

Investing in smart cities

The European Investment Bank (EIB) is the financial arm of the European Union and is owned by its 28 Member States. Founded in 1958, it operates across the EU and more than 130 other countries. The EIB is the largest supranational borrower and lender in the world and the only international financial institution politically accountable to the EU.

Why do we need smart city investments?

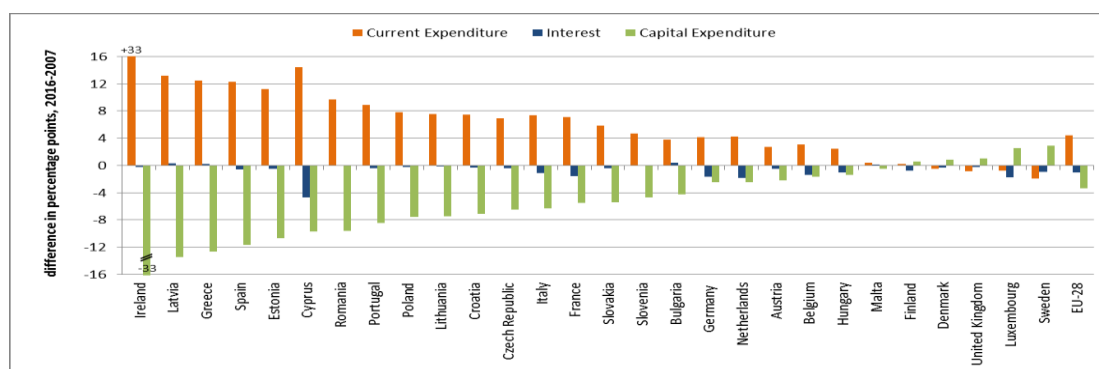
Over the last decades, cities have been growing in terms of population and economy much more than the rest of the territory in Europe and have become true competitiveness, trade and high-end service hubs. However, cities face difficult challenges, including social exclusion, budget cuts and pollution. The projected increase in urban population over the coming decades further accentuates these opportunities and challenges. Timely policy action is needed.

There is a clear case for investment in many cities in Europe. Medium-income cities did not benefit as much as capitals from agglomeration economies. They have fallen behind in competitiveness and are less able to take advantage of the shift toward higher value-added activities. By upgrading technology, infrastructure, and unlocking public data, these cities can open up new value chains and opportunities.

However, the financial crisis of 2008 took a

disproportionate toll on public investment and continues to affect the municipal level today. Economic indicators show that cities have had to scale back investment during the financial crisis to meet the shortfall in revenues. To keep key urban services functioning many cities and regions favoured routine maintenance, not innovation. Furthermore, in some countries such as Slovakia, Austria or Germany, national fiscal rules limit the ability of cities to take on additional debt to fund new large-scale investment projects or programmes.

To help cities and regions take advantage of their unique assets, the European Investment Bank provides technical and financial advice as well as financing for smart city projects. Transforming cities and making them smarter and more sustainable are important goals of our investment approach, informed by both the EU's 2020 Strategy and the EU Urban Agenda.



Financing smart cities in Central and Eastern Europe

In Central and Eastern Europe (CEE), cities show large, untapped potential for growth and development. In many areas, city productivity is below the EU-28 average and smaller cities are lagging behind the capitals in terms of economic growth. Smart investment can address both the existing infrastructure gaps as well as unlock innovative potential. With EIB support there is now a new momentum driving smart city developments across the region. Several inspiring projects have already been implemented, as shown below. Furthermore, the EIB is working on new ways to support smart city investment in the CEE region. With the support of the European Investment Advisory Hub, the EIB is exploring the potential to create a dedicated smart cities investment platform in Slovakia.

In **Budapest** we finance improvement of transport infrastructure, including tram development.



In Poland we provide a EUR 145 million loan to Rzeszow to fund urban infrastructure. The investment helps Rzeszow create a pro-innovation business environment linked to its specialisation in the aviation sector.



What makes a city smart?

By harnessing the benefits of information technologies and innovation, modern cities have the opportunity to streamline their day-to-day management, become more efficient and improve many aspects of our daily lives.

The opportunities are countless. Smart lighting using motion sensors can save billions on energy costs. Use of information technology and big data may prevent the spread of infectious diseases or improve traffic. To know which issues really matter, smart cities place an emphasis on effective urban planning and consultation. When identifying and developing new projects smart cities engage their citizens.

With a greater use of technology, cities have the opportunity to pursue their development in a more sustainable manner. Indeed, the EIB considers “smart” development as one







important route towards sustainable urban development. Smart cities therefore not only use innovation and technology to tackle complex challenges, but also contribute to making the city climate change resilient, socially inclusive and green.

When it comes to smart development, there is no one-size-fits-all solution. Smart cities exploit their comparative advantages and unique assets. As a consequence, individual smart city strategies will differ in their focus to cover the city’s specific development needs such as digital transition, sustainable urban mobility, smart grids, energy efficiency enhancement, climate adaptation and more.

All these elements come together in an integrated approach as part of a smart city plan.

How can we identify a smart city?

The EIB considers that smart cities would typically present, to varying degrees, some or all of the following characteristics:

- ✓ Have a multisector sustainable development strategy  Smart cities plan and execute investments in their territories on the basis of medium- to long-term integrated strategies and target sustainable development.
- ✓ Utilise their comparative advantages  Smart cities ensure efficient use of human capital, resources and assets to optimise their comparative advantages.
- ✓ Consult citizens and stakeholders  Smart cities take into account the views of all the stakeholders, among them their citizens directly or through their associations, as well as the representatives of economic, social, cultural and political organisations.
- ✓ Adopt a comprehensive approach in the making of investment decisions  Smart city projects analyse costs and benefits, sustainability over their life-cycle, integration within the urban system and other planned investments, as well as overall consistency with the urban or regional development strategy.
- ✓ Use new technologies, skills and innovation  Smart cities invest in advanced technologies, in particular in information and communication technologies.
- ✓ Foster a pro-innovation environment  Smart cities foster an innovative ecosystem through investment and by encouraging and collaborating with universities, industry and other partners to put in place the infrastructure, services and skills needed to support and nurture innovation.

How does the EIB support smart cities?

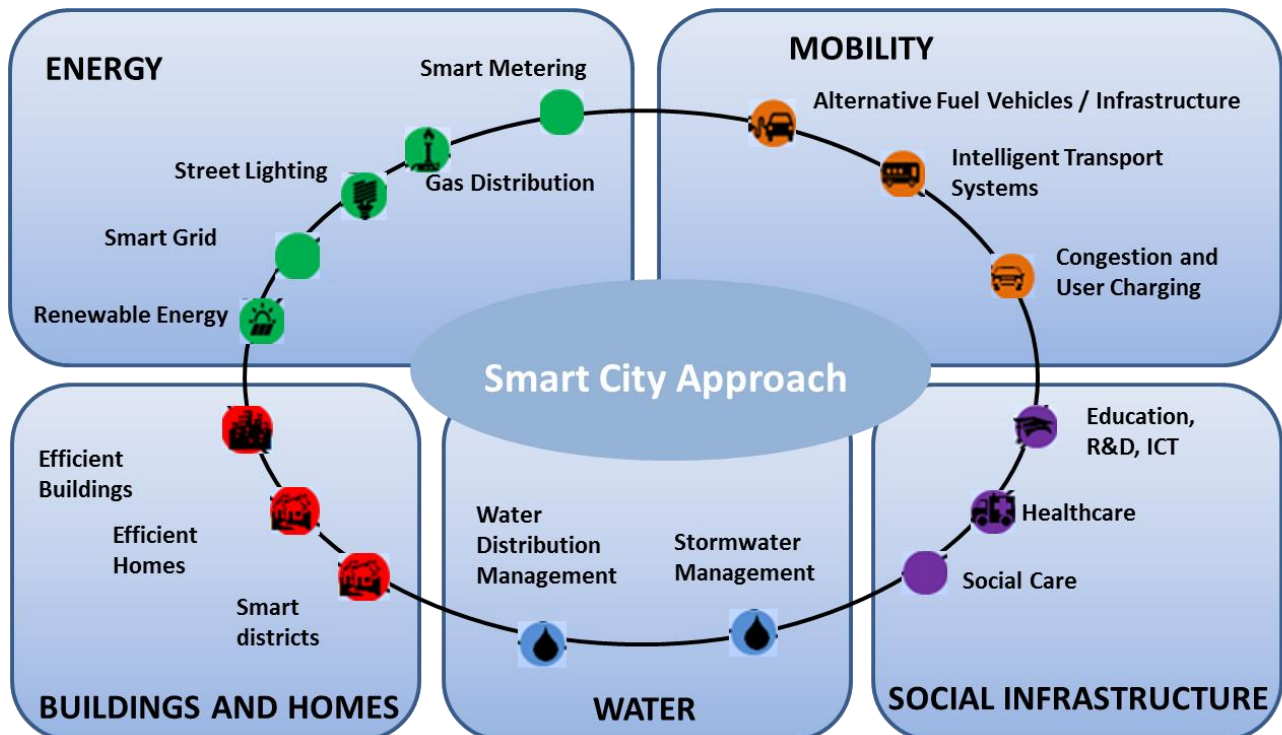
The EIB supports a broad range of urban projects. Our investments have helped many urban areas deliver significant improvements in terms of infrastructure development, intelligent and sustainable mobility, better water and waste management systems, and improved e-government and other municipal services and facilities.

Despite the broad scope of projects we support, all EIB financed projects in the field of smart cities are **innovative, inclusive and integrated**.

- ✓ Our smart city investments apply **innovative** technology and management approaches.
- ✓ Decisions are made through **stakeholder participation** and

sound governance in project design and implementation.

- ✓ Smart city interventions **integrate** solutions through a planning-led approach in the areas of mobility, energy, water management, housing or other public services. For example, it could be intelligent street lighting, smart energy metering, alternative fuel vehicles, intelligent transport systems, efficient buildings and smart districts, storm water management, ICT in health and social care services, but also innovative approaches towards city administration and interaction with citizens. The chart below illustrates the kind of smart city project that could qualify for EIB support.



Which financing products can be used for smart city investments?

Given the diversity of potential smart city projects and borrowers, a number of EIB products could be potentially used for the financing of smart city investments:

Investment Loan

When a single large investment project needs long-term funding (such as a metro or a complex urban regeneration project) cities or regions typically arrange financing on a project basis. In such cases the EIB can provide dedicated project-specific loans – or as we call them investment loans. They usually amount to at least EUR 25m. To see how investment loans are being used in practice read more about [EIB financing for eco-districts in France](#).

Framework Loan

Framework loans are a source of long-term financing that is flexible enough to handle changes in the investment programme over time. They can be used to finance multiple small and medium sized projects, usually in the range of EUR 1-50m, over a period of normally 3-5 years. City or regional councils typically work with 3-5 year capital investment programmes but only give final approval to investments on an annual basis. Framework loans take this into account by setting up criteria for financing without specifying individual projects. As a result, projects in the indicative investment programme can be replaced by other projects, provided they meet the same criteria. Visit our dedicated [framework loan](#)

factsheet or read more about our smart city investments in [Belgium](#).

Equity Investment

We can also support smart city projects through equity investment, for example through pure private equity funds or financial instruments which blend together grant and commercial funding. We work with new and established fund managers both in traditional and innovative segments that are not yet mainstream. For illustration read more about our support for [Ginkgo Fund](#) facilitating sustainable redevelopment of polluted sites in urban areas.

Intermediated loans

Our intermediated loans provide indirect financing to smart city projects. The EIB works together with local banks or other intermediaries to set up dedicated smart city programmes, which then on-lend to final beneficiaries such as SMEs and local authorities.

Investment Platforms

Smart city investment projects can also be supported by investment platforms. Investment platforms involve the provision of EIB financing under the European Fund for Strategic Investments (EFSI). Through the investment platform approach, EFSI is used to catalyse a pool of other public and private financing for investment in a portfolio of projects with a given thematic and/or geographic focus.

Can EIB loans be combined with EU financing?

Yes, [blending](#) is one of the EIB Group's core products, along with advising. We combine our finance with other sources to maximize financial impact. Smart city investments can be co-financed through EIB products blended with EU grants and other sources. There are some limitations in the EIB lending policy for the combined EIB and EU support depending on the location of the promoter.

What kind of cities or regions could benefit from EIB financing?

The EIB's clients are public and private sector entities. Cities, regions, towns and other settlements, companies and banks financing urban investments can apply for EIB financing.

The total investment for project loans normally exceeds EUR 25m. Total size of the investment programme financed under a framework loan is usually over EUR 100m. Even cities with a population of as low as 75 000 can generate sufficient investment volume to justify a framework loan, although most of the cities and regions which have framework loans are larger.

Does the EIB provide advice to help get projects off the ground?

Our lending activity is complemented by advisory services and technical assistance. We make our expertise available to help our clients develop bankable smart investment projects.

The European Commission and the EIB have established the [European Investment Advisory Hub \(EIAH\)](#) that serves as a single access point to a wide range of advisory

services and technical assistance. EIAH provides advisory support for projects and programmes with both public and private sector promoters, EIAH is also able to offer support in relation to the development of Investment Platforms.

The EIB also offers a number of specialised [advisory services](#) such as the [Joint Assistance to Support Projects in European Regions](#) (JASPERS). JASPERS is a technical assistance partnership between the EIB and the European Commission. It provides independent expert advice and capacity building support to public authorities and final beneficiaries on how to plan, develop and implement high quality large investment projects and programmes to be co-financed by European Structural and Investment Funds. Furthermore, the advisory service may provide strategic advice on programmes and sector strategies that deliver EU policy objectives. Advice on specific issues such as cost-benefit analysis and state aid can also be provided. In relation to smart city development, JASPERS Smart Development Division provides advisory support on the development of urban strategies and associated investment programmes and projects. JASPERS can provide support on a range of sector-specific urban projects such as urban mobility and energy efficiency in housing.

Other advisory programmes such as ELENA (targeting energy efficiency) and the Clean Transport Facility (targeting sustainable urban mobility) can support relevant types of smart city projects. Furthermore, instruments such as FI-Compass offer support in the development of financial instruments including smart city instruments.

Frequently asked questions

- Are municipal (project and framework) loans on-budget?

Yes, the loans to municipalities count as municipal debt. However, in some cases the EIB can lend to utility or urban development companies on a limited recourse basis. The Bank can also lend to private service providers offering smart urban services to cities in areas such as energy efficiency or e-vehicle leasing.

- Can the EIB finance a mix of smart city investments and other urban investments?

Yes. Cities use smart investments to contribute to their sustainable development goals, but other investments in areas such as health, education and culture are also critical. We recognise that in some cases investments in basic services do not necessarily emphasise innovation. The EIB takes a flexible approach and can finance the full range of investments typically found in a city's investment programme. However, to label it as a "smart city" investment programme, the EIB would expect to see a significant share of smart city investments.

- Do smart city investments pay back on their own?

Some smart city investments are revenue generating and may generate sufficient cash flow to finance not only their operation and maintenance costs but also the repayment of the loan – for example through savings in energy costs. However, not all smart city investments are in this category. Some generate important economic benefits for the city, but it is difficult to capture these in direct revenue streams that can be used to pay back a loan. In such cases, smart city investments must be repaid with other revenues, such as the city's general budget. Capital intensive investments in public transport, such as metro or investments in smart environmental monitoring, would typically fall into this category.

- Can smart city investments be combined with EU grant funds?

Yes, as long as the total of the EIB+EU contribution is not more than 90% of the total investment programme (70% for developed regions).

- Are they very bureaucratic?

The EIB has to ensure its funds are invested in projects which benefit society, so it does need information. Experience shows that with a good project coordinator appointed by the city or region, the reporting is easier to manage.

- Is EIB funding counted as "state aid"?

No, but the EIB does review whether state aid aspects have been adequately handled for the non-EIB public funding.

- Can the EIB provide support at a more upstream stage in the preparation of smart city programmes and projects?

In line with its extant mandate, JASPERS can provide technical advice to cities that make use of European Structural and Investment Funds to co-finance their smart city investment programme and associated projects.