the Berlin urban development fund

The starting point for the further analysis is the project portfolio with its cash flows and returns, as derived in the preceding chapter. From this it is possible, as a first step, to infer the necessary maximum capital requirement for the urban development fund. Then the proposed project financing which the fund is to grant to individual operations must be taken into account in order, as a final step, to consider the refinancing of the fund together with the costs of the fund as a whole in the fund architecture.

As the financial model for the Berlin Urban Development Fund contains sensitive financial data, chapter 5.2 is classified as confidential. On request of the Managing Authority of Berlin, further findings of this chapter are excluded from publication.

5.3 Evaluation of economic activity at fund level

The business plan for the Berlin urban development fund based on the first five projects identifies the risks, but also the further opportunities for optimisation for this innovative financial engineering instrument for urban planning.

Continuing the financial planning from Chapter 5.2.2, it is apparent that after the expiry of the planned 25 years the 'national' cofinancing and the refinancing costs (3.75%) would have been repaid in full. Thus, in future private investors could also be presented with a chargeable result in the case of acceptance of a return on capital of 3.75%. Possible partners are long-term investors, sustainability funds, foundation capital or banking capital (in the form of loans to the fund).

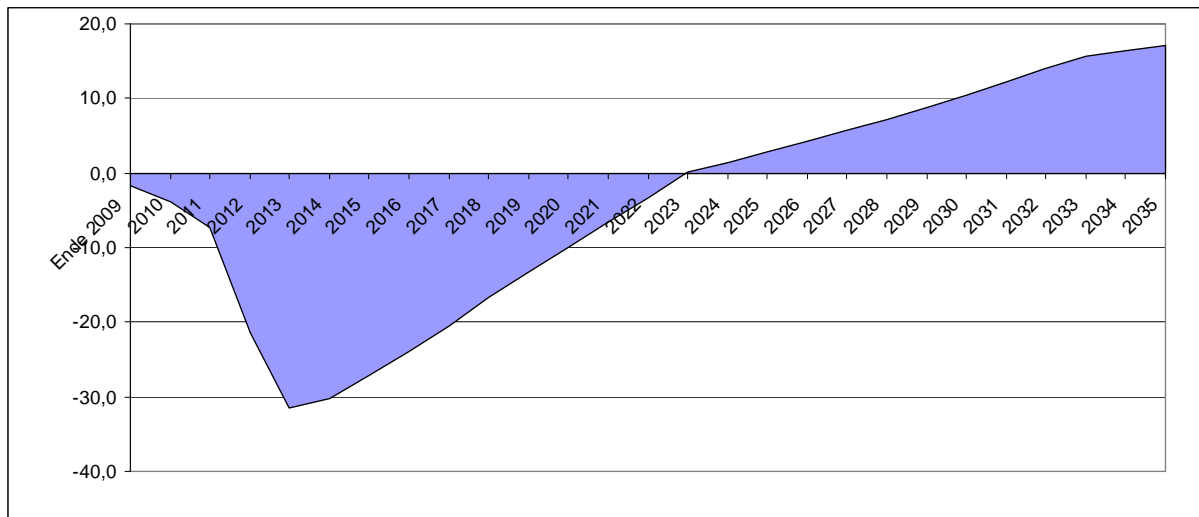


Figure 24: Cumulative trend for fund cash flow over the entire period of commercial activity

A comparison of the available residual funding (EUR 37 164 million) also shows that the interest-free fund capital and the ERDF initial investment of EUR 20 million could be maintained not only nominally. Rather, at fund level a total surplus of EUR 17 164 million was generated. This is consistent with a total surplus of 85.8% (see [Figure 24](#)).

Therefore, over the life of the fund, despite making allowances of all the interest, default and management costs, the fund capital has grown nominally by 2.5% each year. Assuming that the recycling of project funds described above came into being, the owner of the fund, the Land of Berlin, would not only achieve nominal capital maintenance. If account is taken of an annual inflation rate of 1.5-2.0%, it can be seen that there is also real capital maintenance. There is even limited capital appreciation.

On the basis of these assumptions, the added value compared with extending 'lost' grant-funding partly from ERDF funds is high. After the end of the life of the fund, there is at any rate EUR 37.164 million available, which is more than the EUR 20.00 million initially provided. This sum could be used for new urban development projects in Berlin (outside the fund). In addition, in accordance with this budget, the fund, at its peak, provided not only more than EUR 30 million as funding for the initial projects, but, in accordance with the analyses above, implemented all the public interests at project level.

5.4 Further opportunities for optimisation in future fund management

It should be pointed out at this juncture that there are still opportunities for further optimisation of the implementation of the Berlin urban development fund. The future fund management of the Berlin urban development fund will play a crucial role here.

The fund management can not only support the project participants in their own financial structure in order to make the individual projects more financeable and more economically efficient. It can also, for example, coordinate the timing of the beginning and end of projects more effectively.

Furthermore, through consistent monitoring of loan and investment projects, the fund management can ensure that the (calculated) estimated default costs do not occur, or occur only to a limited extent. Because of the high quality of the equity projects in particular, if, for example, 20% of the defaults on the equity capital did not occur, this would mean a considerable increase in the amount of recycled funding, as is shown in [Figure 25](#).

The increase in lending rates (or dividends) and/or the shortening of the redemption periods also improves the maintenance of the fund capital. However, as has been stated above, this is to the detriment of the implementation of public interests at the level of the individual projects; it merely increases the cost of project financing through the fund. This shift towards commercial project financing, as offered on the capital market, should be prevented through the provision of an urban development fund. For this reason, this option is not pursued any further here.

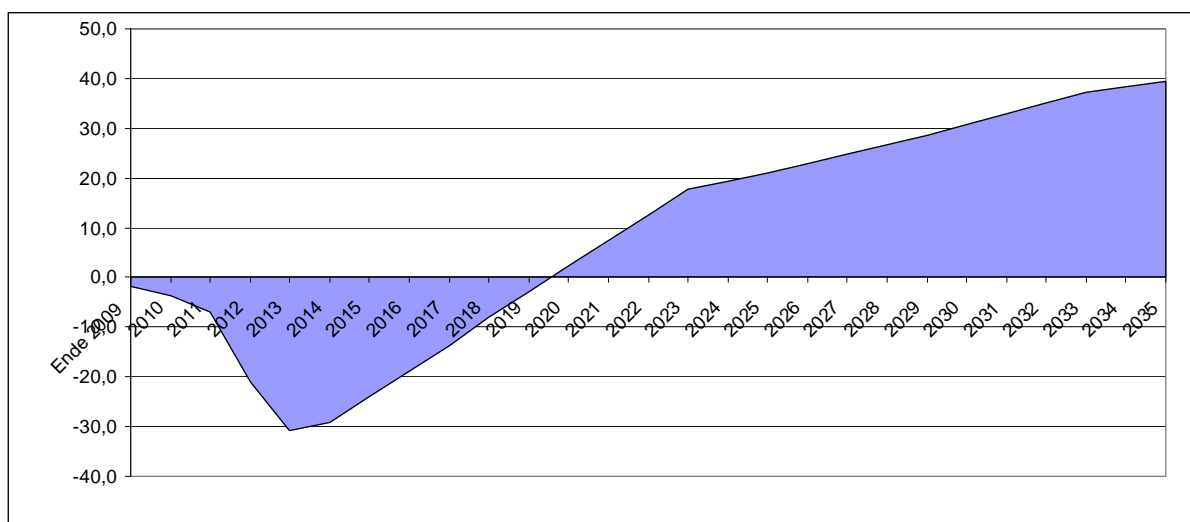


Figure 25: Cumulative trend for fund cash flow over the entire period of commercial activity (alternative scenario 1: no default costs in the equity portfolio)

The same also applies to reducing fund financing further to just individual elements of the total investment requirement (see, for example, the Research Institute for Culture and Information Technology project), as in this case too the residual financing must also come from commercial sources and higher financing costs thus restrict or even jeopardise the implementation of the public project aims. The grant of guarantees by the fund, alongside lending from commercial banking partners, would also increase financing costs at project level, as the guarantee fees and the normal market lending rates will not be below the project financing rate of 2.75% (or 5.00% in the case of the University of Applied Sciences project) which has been assumed thus far.

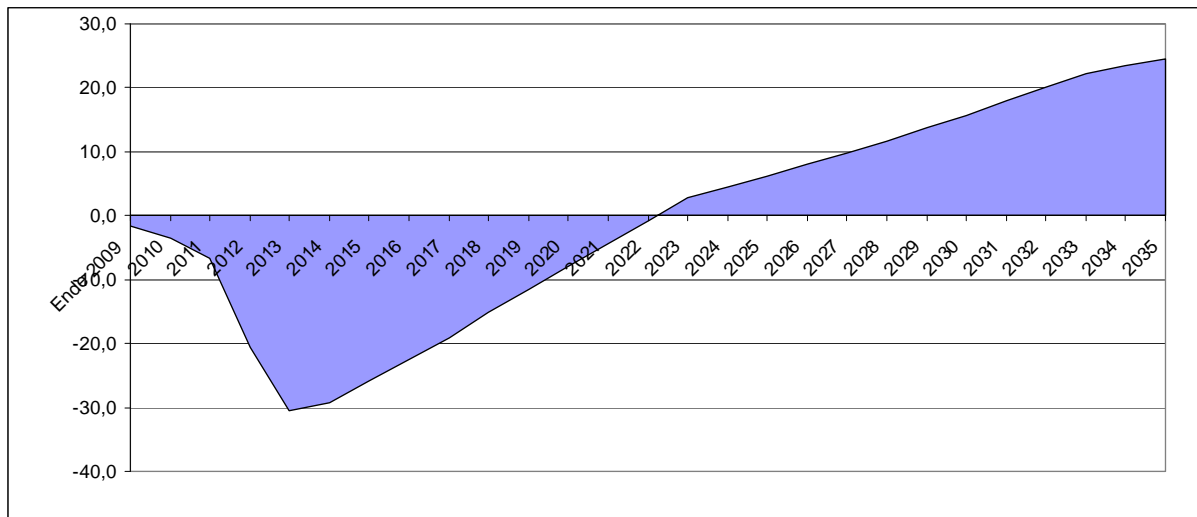


Figure 26: Cumulative trend for fund cash flow over the entire period of commercial activity (alternative scenario 2: immediate reinvestment of available remaining funding in new loans at 2.75%)

It would seem better for the fund management to reinvest the funding recycled into the fund in new projects in order to generate higher ‘interest earnings’ and to implement other public project aims. Furthermore, funding of more short-term projects and of smaller projects (rather than individual large-scale projects) would appear to be practical on account of the quicker recycling, but also the lower ‘cluster risk’ at fund level. However, these would still have to be identified in Berlin. The extent of the effects of a full injection of all fund resources at least in low-risk lending can be seen if it is assumed, in a third alternative scenario, that all available and revolving funding would be allocated directly into new loans at 2.75% (see [Figure 26](#)).

In this scenario the fund surplus rises from EUR 17.164 million to EUR 24.596 million in total, which is a striking illustration of the high importance of ongoing identification and financing of appropriate urban development projects by the future fund management.

Lastly, it must also be borne in mind that thus far no private capital was deployed at fund level, which is, however, a central element of the JESSICA initiative. There has not yet been any leveraging of public funds at fund level, where the scarce public (equity) funds are multiplied by available private capital. If the decision is taken to establish the urban development fund in Berlin, and if this is desired by the current project participants, this could be set in motion as quickly as possible, making approaches to possible private capital partners.

At least at project level, however, there can already be said to be leveraging of public funds if it is assumed that the relevant residual financing in the project comes from private investors (see [Figure 27](#)).

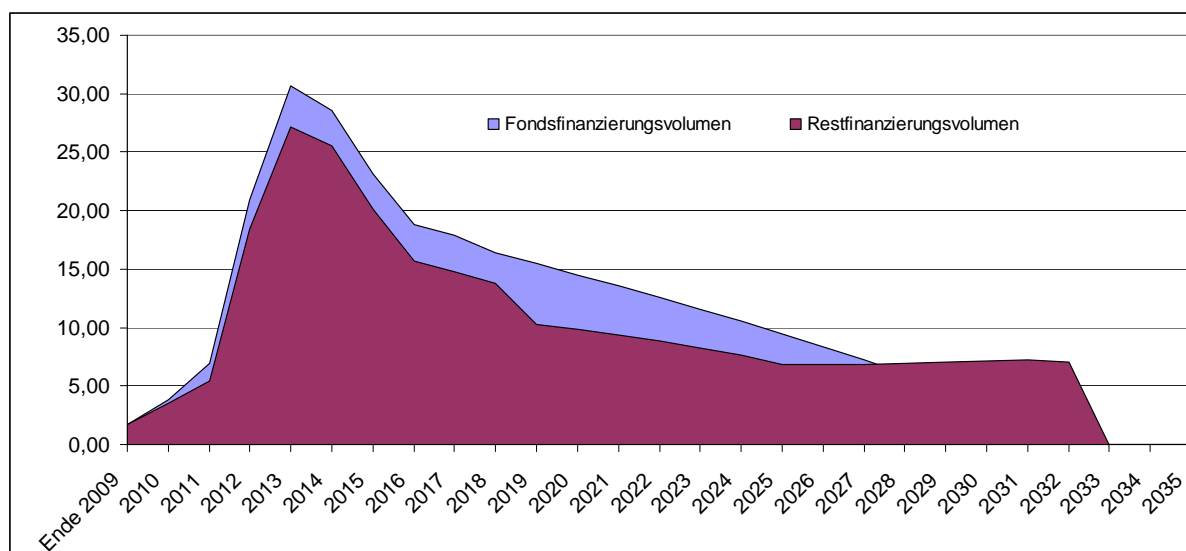


Figure 27: Trend of fund financing v 'private' residual financing

Key: Fondsfinanzierungsvolumen = Total fund financing, Restfinanzierungsvolumen = Total residual financing

Here the trend over the entire life of the fund shows that even in the initial portfolio a roughly equal financing volume is mobilised by third parties as from the fund. This corresponds to a leveraging of almost 100% (fund financing vs residual financing across all projects – see [Figure 27](#)).

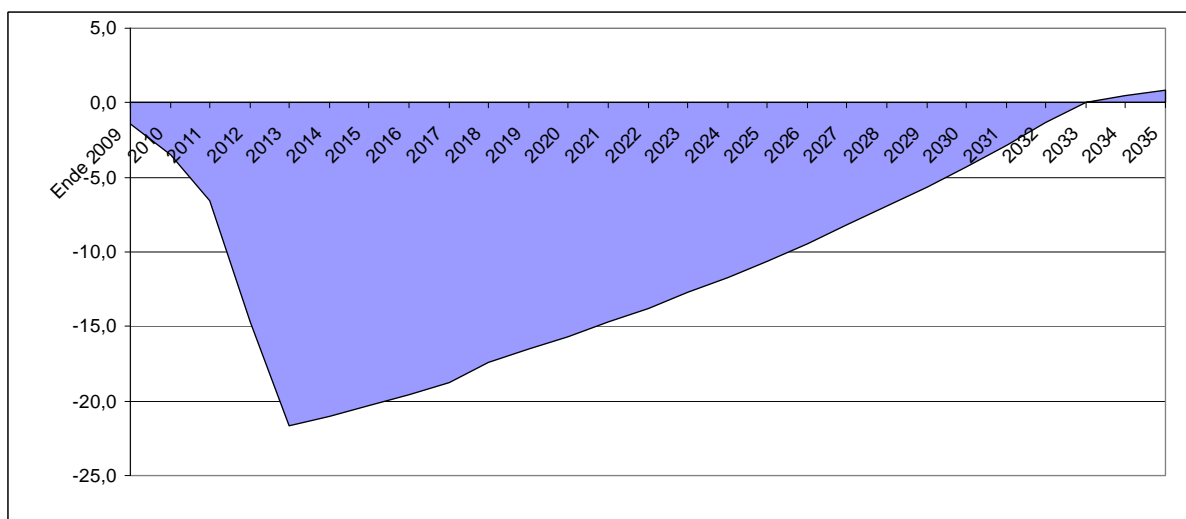


Figure 28: Cumulative trend for fund cash flow over the entire period of commercial activity (alternative scenario 3: decision by fund management not to pursue the Proton Treatment Centre project)

At the same time, the future fund management must also be permitted to reject projects with too low recycling of funds or too high inherent risks. An example is the Proton Treatment Centre, where there are still some uncertainties over future project revenue. The business model of the Berlin urban development fund appears to be sufficiently stable, however, that even a decision not to pursue this investment project at all (e.g. by a decision of the future fund management) would significantly reduce economic efficiency at fund level on account of reduced recycling, but, as is shown in [Figure 28](#), overall economic efficiency is not jeopardised.

There is not only full repayment of cofinancing, but also the ERDF initial contribution of EUR 20 million is maintained. Furthermore, a small surplus amounting to EUR 0.867 million is generated at fund level. There is therefore at least nominal capital maintenance for the Berlin urban development fund.

A comparative overview of the fund models, optimised to different degrees, can be seen in [Figure 29](#).

Comparison of total surpluses of fund models optimised to different degrees (after 25 years)

Fund model – Total surplus	(in euro)	(in percent)
Initial model:	17.2 million	85.8%
Scenario 1: 20% of defaults not occurring:	40.0 million	200.0%
Scenario 2: reinvestment in projects (2.75% p.a.):	24.6 million	123.0%
Scenario 3: risk reduction (without PTC):	0.9 million	4.3%

Figure 29: Comparison of fund models optimised to different degrees

6 IDENTIFICATION OF LEGAL QUESTIONS CONCERNING THE IMPLEMENTATION OF AN URBAN DEVELOPMENT FUND FOR BERLIN

The legal questions which could be identified as this study developed were in some cases general in nature, but in others stemmed specifically from the situation in Berlin. All questions arising were compiled by the Berlin authorities and passed on to the legal experts who have been commissioned by the European Investment Bank to identify legal questions in connection with the implementation of JESSICA in all the Länder and who will answer those questions in the first quarter of 2010, following direct consultations with the European Commission. Initial answers have been added in italics. It was possible to identify the following questions (in some cases asked by other Länder, but having equal relevance for the Land of Berlin):

- Requirement for the substantive orientation of the urban development fund under the Operational Programme:
 - Can the urban development fund also support projects which cannot be attributed to the priority axes under the Operational Programme, but are eligible under Articles 5 and 8 of the ERDF Regulation (in extreme cases these may be projects which are even precluded by the Operational Programme)? *In order to assess the eligibility of projects, account must be taken of the following three points: the principles laid down in Articles 4 (convergence regions) and 5 (regional competitiveness and employment) of ERDF Regulation 1080/2006 are relevant. Equally important are the stipulations of the Operational Programme, i.e. the provisions contained therein on the non-eligibility of projects also apply. Furthermore, projects may be supported only if they are included in an integrated plan for urban development.*

This means that projects are eligible under the conditions laid down in Article 8 of ERDF Regulation 1080/2006 only where the provisions of the Operational Programme are complied with (e.g. by an urban development priority axis).
 - On the basis of a logical interpretation of these statements, only urban development measures which are in any case already eligible under Article 4 or 5, e.g. as industry-oriented innovation or environmental measures can be supported. Article 8 would be superfluous. Even the additional requirement would be redundant. This cannot have been the intention with Article 8. It is therefore necessary to clarify the question of the additional discretion which Article 8 is intended to offer. Is it possible to gain the support of the Commission member responsible for financial engineering on this point?
 - Under Article 8 of Regulation (EC) No 1080/2006, sustainable urban development measures may be supported by the ERDF. This possibility is expressly opened up 'in addition to the activities listed in Articles 4 and 5'. On this basis, can operations be financed which are not mentioned by Article 5,

which is relevant for the Land in question, if they are included in an integrated plan for urban development? (For example, at present, as part of an integrated plan, a concept is being devised for the development of Berlin City West. The concentration of the university campuses located there takes on an important function. The plans include the construction of a university building for mechanical engineering and information technology which could play a key role in the development concept. Can such a measure, as an important component of an integrated urban development concept, be financed through a JESSICA fund? No provision is made for the financing of university construction in the Berlin Operational Programme. In the negotiation of other Operational Programmes with DG Regio, the financing of university construction from ERDF funding was refused if no direct business link could be demonstrated.

In general there is a dilemma in the interface between higher education institutions and knowledge-based spin-offs in relation to the construction of suitable buildings and infrastructure: the universities and higher education institutions appear as project promoters and developer for such construction projects. The regional planning programme for the construction work is examined by the competent Senate Administration for Education, Science and Research in order to establish whether and to what extent the newly constructed buildings fulfil the original functions of the universities and higher education institutions, namely education and research. Use of space for economic purposes cannot be approved by the Senate Administration for Education, Science and Research. On the other hand, with some of the projects also proposed for the urban development fund portfolio, the universities and higher education institutions intend specifically to close the gap between science and research, on the one hand, and economic activities, on the other. The central, noble approach taken by the Berlin Operational Programme to establish better links between the city's potential in terms of knowledge and innovation and economic growth, and the corresponding labour market effects, runs a serious risk of being worn down between different areas of responsibility, legal provisions and sector-specific ideas.

- In the provision of private co-financing or co-financing by the regional development institute (SAB) does the indicative financing plan have to be adapted to the Operational Programme of the Land? Financial planning under the Operational Programme in the Free State of Saxony currently provides for only a classification according to EU funding and national co-financing from municipal resources, and private co-financing resources or other co-financing is not envisaged. The question therefore arises whether as a result of the attraction of private co-financing partners at fund level or, for example, the description of national co-financing by the SAB it also becomes necessary to adapt the Operational Programme.

- *Statement by DG Regio: Urban development funds can only finance measures covered by the existing Operational Programme. The intended use of JESSICA is no reason to adjust the Operational Programme. There are also no plans for a simplified procedure. Changes to the Operational Programme must be justified by alterations in the socio-economic trend.*

The introduction of JESSICA is being seriously impaired and delayed in many Länder by this restrictive position. An attempt should also be made here to find a more flexible solution with the assistance of the Commission member responsible for financial engineering. In previous discussions he had been very open and constructive on this point.

- **Fund management**

As regards the different approaches to estimating management costs, it was possible in the legal experts' report to give clarification of the different methods of interpretation having regard to the European Union legal requirements. Contrary to the view expressed orally by the European Commission that the management charge is limited to 3% of the Operational Programme contribution for the duration of the programming period (plus two years), the 3% limit represents a yearly average value. Up to 3% per year in the programming period (plus two years) can therefore be imputed to management costs, on the basis of the average value considerably more in the initial phase (and correspondingly less once the fund is 'up and running'). The calculation should also not be based on the financial outflows from the fund, and this approach is recommended only as best practice. In principle, fund management in its entirety is subject to the 'principle of sound and efficient management' with the result that it should not be necessary to exceed that maximum limit.

7 SUMMARY REPORT

7.1 Findings from the Berlin model projects and conclusions in relation to the identified project types

It can be concluded from the findings of the chapter on fund and project financing that the Berlin urban development is essentially feasible and depending on the measures taken by the fund management – unlike other model funds currently being implemented – it is possible not only to achieve nominal capital maintenance, but also a completely real capital maintenance or even a clear surplus.

At the same time, the financial analyses of the projects have shown that within the individual projects in the exemplary initial portfolio the debt servicing resulting from the fund financing is also feasible and financially sound. Thus it is possible in principle to realise with the aid of fund financing all the inferred public interests, such as support for research investments, business start-ups or brownfield land recycling, in the individual projects.

The identified project proposals have a prominent importance for the attractiveness of the respective urban districts. Adlershof, the Charlottenburg campus, Oberschöneweide, Heidestraße and Tempelhofer Feld are among the urban areas with high development priority specifically with a view to potential to create sustainable jobs. Whilst the Heidestraße area and parts of Oberschöneweide come under the ZIS, other areas also have major importance for urban development purposes. The site of the former Tempelhof airport is currently the most important city-centre brownfield site in Berlin; planning and development of the site are also a key urban development task because of the considerable publicity effect. With the Charlottenburg campus, not only is a higher education institution of national importance being regenerated, but these activities are also being integrated into a development of the district as a whole. In recent years Adlershof has been developed into a geographical centre for industry, science and media and is also of special importance having regard to the objective of Berlin-Brandenburg as a healthcare region.

In principle it must be assumed that other projects which can be classified under the identified project types are of similar importance for urban development as those studied as examples. These projects can play a pioneering role, pushing forward urban development in the districts. Some of the projects are located in urban areas in whose vicinity there are residential and mixed-use districts with social and economic problems. The implementation of the pilot projects can also be expected to have long-term effects on these disadvantaged parts of the city.

The argument put forward at the start of the preparation of the study that the city state of Berlin, with its districts which cannot themselves raise loans, is probably a rather ‘bad place’ for the urban development fund has not been confirmed. On the contrary, the ‘creative environments’ to be found in many places are an appropriate breeding ground for ideas, proposals and ultimately projects which are suitable for an urban development fund.

Mention should be made of the project type 'Transfer institution between research and industry', which can be found around universities and higher education institutions. The core business is to translate innovative ideas from research into marketable economic products and services. Such developments are always subject to a certain risk, but these can be controlled by making links with a university or a higher education institution. On the other hand, the project type 'Cultural industries and centres of creativity' are also strongly represented, located directly in the sphere of art, culture and creative industries and emanating from private promoters. There is reason to assume that many more projects than the projects listed in the 'project pipeline' can still be identified in this field. As a rule, however, they will probably be projects which require shorter response times from the fund to financing requests and whose volume is below the one million limit. In addition, as time passes, there will repeatedly be important projects which come under the areas of expertise of the Berlin-Brandenburg region and/or serve to develop extensive areas of brownfield land.

The presence of large project developers and land owners (WISTA, Adlershof Projekt, Vivico) with experience in project developing has proved to be very useful in accessing appropriate projects and was ultimately a crucial factor in individual projects achieving a quality in the short time available which allowed any assessment at all to be made. The management capacity of these developers should continue to be utilised specifically to implement important initial projects for the urban development fund.

The request for suitable localised projects in the districts (presentation to the regular meeting with district economic advisers) did not initially meet with a positive response. It must be assumed that in the districts too there are projects to develop brownfield land or empty building complexes which meet the criteria of the urban development fund. Because a sufficient number of project proposals have already been identified in the key urban development areas in Berlin, the search for localised projects did not go any further than the abovementioned step.

7.2 SWOT analysis

The revolving use of funding is a central idea of the JESSICA initiative which has been founded to implement urban development funds. The use of ERDF funding as loans, guarantees and equity requires funding to be recycled from the supported projects, so that those resources are made available for funding activities. Against the background of the enlargement of the European Union and the dramatically changing support strategies (new focus of the new EU Member States), particular importance must therefore be attached to this aspect. The recouped funding from the 2007-2013 programming period can be utilised again irrespective of how much new funding is available to Berlin from 2013. This means that under the scenarios examined the Land of Berlin will continue to have EUR 20 million (including compensation for inflation) available for urban development, initially to be invested in the urban development fund as ERDF funding.

Furthermore, the use of the funding, once it has been recycled, is no longer subject to the requirements of the ERDF regulation, as it must 'only' be used for the purposes of sustainable urban development (Article 78(7) of Regulation (EC) No 1083/2006).

Once contributed to an urban development fund, the ERDF funding is regarded as having been disbursed. This means that it no longer runs the risk, in accordance with the n+2 rule, of having to be repaid to the European Commission if it is not drawn on, which represents a major administrative advantage. Cofinancing is the responsibility of the IBB. The proof of use of the ERDF resources by the fund must be provided by the end of 2015, with the result that the urban development fund must have disbursed the funding to projects (and proven this) by that time.

The provision of funding through the urban development fund (including, for example, as regards reporting to the European Commission) is less expensive even though the administrative requirements in the initial phase of an urban development fund (preparation of the funding agreement) mean much more work than grant-funding.

The activities of the urban development fund will selectively mobilise financing commitments from public and private sources and integrate them into urban development activities. Leveraging can thus be achieved which is many times greater than the amount of funding deployed. At the same time, the public authorities are given a say in all phases of the privately-controlled project development. Joint public/private urban development projects also increase awareness of sustainable urban development in the private sector. Using the instruments of the urban development fund, the public sector can make a contribution to such joint projects.

The acquisition of external capital for a project – particularly for a private investor – is also made easier through the provision of equity or guarantees by the urban development fund, as a result of which a large number of projects can be helped in their implementation.

General advantages, disadvantages, opportunities and risks of urban development fund, in so far as they are relevant to the Land of Berlin, are set out below (see [Figure 31](#) and [Figure 31](#)).

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Use of flexible financial engineering instruments, as are already employed in SME support in Berlin, now also in urban development (loans, guarantees, equity) – a combination with grant-funding is possible. ▪ EUR 20 million in funding can continue to be used (revolving funding) ▪ By using funding with a repayment condition, private funding must also be invested in accordance with the eligibility requirements (considerable leveraging in the Berlin market for urban development projects). ▪ Sustainable and efficient use of ERDF resources for urban development projects through revolving use of funding following the model of the fund already set up for economic support and for the VC business. ▪ Cofinancing of the ERDF funding is by the IBB – no budget resources are required from the Land. ▪ Small-scale funding helps large projects to be implemented (facilitation of private financing). ▪ Revolving capital is no longer subject to the ERDF rules, and capital which has been recycled twice is no longer subject to any post-exit rules on use. ▪ Revolving financing approach promotes project discipline and sustainability in preparation and implementation. ▪ Reduction in the n+2 problem by accounting for the fund contribution when it is paid in. 	<ul style="list-style-type: none"> ▪ JESSICA starts very late in the programming period, when ERDF funding has already been allocated to the priority axes and budgeted by the Operational Programme. Resources for the Berlin urban development fund must therefore be taken from existing budgets. ▪ Restrictions under the ERDF regulation regarding eligible use (new housing excluded). ▪ High administrative expenditure and running costs through participating banks and fund management.

Figure 30: Strengths and weaknesses of an urban development fund in Berlin

Opportunities	Threats
<ul style="list-style-type: none"> ▪ The shift in the geographical emphasis of EU support to the ten new Member States results, in the long term, in less and less funding for the old Member States. With the aid of the urban development, the Land of Berlin has a constant volume of funding despite the possibility of funding allocations diminishing from one programming period to the next. ▪ Because of its revolving character, JESSICA funding can be used more than once and, as a result, well beyond the respective programming period (including as cofinancing for ERDF funding received in the future). ▪ The supported projects are often central elements of large-scale development plans and their implementation may lead to other businesses being established and other projects being developed. ▪ At times of economic crisis, secure JESSICA funding can have positive effects on the beneficiary's general credit-worthiness. ▪ The identified project types fit in with Berlin's core urban development policy, so that future sustainable urban development is actively supported. ▪ The implementation of the aims and content of integrated urban development plans is actively encouraged by the relevant eligibility conditions under the JESSICA initiative. 	<ul style="list-style-type: none"> ▪ ERDF resources committed to the fund can no longer be disbursed as grants. ▪ The entire fund capital must have been invested completely in projects at least once by the end of 2015. ▪ As a result of the economic crisis, there continue to be difficulties raising third-party capital for project developers, which can only be improved to some extent by the instruments of the urban development fund. ▪ The administrative structure has not yet been tailored to the use of urban development funds, and it is not yet possible to estimate the capacities required for the administrative operation of funding activity. ▪ Only a few of the projects eligible for support under the Operational Programme allow recycling to a fund. In many cases they have to be restructured or split into an eligible part and a non-eligible part. ▪ There is already experience of new financial engineering instruments in support for businesses, but not yet in urban development. ▪ So far it has been possible to examine only larger projects (at least as examples). It has not yet been explored whether the urban development fund can be applied to smaller projects.

Figure 31: Opportunities and threats of an urban development fund in Berlin

7.3 Analysis of benefits for the different actors

In addition to the abovementioned advantages, disadvantages, opportunities and threats, there are further specific advantages which can be broken down by the different actors participating in the implementation of an urban development fund or its beneficiaries.

A number of different projects may receive support through the urban development fund on account of their integrating approach and focus on urban development, where the Operational Programme is structured as it is in Berlin. The range of possible project developments is therefore broadened considerably. For formerly purely public, purely private or publicly-subsidised private project financing, two further options are created:

private project financing funded by the urban development fund, which can also be publicly subsidised at the same time. The support provided through the fund can vary as regards the instruments used: loans, guarantees or equity. Furthermore, land and properties can also be contributed for the benefit of the supported development. In addition, these projects can primarily be classified under projects types which are of central importance to the Land of Berlin and the surrounding Land of Brandenburg.

There are several advantages for private project promoters benefitting from support under the urban development fund. The provision of additional capital for a project eases the burden of raising third-party capital (lowering of barriers to entry). Furthermore, the new instruments can also be used to support elements of projects for which grant-funding is not possible. In addition, where it has been decided to support a project through the urban development fund, this sends a signal of a positive administrative and political attitude to the project, which is conducive to the acceptance and success of the project development. Optimisation of the approval process over time should also occur, as a result of which new development opportunities will be created for private investors (new project types).

Successfully surmounted market barriers and successfully developed projects result in the formation of a label and thus boost the image of the urban district or the development area. As beacon investments for urban development, the projects have a positive effect on the surrounding area and produce further positive processes with a view to economically and socially sustainable urban development. Further investments in the economic and social infrastructure of the Land of Berlin are thus made possible.

The establishment of the urban development fund and the related consultancy service for the fund, but also for potential funded projects, are important above all from the point of view of management of public finances. Conventional services in this connection are the preparation of a business plan and the financial evaluation and appraisal of the project business plans. The public authorities are provided with private-sector know-how through cooperation between the public fund management and the urban development advisory council. With the urban development fund, the notion of profitability is now being taken on board directly by the national and regional authorities, which may bring about a change in the orientation of the existing support programmes at other (partially) profitable projects.

An overview of the advantages for the different participants is given in [Figure 32](#).

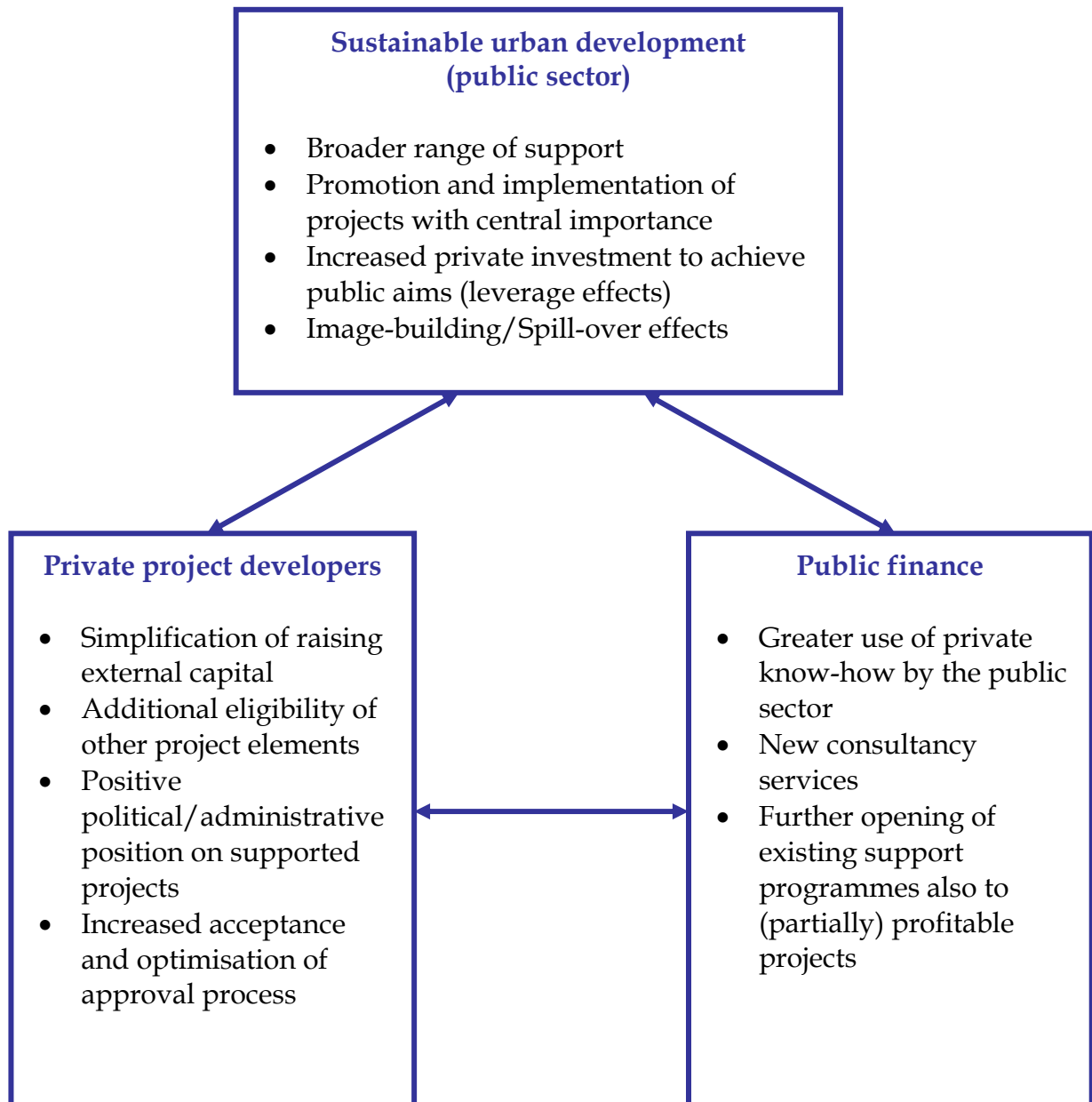


Figure 32: Analysis of advantages from the perspective of the different participants

7.4 Future potential for JESSICA financial engineering instruments in Berlin

This study illustrates that the use of JESSICA instruments in Berlin is reasonable for supporting sustainable urban development. A number of specific measures must be taken in the next decade and the joint model with the Land of Brandenburg provides the rough framework for this. However, the current economic situation makes it clear that public and private investment capital is in increasingly short supply. It therefore seems to make even more sense to use the scarce public funding for urban development more efficiently and at the same to generate more private investment in that sector. The instruments of the urban development fund meet a large demand on the Berlin market for urban development projects and can therefore act as an ideal supplement to the existing grant-funding.

In the project type 'Key investment in an area of expertise of the Berlin-Brandenburg region', the example of the Proton Treatment Centre has shown that increasingly large grant-funding is not required to make anchor investments with a view to the development of an area. There were enough private finance providers for the development of the project, which is important for Berlin as a healthcare location, and only the subsequent securing of businesses at the location required support. This project clearly shows how effective the use of a revolving instrument can be in comparison with conventional grant-based funding. The Land of Berlin, as a partner in the fund, could benefit from the prospects of high returns if it is prepared to bear the corresponding financing risks. This is clearly illustrated by the scenario accounting in Chapter 5 based on the project data provided by the working group. Even a decision not to pursue individual projects like the Proton Treatment Centre would, under the fund accounting assumptions made, nevertheless make possible a nominal capital maintenance.

In addition, it is firmly assumed that the project will act as a development pole for further land development in Adlershof, as a result of which further private funding will be made available for urban development investments. It can be expected that other projects of this type, which are also often important from an urban development perspective outside the healthcare sector cluster, have the same potential in terms of support under the urban development fund.

A key area of intervention for the Berlin urban development fund may be the interface between research and industry (project type: Transfer institutions between research and industry). The Research Centre for Engineering and Information Technology and the Research Institute for Culture and Information Technology projects come under the forward-looking sphere of innovation. Even though Berlin is one of the leading metropolitan regions in Germany and Europe in this sector, this position has not so far been translated sufficiently into tangible capital inflows. In both projects the translation of innovation into the development and sale of marketable products primarily by SMEs is given greater support. For that reason, they can be regarded as examples of steps towards a stabilisation of the employment and municipal budget situations. There will also probably be similar projects in future.

The two other pilot projects, Tempelhofer Feld and the Art Cube, are typical modern-day urban development projects. Through preliminary infrastructure work (Tempelhof) and direct assistance with project development (Art Cube), they allow the successful re-use of brownfield land. In the case of the Art Cube, support is also given to Berlin's forward-looking creative industries; in future similar projects will probably also be of interest in terms of urban development policy and eligible for support under the Berlin urban development fund. Development projects on large expanses of brownfield land occur regularly in large cities and are generally highly important in terms of urban development.

7.5 Identified issues with regard to the implementation process for the Berlin urban development fund

This feasibility study confirms the profitability of an urban development fund for Berlin and recommends direct implementation. In advance of the actual implementation of such a fund, however, there are still some relevant steps to be taken and the present evaluation of data must be further clarified, above all on financial aspects. These points must be clarified in a more precise implementation study, if necessary under the aegis of the IBB (as originally envisaged at the beginning of the working process); the working group is responsible for taking the relevant decision.

In such an analysis the financing approach ultimately chosen must be identified and the (financial) conditions for implementation must be clarified. Against this background, further relevant steps must be the formulation of eligibility guidelines, an instruction sheet or similar instrument for potential beneficiaries at project level, the formation of a project advisory board or other body to verify and assess the relevance of the projects potentially to be supported in terms of urban development policy and produce a guide portfolio, the organisation of the fund management (including calculated examination and acceptance of projects, compliance with requirements of procurement law and clarification of issues in relation to State aid irrespective of the chosen structure) and of the associated consultancy and PR services, business plan and administrative agreement, and ultimately the gradual contribution of capital into the fund. In this connection, it is important, above all, to estimate the upfront costs arising by producing studies and other preparatory work and by making advances on the resources contributed into the fund in the form of interim financing. The entire process must therefore still be integrated into a timetable.

Lastly, it is necessary to inform the political decision-makers and obtain their agreement.

8 SUMMARY AND OUTLOOK

On the basis of the findings of this study it is recommended that the Land of Berlin set up an urban development fund. Attention should also be paid to the special importance of the possible intervention instruments of the urban development fund as a whole. The project types identified for Berlin in this study illustrate the possible starting points for support through the urban development fund in the main areas of activity of Berlin's support policy. Many low-return projects which can reasonably be supported because of their special importance to the economy and urban development, but which are equally capable of repaying the funding extended to them, can be classified under those project types.

For the pilot projects examined as examples, the main option as an appropriate funding instrument was the loan. Preferential urban development fund loans help to reduce costs in project cost accounting, because they facilitate third-party financing and make it more attractive. As a result, the rents to be expected in the occupancy phase can also be accounted for, which in turn reduces the likelihood of rent loss and further diminishes the project development risk.

The guarantees, which cannot be observed so far in the pilot projects, have similar effects. A development is not provided with capital directly through them, but they make it easier for the project participants to raise third-party capital. The funding recycled to the urban development fund is limited to (only) small guarantee fees, but the guarantee capital does not have to be extended for this; it can continue to be invested profitably. In the event of default it must merely be directly available. Consequently, attention should also be paid to this instrument in the activity of the Berlin urban development fund.

The most important instrument is the provision of equity by the urban development fund, since in most cases the equity capital is the central parameter for the success of the development. As can be seen from the example of the Adlershof Proton Treatment Centre, provision of equity reduces the third-party share in financing and thus also the costs. Furthermore, the equity provider (the public sector as initiator of the urban development fund) gains further-reaching, direct influence on the organisation and development process for the supported project until the development is completed. However, this means, for the structure of the urban development fund, that the capital extended in the form of equity is not generally repaid to the urban development fund until the development in question has been completed (exit proceeds). However, the urban development fund can share directly in the returns from developments, which is generally not possible in the case of the other instruments.

The aim of the future fund management must therefore be to commit the extended capital to projects for as short a term as possible or at least to 'offset' a few long-term with several short-term projects (risk reduction). This applies, for the abovementioned reasons, not only to equity participations, but also to loans and guarantees.

First of all, a political decision must be taken in favour of establishing the Berlin urban development fund; then, after possible questions in connection with the rules on State aid have been clarified, a funding agreement can be concluded between the managing authority responsible for the ERDF funding and the designated fund management. Subsequently, projects must be examined, following a similar procedure to that adopted in this study, and selected for support through the urban development fund. The pilot projects examined in this study could possibly also be supported by the urban development fund, depending on the possible elimination of restrictions on eligibility and after further clarification of business plans, and in the event that no other financing opportunities were found in the meantime. The speed of implementation of the Berlin urban development fund is of crucial importance for the selection of the first projects to be funded, since the projects generally have only a limited timeframe to rectify gaps in financing. It is also important that during the implementation phase an ongoing effort is made to identify projects in which the initial capital recycled to the urban development fund can be re-invested.

In future greater account should be taken of the involvement of private investors at fund level if there has been multiple revolving use of funding and this has given practical proof of the reasonableness of using the new support instruments in the field of urban development. Involving private capital at fund level has both advantages and disadvantages. Supplementing ERDF funding and cofinancing, it increases considerably the scope of urban development fund interventions, since that capital is not subject to the provisions of the ERDF regulations and can therefore be used, for example, on the housing market. As a result, new, profitable project types can be developed and the risk spread in the project portfolio can be broadened. After the ERDF funding and its cofinancing have been recycled once, however, this can also be done using 'original' fund capital. Because of the higher capital costs for the private financing shares, the urban development fund must generate a higher return and/or an asymmetrical distribution of returns must be established, to the detriment of the public fund capital. Consequently, medium- to long-term investors with limited profit expectations, such as foundations and development banks, are above all suited as possible private financing partners.

In establishing an urban development fund, the Land of Berlin would be one of the first regions in the EU to utilise this funding instrument for sustainable urban development. If, therefore, the first success stories emerged relatively quickly, this could help to build a positive image which could further intensify the positive effects of that instrument.

ANNEX 1 – GENERIC LIST OF CRITERIA FOR SELECTING PROJECTS FOR URBAN DEVELOPMENT FUNDS

General criteria for project structure:

- Public interest in the project: Why is the public sector participating economically? Why has the private sector not participated so far?
- Expected effects of the project (economic and urban planning)
- Recycling of funding
- Raising private capital, risk sharing in public-private partnerships
- Inclusion in integrated urban development: plans combine the various sectoral interests

Criteria for project content:

- Reclamation of brownfield land, property development with subsequent sale/subsequent rental
- Development of local community and employment, support for business start-ups, strengthening of economic growth: measures to improve socially disadvantaged and declining districts and urban centres through the creation of new office space and commercial space, trading estates and technology centres for SMEs (job creation)
- Ecological upgrading and improvement of infrastructure networks: support for sustainable supply systems (new energies/energy efficiency, water supply and waste water disposal, transport management plans, environmentally friendly public transport)
- Upgrading of public services: investment in healthcare and social infrastructure (hospitals, rehabilitation centres, nurseries)
- Support for knowledge-based economy (schools, universities, training institutions)
- Development of natural and cultural heritage: investment in concert halls, art museums, galleries, theatres and leisure centres (sports centres, swimming baths, cinemas, monuments, including commercial use)

Criteria for project management:

- Right to build exists or will be created in the foreseeable future
- Business plan/cost estimate/revenue estimate exists
- Section of property life cycle
- Total funding within the scope of the resources earmarked for the model operation