

Funding and financing Smart City Solutions



Marketplace of the European Innovation Partnership – Smart City and Solutions
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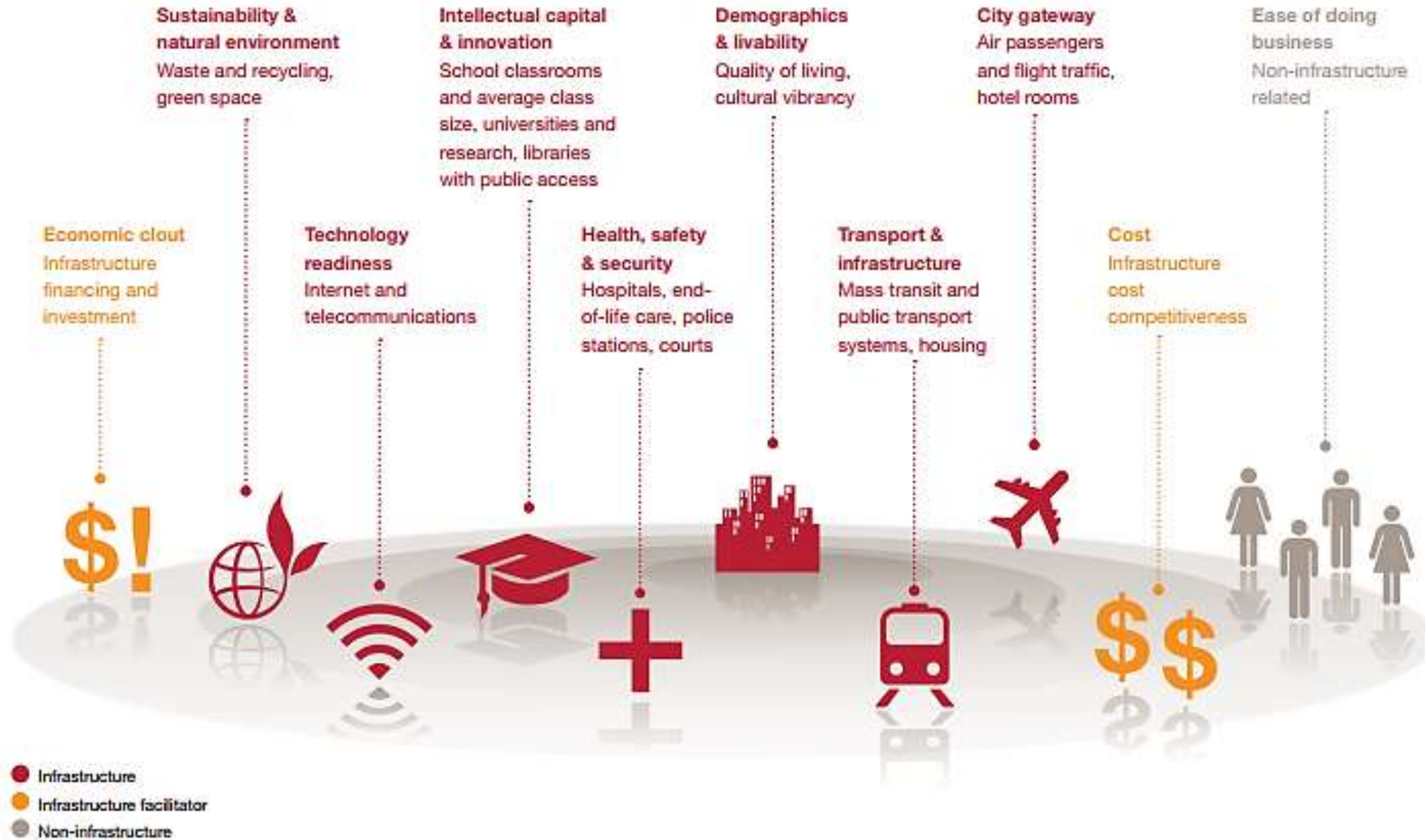
Capital Projects & Economic Studies

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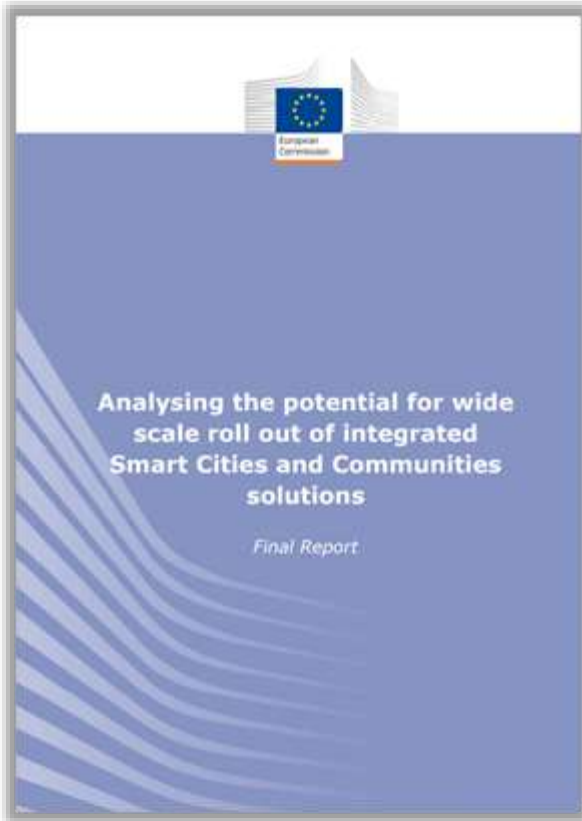


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Smart City and infrastructure



We have been awarded this study with the objective to **promote scalable and transferable solutions** to contribute reaching the EU 20-20-20 climate action goals.

Further, the study aims to **foster the knowledge base of the EIP - SCC** by analysing smart city solutions and initiatives that are linked to the Strategic Implementation Plan.

PwC et al. (2016) Study analysing the potential for wide-scale roll-out of integrated smart cities and communities solutions

Business cases

Overview of business cases identified

Different ways to succeed...

...different ways to shape solutions.

R&D, test and sell the product

Some of the major cases of positive business cases identified based its success to develop and test a standard, technology, integrated solution in integrated pilot projects and then sell it replicating it entirely or partially.

Real estate-based

SCC solutions are an essential part of the development of new residential areas.
Business case is sustained by increased cost per square meter in property selling and leasing.

Public utility

Investment in SCC in some cases are not aimed at producing returns for the investors. These cases are often related to innovation in public services.
Costs for the development and installation of SCC solutions are sustained by taxpayers.

*Improved efficiency/
shared economy*

Investments that improve the way services or citizen private activities are performed. It is i.e. the case for the sharing economy (cars, bikes).

A few good tips...

...to start with

Consider all the elements that enable "common" businesses to be successful. These include a ***strong vision***, project ***governance*** and ***management***.



Comply with the market. Solutions developed high level that do not match with the society's needs have little chance to be supported by their very users and beneficiaries.



Technical perspective: successful solutions ***integrate with other Smart City components***, they apply standards and they provide data finalized to assure interoperability.



The analyses carried out demonstrate that there is no unique solution to the successful roll-out of SCC solutions.

Integrating city needs and project requirements

Plan and Pilot

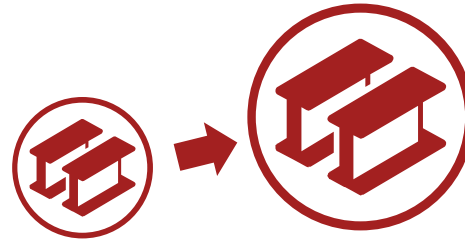
Find ways to generate short term results while planning for the future



- Integrate with the Smart City Master Plan
- Identify and launch targeted pilot projects and “quick wins”
- Ensure governance and performance management systems are in place to properly operate and evaluate pilot projects
- Begin engaging the public and global private sector partners

Expand and Attract

Expand successful pilots, solidify partnerships, and share results



- Identify successful pilot projects and expand
- Enter agreements with global private sector partners
- Communicate results with local, regional, and global stakeholders

Integrate and Exceed

Future execution on master plan objectives with focus on integration



- Attract new financing opportunities based on initial success
- Evaluate whether existing initiatives need to be expanded, shifted, integrated, or scaled back
- Assess how technological advancements have presented new opportunities

*Need to balance **short-term pressures** to deliver results with **long-term benefits** of partnering with private sector.*

Funding and Financing



Funding

is the cash inflow to pay for the implementation of a project. **It does not imply any repayment.**

- *Property taxes*
- *Business taxes*
- *Municipal income tax*
- *Tolls and user charges*
- *Asset disposals*
- *Budget allocations received*
- *Grants received*

Financing

is a temporary provision of cash-flow resources that is **expected to be paid back** at a specific point in time.

- *Public sector banks*
- *Commercial banks*
- *Municipal or project bonds*
- *Pension fund private placement bonds*
- *Development banks/multilaterals*
- *Equity investment and infrastructure fund managers*
- *Leasing and vendor finance*

Funding and financing

How SCC solutions get funded?

Small-scale projects

- *Crowd funding*
- *Venture philanthropy*
- *Specific programmes (i.e. EIC)*

Small scale projects find it difficult to access to main funding and financing sources:

- Limited awareness of what the financial market offers;
- Not very interesting to banks (too small to be relevant).

Dedicated Financial instruments are designed to facilitate financial support

Medium-size projects

- *Venture capital*
- *EU/national funds*

Medium-size project, depending on the context and type of solution, can benefit from certain dedicated public support mechanisms, but mostly rely on venture capitalists to have their solutions financed.

Large-scale projects

- *Bond financing*
- *Financial products provided by commercial banks*
- *EU/ national funds*

Large scale projects are that find it easier to access to finance.

- Promoters know the market and of the range of products offered.
- May involve major companies which blend SCC into other businesses.
- Do benefit from public support mechanisms.

Funding and financing



Marguerite



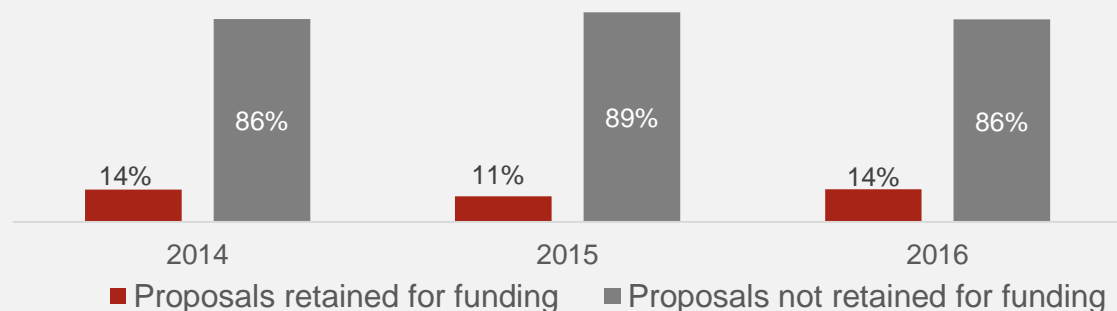
Resources availability

...or the need for financing support

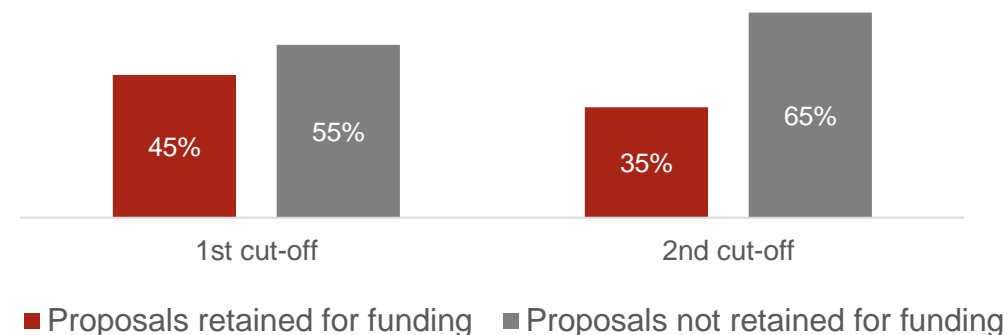
74% of the H2020 proposal is
of high quality...

...yet only **11.6%** supported

H2020 2014-2016 success rates of proposals



CEF blending call 2017 success rates of proposals



...which is being translated into a "blending facility":

"A cooperation framework established between the Commission and development of other public finance institutions with a view to combining non-repayable forms of support and/or financial instruments from the EU budget and financial instruments from development of other public finance institutions as well as from commercial finance institutions and investors."

European Innovation Council (EIC)

The European Innovation Council (EIC) pilot supports innovators developing breakthrough innovations with the potential to create new markets and boost jobs, growth and prosperity in Europe.

Context: The EIC pilot is running under the Horizon 2020 research and innovation programme which ends in 2020. The new EIC will constitute one of the main features of the new programme of Horizon Europe (evolution of the current H2020).

Objective: Need to strengthen the support for enabling the emergence and rapid scale-up of highly innovative enterprises.

Supported projects' characteristics:

radically different from existing products, services or business models;

'high risk – high gain'-nature for investors;

potential to scale up internationally.

Instruments:

SME Instrument addresses SMEs with a radically new idea underpinned by a business plan for rolling out marketable innovation solutions and with ambitions to scale up;

FTI targets industry-driven consortia seeking a quick market uptake of new solutions, and brings together actors with complementary backgrounds, knowledge and skills;

FET Open uses interdisciplinary collaboration to tap into Europe's excellent science base for exploring radically new technologies, which may become the game-changers of the future;

Horizon Prizes boost breakthrough innovation by fostering solutions to challenges which bring major benefits to society.

Opportunities under the new MFF

Focus on financing and simplifying access to financial support

InvestEU Fund (based on EFSI success) will contribute with € 15.2 m of EU budget with the partnership of EIB and the National Institute of Investment Promotion.

The **InvestEU Fund** will support resource efficiency through the integration of financial sources (currently fragmented) in new integrated programmes and to simplify the use of financial instruments.

According to the European Commission, InvestEU will generate € 650 m of new investments.

MFF 2021-2027

Budget: € 1,135 bn over 7 years period (1.11% of MS 27 GDP)

Increment of allocations expected for:

- 15 billion EUR in R&D and pilots in climate, energy and mobility.
- CEF will continue to give priority to the urban nodes of the Core Network. All urban nodes of the comprehensive network will become eligible under the new CEF for projects relating to the modernisation of existing infrastructure.
- HorizonEU, with €100 bn investments. New features are designed as i.e. *European Innovation Council (EIC)*: a one-stop shop to bring the most promising ideas and support innovative start-ups and companies to scale up their ideas. Two main funding instruments, one for early stages and the other for development and market deployment.