Roadshow: Build your financial capacity

Empowering local authorities to drive the energy efficiency market within the Smart City context

4rd webinar, 25th of April 2024

Paula Ferrando and Valentina Cabal.
Scalable Cities Secretariat
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1. Introduction

By harnessing digital technology, data analytics, and connectivity, cities can optimize resource use, enhance energy efficiency, reduce emissions, and foster sustainable practices. Smart infrastructure, from energy-efficient buildings to efficient transportation networks, enables local administrations to meet their green goals.

A Smart City empowers local governments to utilize data-driven decision-making, engage citizens through co-creation processes, comprehend financial needs for implementing innovative financing models, nurture a collaborative stakeholders' ecosystem, and include vulnerable groups and deprived areas to align with EU sustainability goals. In this context, financial insights are indispensable within the local administration, playing a vital role in transforming cities into sustainable, green hubs of the future. It represents a wholehearted commitment to the journey towards a climate-neutral Europe by 2050.

Local administrations are crucial for the success of the EU Taxonomy, and the New Green Deal due to their role in implementing green initiatives at the city and regional levels. They require financial skills to secure funds, manage budgets, attract investments, ensure compliance, foster innovation, and drive local economic growth in alignment with the EU's sustainability objectives. Local governments are the bridge between European sustainability policies and tangible projects, making their financial expertise vital for translating these initiatives into actionable, green solutions that benefit both the community and the environment.

1.1. What is Scalable Cities

Scalable Cities is a community of communities. Since 2014, a total of 20 European projects have been funded in which lighthouse cities and fellow cities have committed to developing innovative projects to achieve climate neutrality. The key idea has been to develop innovative energy solutions and business models that can be scaled up and replicated across Europe and lead to measurable results. In this sense, public administrations have been invited to take an active part in the energy transition by taking a proactive role in both designing innovative services and addressing the local market.

Scalable Cities has a Secretariat that supports all these Smart Cities communities to collect and document all the knowledge and experiences developed, as well as to provide support through different services.

Some of the technical solutions developed by the cities that are part of Scalable Cities are the following:

- Computing and cognitive solutions, providing applications or services enabling behavioural changes for citizens.
- Data-Driven business models enable cities or operators to manage energy efficiency better.
- Deployment of charging infrastructure for electric vehicles.
- District heating.
- Electric/hybrid public vehicle purchases.
- Energy management (district/blocks/ buildings/Demand/response) using technologies such as AI, microgrid, blockchain or others.
- Energy storage.
- Frugal solutions: it is an approach that involves using ingenuity to innovate most simply and effectively possible using the least amount of resources.
- Industrial heat production.
- Infrastructure physical and digital.
- Mobility stations.
- New buildings.
- New public transport infrastructures.
- Park & ride facilities.
- Positive Energy Blocks or Positive Energy Districts.
- Private buildings retrofitting.
- Public buildings retrofitting.
- Public lighting.
- Renewable energy production.
- Renewable energy thermal production.
- Vehicle Sharing Platforms (carpooling, sharing).
- Bundling services, please specify which sectors are involved (bundling services means grouping a set of actions in a coherent and global business model. E.g. combining retrofitting with renewables and EV charging stations).
- Others.

1.2. What is the Roadshow: Build your financial capacity?

The Roadshow is a service offered by the Scalable Cities Secretariatto support cities in the field of financial design of projects such as business model, financial schemes and everything that unfolds from it. With this objective, a series of activities will be carried out through which basic and advanced

skills on finance will be acquired, to have resources with which to think and design economically sustainable and scalable urban projects to achieve climate neutrality.

This document covers to the content of the forth webinar: "Empowering local authorities to drive the energy efficiency market within the Smart City context" on 25 April 2024.

1.3. Agenda

Introduction	
10:00 - 10:05	Introduction of Scalable Cities and Smart City project. Paula Ferrando GNE Finance.
10:05 - 10:15	Assessment and reflection on general knowledge regarding innovative procurement and innovative financial mechanisms. All, interactive tool.
Financial concepts explanation	
10:15 – 10:55	Understanding implementation strategies for Special Purpose Vehicles (SPVs), Innovation Funds, and Innovative Procurement in urban energy transition projects. Valentina Cabal - EU Advisory Director, GNE Finance..
Real case examples	
10:55 – 11:10	An experience in Competitive Dialogue. Joe Hayden - Project Implementation Lead, Codema Dublin Energy Agency
11:10 – 11:25	The French Societé Publique Local model, an example of a successful SPV. Baptiste MOUGEOT, Project Manager - Sustainable Development and Innovation, Lyon Confluance.
11:25 – 11:40	Making-City: Financial solutions for cities & city suppliers: Toolbox for PEDs. Mohaddesh Maktabifard, EU project manager, R2M Solution.
Q&A and open discussion.	
11:40 – 12:00	Q&A and open discussion.
End of the webinar	

2. Innovative procurement for public administrations

2.1. What is a "innovative procurement" within the public administration context?

In the realm of public administration, procurement refers to the process of acquiring goods, services, or works necessary to fulfill the needs of government entities. This can encompass a wide range of activities, from purchasing office supplies to commissioning large-scale infrastructure projects.

Governments are obligated to engage in procurement processes to ensure transparency, fairness, and accountability in the expenditure of public funds. Moreover, procurement plays a crucial role in achieving policy objectives, such as promoting economic development, supporting small and medium-sized enterprises (SMEs), and advancing sustainability goals.

Traditional procurement methods often focus solely on meeting immediate needs, without necessarily considering long-term impacts or fostering innovation. In contrast, innovative procurement approaches prioritize outcomes such as fostering innovation, enhancing efficiency, and promoting sustainability.

One example of innovative procurement is circular procurement, which applies the principles of the circular economy to purchasing practices. Circular procurement aims to reduce waste, promote resource efficiency, and encourage the reuse and recycling of materials. This approach aligns with broader sustainability objectives and can contribute to achieving environmental targets.

When applied to Smart City projects, innovative procurement processes enable governments to leverage technology, expertise, and innovative solutions to address complex urban challenges. By adopting methods such as pre-commercial procurement, innovation partnerships, and competitive dialogue, cities can access cutting-edge technologies, foster collaboration with private sector partners, and ultimately deliver more effective and sustainable solutions for their citizens.

In summary, innovative procurement practices offer public administrations a strategic means to drive innovation, enhance efficiency, and achieve sustainability goals in their procurement processes, particularly in the context of Smart City projects:

Innovative Procurement Method	Brief Explanation	Advantage	Inconvenience
Pre-Commercial Procurement (PCP)	Engages suppliers in R&D activities before commercialization, fostering innovation.	Stimulates research and development, leading to cutting-edge solutions.	Lengthy process, high administrative burden.
Competitive Dialogue	Dialogue between procuring entity and potential suppliers to identify innovative solutions.	Facilitates open discussion and idea exchange.	Can prolong procurement process due to extensive dialogue.

Innovation Partnerships	Collaboration between public authorities and suppliers to co-develop innovative solutions.	Allows for tailored solutions to complex challenges.	Requires close coordination between public and private sectors.
Circular Procurement	Purchasing that applies circular economy principles, reducing waste and promoting resource efficiency.	Reduces resource consumption and waste, enhances sustainability.	Implementation challenges due to shifting from linear to circular models.

More information:

- ec.europa.eu - Guidance on Public Procurement of Innovation
- manutan.com - Circular procurement: its definition, application, and benefits

2.2. Pre-Commercial Procurement (PCP)

Definition:
Pre-Commercial Procurement (PCP) is an approach to public procurement of research and development services that involves procuring innovative solutions that do not yet exist on the market.

Process
PCP involves several stages:

1. **Identification of needs**: Public authorities define their innovation needs.
2. **Tendering**: Competitive tendering process to select multiple R&D suppliers.
3. **Prototype development**: Suppliers develop prototypes to meet the specified needs.
4. **Testing and validation**: Prototypes are tested and evaluated against predefined criteria.
5. **Commercialisation**: Successful solutions may be further developed for commercialisation.

Relevance to Smart Cities
PCP is highly relevant to Smart Cities as it enables the development and acquisition of innovative solutions to address complex urban challenges such as mobility, energy efficiency, and environmental sustainability. By engaging in PCP, cities can access cutting-edge technologies and services to enhance urban livability and efficiency.

Impact on Smart City projects
PCP can have a significant impact on Smart City projects by:

- Driving innovation and technology adoption.
- Addressing complex urban challenges with tailored solutions.
- Stimulating economic growth and competitiveness.
- Enhancing the quality of urban services and infrastructure.

Advantages and disadvantages

Advantages	Disadvantages
- Stimulates innovation and R&D	- Lengthy procurement process
- Tailored solutions to specific needs	- High administrative burden
- Encourages collaboration between public and private sectors	- Uncertainty regarding outcomes
- Fosters economic growth and competitiveness	- Potential for supplier lock-in

European regulatory framework
PCP is not in the Directives itself but is mentioned in a Communication of 14 December 2007 (COM(2007) 799 final). The European Commission supports PCP as a means to drive innovation and improve public services. The Commission provides guidance and funding to facilitate the implementation of PCP across EU member states, promoting collaboration and knowledge exchange in innovative procurement practices.

More information:
- European Commission - Pre-Commercial Procurement
- Lirias - Public procurement of smart city services
- ResearchGate - Policy recommendations for advancing pre-commercial procurement in Europe

2.3. Competitive Dialogue procurement

Definition:
Competitive Dialogue Procurement is a method used in public procurement that allows contracting authorities to engage in a dialogue with potential bidders to develop innovative solutions to complex projects. It is particularly suitable for projects where the specifications are difficult to define or where innovative solutions are sought. This process enables the exchange of information and ideas between the contracting authority and bidders to ensure that the final solution meets the desired requirement.

Process:
1. **Publish minimum requirements, award criteria and their weightings:** Public authorities define their needs and objectives.
2. **Invite selected candidates to participate:** Potential bidders are invited to participate, engaging in a structured dialogue.
3. **Negotiations/dialogue:** Through a series of dialogues, bidders propose solutions and discuss them with the public authority.
4. **Conclusion of dialogue:** You must inform all bidders when the dialogue is being concluded.
5. **Deadline for receipt of final tenders:** Bidders submit their final proposals.
6. **Evaluation and contract award:** Proposals are evaluated, and the contract is awarded to the most advantageous solution.

Relevance to Smart Cities:
Competitive Dialogue is highly relevant in Smart City projects due to their multifaceted nature. Smart Cities integrate technology into various aspects, requiring collaboration and innovative solutions. Public administrations benefit by fostering creativity, ensuring stakeholder engagement, and achieving optimal results.

Impact on Smart City projects:
Services: Enhances the procurement of smart services by allowing for tailored solutions and continuous dialogue.
Infrastructure: Facilitates the acquisition of smart infrastructure, accommodating evolving technological advancements.

Advantages and disadvantages:

Advantages	Disadvantages
- Promotes innovation	- Time-consuming process
- Ensures stakeholder involvement	- Increased complexity
- Tailored solutions	- Potential for bid manipulation
- Flexibility in negotiations	- Higher administrative burden

European regulatory framework:
Competitive Dialogue in Smart City projects aligns with European Union directives, such as Directive 2014/24/EU on public procurement. This framework emphasizes the principles of competition, non-discrimination, and transparency, guiding the application of Competitive Dialogue in a legal and standardized manner.

More information

- Procurement Journey – Competitive Dialogue
- Explanatory Note – Competitive Dialogue
- Public procurement of smart city services - Lirias

2.4. Innovation Partnership

Definition
Innovation Partnerships Procurement (IPP) is a procurement approach that facilitates collaboration between public authorities and private sector entities to develop innovative solutions for specific societal challenges. It allows for joint R&D efforts to address complex problems where market solutions are not readily available.

Process

1. The **selection phase** occurs at the very beginning of the procedure. After a call for competition, one or more of the most suitable partners are selected on the basis of their skills and abilities. The contract(s) establishing the innovation partnership is (are) subsequently awarded based on the best price-quality ratio proposed. This phase is similar to a restricted procedure with a prior call for competition

2. In the next phase, the partner(s) develop(s) the new solution in collaboration with the public buyer. This **research and development phase** can be further divided into several stages designated for evaluating concepts, developing prototypes and/or testing performance. During each stage, the number of partners may be reduced on the basis of predetermined criteria.

3. In the **commercial phase**, the partner(s) provides the final results, but only if they correspond to the performance levels and maximum costs agreed between the public buyer and the partner(s).

Although the procedure is called a 'partnership' and the participants are referred to as 'partners', it is still a public procurement procedure, subject to relevant EU and WTO rules, notably the basic procurement principles of competition, transparency and nondiscrimination.

The innovation partnership was specifically designed to allow public buyers to establish a partnership to develop and subsequently purchase a new, innovative solution. Therefore, it is important that the

innovation partnership is structured in such a way that it can provide the necessary "market-pull"', i.e. it incentivises development of an innovative solution without foreclosing the market.

Relevant to Smart Cities
IPP is highly relevant to Smart Cities as it enables the development of innovative solutions to address urban challenges such as mobility, sustainability, and digitalization. By fostering collaboration between public authorities, industry partners, and research institutions, IPP facilitates the creation of smart infrastructure, services, and technologies tailored to the needs of urban environments.

Impact on Smart City projects
Innovationprtnership can significantly impact Smart City projects by:

- Driving innovation and technological advancement.
- Addressing complex urban challenges with tailored solutions.
- Stimulating economic growth and competitiveness.
- Enhancing the quality of urban services and infrastructure.

Advantages and disadvantages

Advantages	Disadvantages
- Stimulates collaboration and knowledge exchange between public and private sectors	- Requires significant coordination and management efforts
- Accelerates the development and deployment of innovative solutions	- May face challenges related to intellectual property rights and data ownership
- Allows for the sharing of risks and resources	- Can be resource-intensive and time-consuming
- Fosters long-term partnerships and ecosystem development	- Dependency on private sector capabilities and willingness to collaborate

European regulatory framework

Innovation partnership is a relatively new type of public procurement procedure provided for in Directive 2014/24/EU64 (Article 31). It is supported by the European Commission to promote innovation and competitiveness in the European Union. The Commission provides guidance and funding opportunities to facilitate IPP implementation across EU member states, ensuring compliance with relevant procurement regulations and frameworks.

More information

- Guidance on Innovation Procurement
- Procurement Journey – Innovation Partnership

2.5 Circular procurement

Definition
Circular procurement is a purchasing approach that aligns with the principles of the circular economy. It aims to minimize resource depletion, waste, and environmental impact by focusing on the lifecycle of products and materials. This procurement strategy emphasizes the reuse, recycling, and refurbishment of goods, as well as the use of renewable resources and sustainable materials.

Process

1. **Identification of needs**: Procurement officers identify goods or services required by the organization.
2. **Specification development**: Detailed specifications are developed, considering environmental and circularity criteria.
3. **Supplier selection**: Suppliers who offer circular products or services are selected through a competitive process.
4. **Contracting**: Contracts are awarded to selected suppliers, incorporating circularity requirements and performance indicators.
5. **Monitoring and evaluation**: The implementation of circular procurement practices is monitored, and their effectiveness is evaluated for continuous improvement.

Relevance to Smart Cities

Circular procurement is highly relevant to Smart Cities as it supports sustainability goals and fosters innovation. By prioritizing circular products and services, Smart Cities can reduce waste generation, promote resource efficiency, and create more resilient and sustainable urban environments. Circular procurement also aligns with the circular economy principles endorsed by many Smart Cities initiatives.

Impact on Smart City projects

Circular procurement can have several positive impacts on Smart City projects, including:

- **Environmental benefits**: Reduced resource consumption, waste generation, and carbon emissions.
- **Economic benefits**: Cost savings through efficient resource use and the development of circular markets.
- **Social benefits**: Improved public health, quality of life, and resilience to environmental challenges.

Advantages and disadvantages:

Advantages	Disadvantages
- Environmental sustainability and resource efficiency	- Higher upfront costs for circular products and services
- Innovation stimulation and market development for circular products	- Limited availability of circular alternatives in some industries
- Cost savings through resource optimization and waste reduction	- Complexity in assessing and verifying circularity criteria
- Enhanced reputation and stakeholder engagement	- Potential challenges in procurement processes and supplier relationships

European regulatory framework

Circular procurement is supported by the European Union through various policies and initiatives promoting sustainability and circular economy principles. These include directives, guidelines, and funding programs aimed at encouraging circular procurement practices among public authorities and organizations across Europe.

More information

- Circular procurement: its definition, application, and ...
- Circular procurement transformation guidance

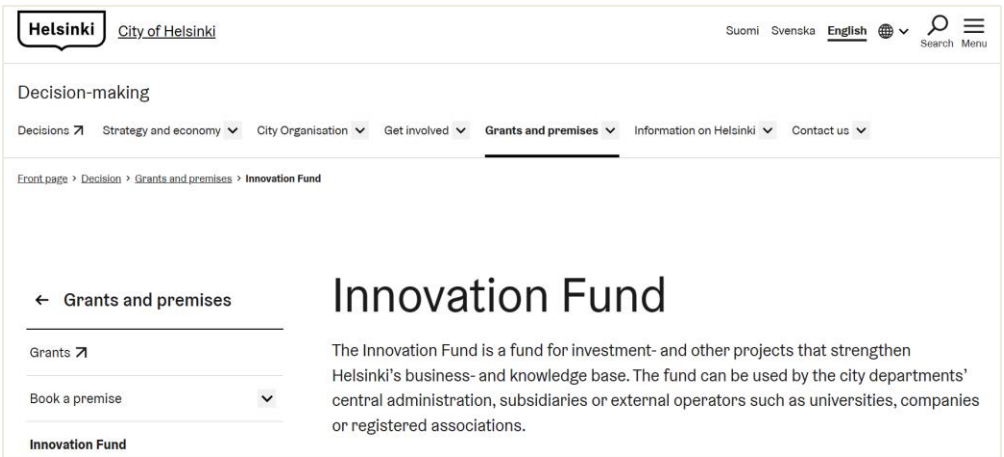
3. Innovation Fund for Smart City projects.

3.1 What is an Innovation Fund lead by cities?

An Innovative Fund for Cities is a financial mechanism designed to support innovative projects and initiatives within urban areas. These funds typically aim to promote sustainable development, economic growth, and social inclusion within cities by financing projects that introduce new technologies, processes, or approaches to address urban challenges. They often involve citizen participation and aim to empower local communities to become active contributors to urban development. These funds may be provided by governmental bodies, international organizations, or private entities, and they serve as catalysts for driving innovation and progress in urban areas.

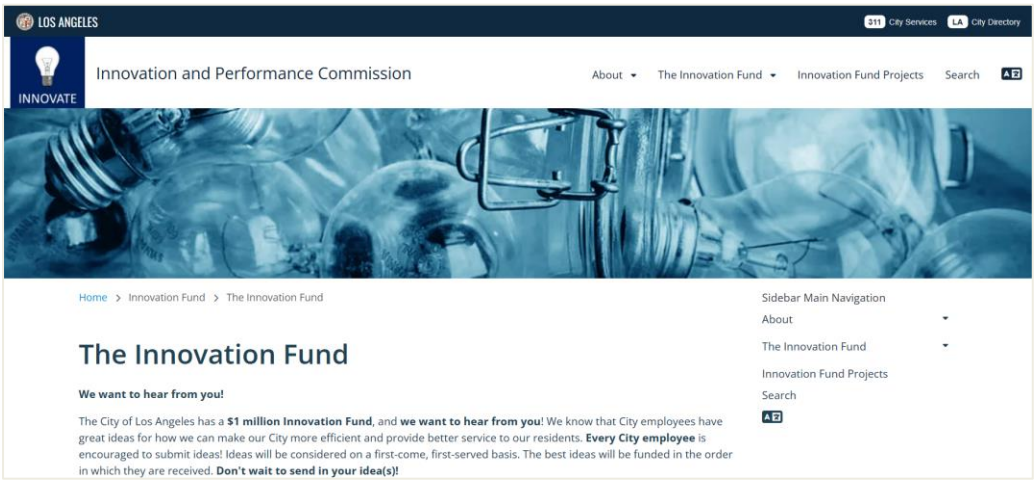
To establish an Innovation Fund, the administration can allocate a sum of money from its budget, secure funds from other public entities, and/or partner with non-profit organizations and private companies that share common goals and objectives with the public administration. Innovation Funds are envisioned as financial pools designed to be distributed in the form of grants, providing full or partial support to specific projects that align with the fund's criteria. The focus is on identifying high-impact, innovative projects and fostering and supporting businesses and start-ups that are developing new products and services within the framework of the innovation fund in question.

Some examples:

1. **City of Helsinki - Innovation Fund**:
    - The City of Helsinki's Innovation Fund is designed to strengthen the city's business and knowledge base. It serves as a financial mechanism to invest in projects that drive innovation, entrepreneurship, and economic competitiveness within Helsinki. The fund supports initiatives that contribute to the city's development and enhance its position as a hub for innovation and growth. City of Helsinki - Innovation Fund
    - 

2. **Innovate LA - The Innovation Fund**:
    - Innovate LA's Innovation Fund focuses on financing projects and initiatives within the City of Los Angeles. Its objective is to support innovative solutions that address urban challenges, improve city services, and enhance the quality of life for residents.

The fund operates under the oversight of city officials and departments, with funds distributed to support approved projects that align with the city's goals and priorities. [Innovate LA - The Innovation Fund](#)



3. **City of London - Innovation Fund for Affordable Housing**:
   - This fund, promoted by the Mayor of London, is designed to support innovative projects that increase the supply of affordable housing in the city. The goal is to foster the development of creative solutions to provide affordable housing for Londoners through collaboration between public and private entities. [Innovation Fund for Affordable Housing.](#)

Some important aspects:

Process to create:
Cities establish Innovative Funds through local government initiatives or collaborations with regional or national entities. The process typically involves:

1. Identifying funding sources, which may include municipal budgets, grants, or public-private partnerships.
2. Defining the fund's objectives, criteria for project selection, and governance structure.
3. Establishing legal frameworks and regulations to govern the fund's operation and ensure transparency and accountability.
4. Launching calls for proposals and evaluating project submissions based on predefined criteria.

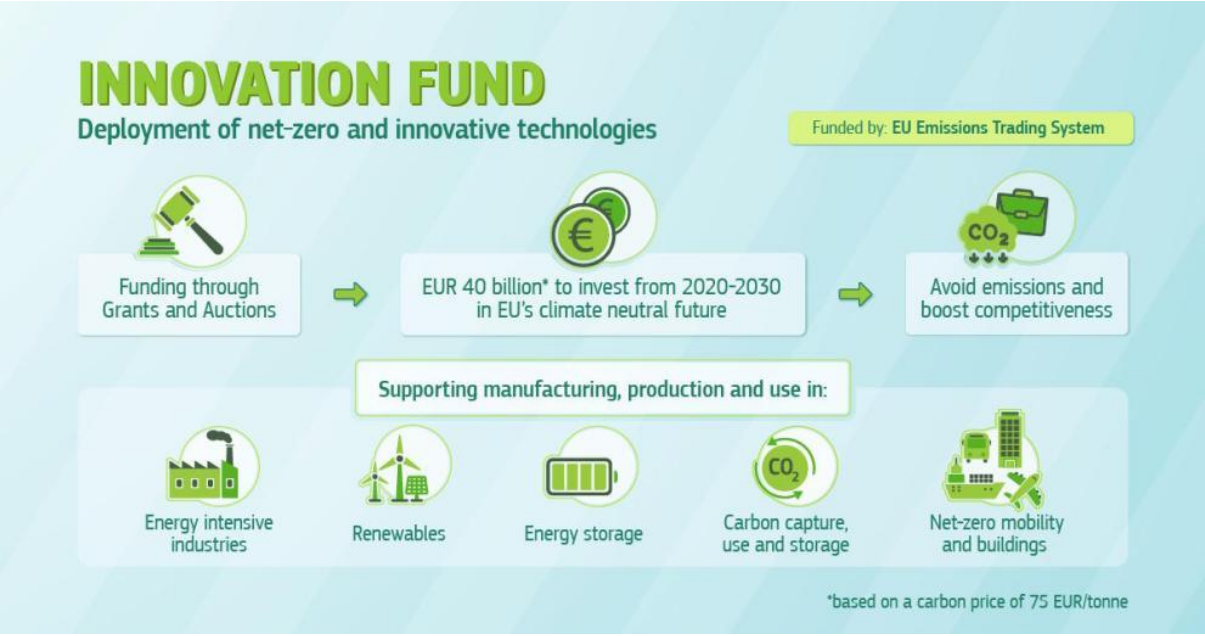
Relevance for Smart Cities:
Innovative Funds play a crucial role in advancing smart city initiatives by:

- Financing projects that leverage technology and innovation to address urban challenges, enhance infrastructure, and improve service delivery.
- Fostering collaboration between public and private stakeholders, academia, and communities to co-create innovative solutions.
- Supporting the development and deployment of smart technologies, sustainable practices, and low-carbon innovations to promote environmental sustainability and resilience.

Advantages and disadvantages:

Advantages	Disadvantages
- Stimulates economic growth and job creation through innovation-driven projects	- Dependency on limited funding sources may constrain the scale and scope of projects.
- Catalyzes urban development and fosters a culture of entrepreneurship and creativity.	- Administrative complexities and bureaucratic processes can hinder the efficient allocation of resources
- Enhances the quality of life for residents by improving infrastructure and public services.	- Ensuring equitable access to funding and addressing the needs of marginalized communities may pose challenges.
- Encourages collaboration and knowledge exchange among diverse stakeholders	- Risk of mismanagement or misuse of funds without adequate oversight and accountability mechanisms.

3.2 What is the European Innovation Fund?



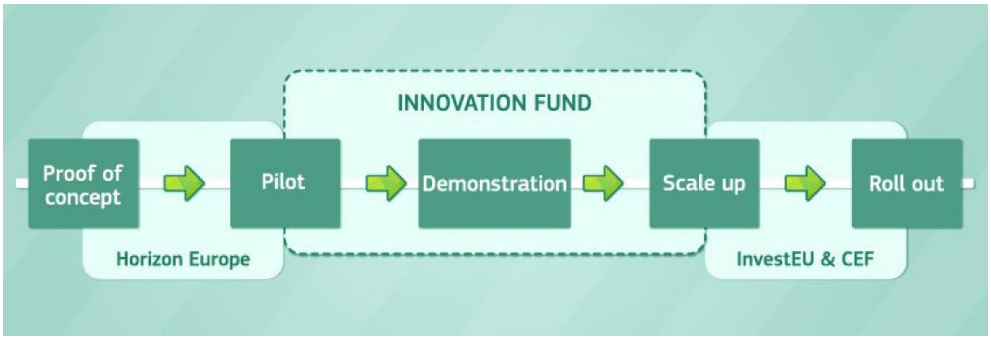
What is it:
In the EU, polluters have to pay for their greenhouse gas emissions via the Emissions Trading System (ETS). The money raised via the ETS is reinvested into the Innovation Fund: one of the world's largest funding programmes for innovative low-carbon technologies.
The European Innovation Fund is a significant funding program offered by the European Commission to support innovative projects that contribute to the transition towards a sustainable, low-carbon economy. It focuses on financing initiatives that demonstrate novel low-carbon technologies and processes, aiming to accelerate their deployment across the European Union.

How to Apply:
Project promoters can apply for funding by submitting their proposals through the EU Funding and Tenders portal during open calls for projects. The application process typically involves preparing and submitting a detailed proposal that outlines the project's objectives, methodologies, expected impacts, and budget requirements.

Who Can Benefit:
The European Innovation Fund is accessible to a wide range of entities, including businesses, research institutions, universities, non-profit organizations, and public authorities. These entities can apply individually or in partnership with others to implement innovative projects that align with the fund's objectives.

Eligibility Criteria:
Specific eligibility criteria are outlined for each funding program and individual call for proposals. Projects must typically demonstrate their innovative nature, relevance to the fund's priorities, feasibility, scalability, and potential for environmental and societal impact to qualify for funding.

For what can be used:
The European Innovation Fund can be used to finance a wide range of activities related to the development, demonstration, and deployment of innovative low-carbon technologies and processes. This may include research and development, pilot projects, technology demonstration, scaling up of innovative solutions, and capacity building initiatives.



European legal framework:
- The European Union's legal framework, established by Article 10a(8) of Directive 2003/87/EC, supports innovation in low-carbon technologies and processes across all Member States. This directive provides guidelines for funding and promoting innovation initiatives aimed at reducing carbon emissions and advancing sustainability goals.

More information:
- EU funding for climate action - Innovation Fund
- European Commission - What is the Innovation Fund?

- EU Funding Playbook - Innovation Fund
- Eura AG - EU Innovation Fund: Overview of the Funding Programme

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Examples of Cities Applying to the European Innovation Fund

City of Amsterdam, Netherlands:

- Amsterdam received funding from the European Innovation Fund to implement a project focused on developing a robotic wind turbine blade repair system. This innovative system aimed to enhance the efficiency and effectiveness of wind turbine maintenance, contributing to the advancement of renewable energy technologies.

City of Barcelona, Spain:

- Barcelona utilized funding from the European Innovation Fund to establish RockStore, an accessible and cost-effective energy storage solution. This project aimed to address the challenges associated with energy storage by providing innovative storage solutions that support the integration of renewable energy sources into the grid.

City of Copenhagen, Denmark:

- Copenhagen leveraged support from the European Innovation Fund to implement a project focused on developing sustainable and energy-efficient urban mobility solutions. This initiative aimed to reduce carbon emissions and enhance the resilience of the city's transportation infrastructure through the deployment of innovative technologies and practices.

City of Milan, Italy:

- Milan received funding from the European Innovation Fund to launch a project aimed at developing innovative solutions for reducing food waste in urban areas. This initiative involved the implementation of circular economy strategies, such as community composting centers and sustainable food consumption campaigns, to promote a more sustainable and resilient food system.

City of Vienna, Austria:

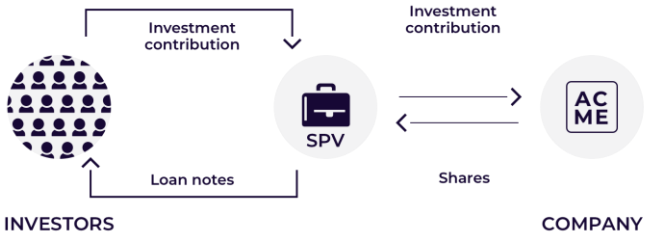
- Vienna utilized funding from the European Innovation Fund to implement a project focused on enhancing the energy efficiency of buildings in the city. This initiative involved the development and deployment of innovative technologies and practices to retrofit existing buildings and promote sustainable construction standards.

More information:

- EU Climate Action - European Union - Innovation Fund projects

4. Special Purpose Vehicle (SPV) for Smart City projects.

4.1 Understanding an SPV in the private-financial world



What is an SPV?

- An SPV, or Special Purpose Vehicle, is a legal entity created by a parent company for a specific, often temporary, purpose. It operates as a separate company with its own assets, liabilities, and legal status. SPVs are commonly used in finance for securitization, where they hold and manage a pool of assets such as mortgages or loans, reducing the parent company's risk exposure.

Purpose of an SPV:

- The primary purpose of an SPV is to isolate financial risk. By segregating certain assets or operations within the SPV, the parent company can protect its core business from potential losses or liabilities associated with those specific activities. SPVs are often used in complex financial transactions to achieve specific objectives, such as raising capital, managing debt, or executing investment strategies.

More information:

- Investopedia - What Is a Special Purpose Vehicle (SPV)
- Corporate Finance Institute - Special Purpose Vehicle (SPV)

3.1. Understanding an SPV from a public administration perspective for Smart City projects.

Special Purpose Vehicles (SPVs) from a public administration perspective serve as strategic instruments for facilitating various initiatives and projects. An SPV related to a city is a separate legal entity established to manage and implement the initiatives, in this case under the Smart City mission.

Purpose: The SPV serves as the primary vehicle through which the Smart City projects are executed. It provides a dedicated organizational structure with the necessary autonomy and resources to effectively plan, fund, and implement the initiatives.
Structure: Typically, the SPV is set up as a separate entity at the city level. It operates independently and is headed by a full-time CEO who oversees the implementation of Smart City projects.
Functions: The SPV is responsible for various aspects of project management, including planning, appraising, approving, releasing funds, managing operations, and monitoring progress. It acts as a central authority to coordinate efforts between the central government, state government, and local stakeholders.
Key Role: The SPV acts as a master developer, engaging with other stakeholders such as developers, investors, and government agencies to execute redevelopment projects and infrastructure initiatives within the city.

General types of Special Purpose Vehicles (SPVs) for public administration

Infrastructure SPVs:
Infrastructure SPVs are established by public administrations to facilitate the financing and management of large-scale infrastructure projects within their jurisdiction. These projects can include the construction and maintenance of essential public infrastructure such as roads, bridges, airports, and public transportation systems. By creating dedicated SPVs for infrastructure projects, governments can streamline project management, attract private investment, and ensure efficient delivery of services to citizens.

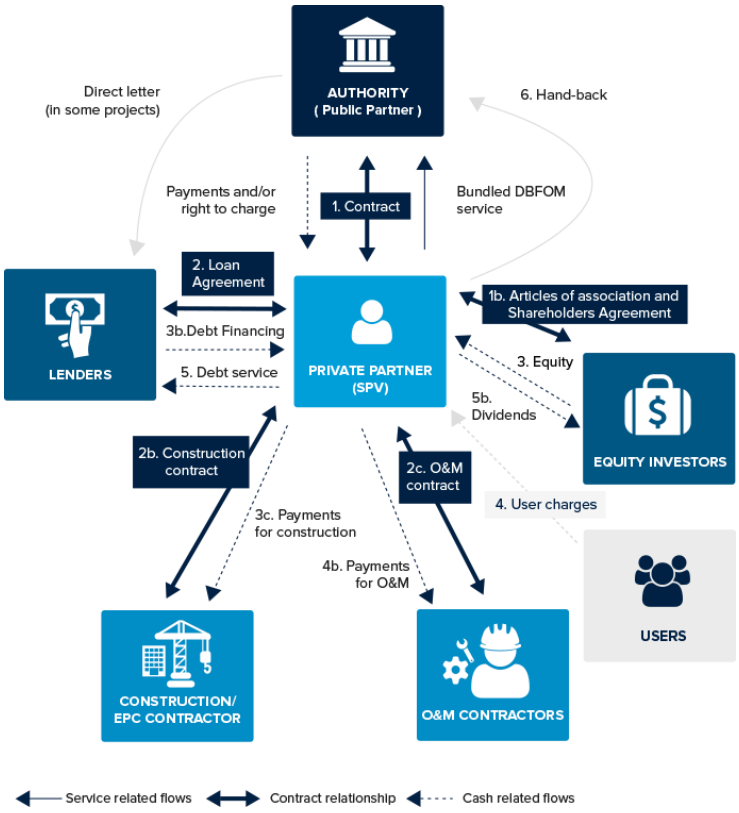
Urban Development SPVs:
Urban Development SPVs are specialized entities tasked with driving the revitalization and enhancement of urban areas. They focus on initiatives aimed at improving the quality of life for residents, enhancing public spaces, and upgrading urban infrastructure. Public administrations often play a central role in governing these SPVs, ensuring that development efforts align with the city's strategic goals and priorities. Through collaboration with various stakeholders, including local communities and private investors, Urban Development SPVs implement projects that contribute to sustainable urban growth and development.

Public-Private Partnership (PPP) SPVs:
PPP SPVs are formed through collaborations between public administrations and private companies to undertake infrastructure projects or provide public services. These partnerships leverage the expertise and resources of both sectors to deliver projects efficiently while sharing risks and rewards. PPP SPVs facilitate the structuring of complex financial arrangements, manage contractual relationships, and oversee project execution. By engaging in PPPs, public administrations can leverage private sector innovation and investment to address infrastructure needs while optimizing the allocation of public resources.

General structure of an SPV according to the role taken by the public administration:

Role of Public Administration	Description/Purpose/Example	Benefits of this role	Disadvantages of this role
SPV Created by Public Administration	**Description:** The public administration initiates the establishment of the SPV, aligning it with governmental objectives and regulations. This approach ensures direct control and oversight, enhancing regulatory compliance and alignment with public policies. **Purpose:** Sometimes the administration may require private or public financing and may access it through an SPV. **Example:** In the UK, public administrations can access funding through the Heat networks investment projects through the creation of an SPV.	- Direct control and alignment with government objectives. - Full control and oversight, enhancing regulatory compliance .	- Limited private sector expertise may lead to slower decision-making. - Higher costs due to potential lack of private sector efficiency .
Public Administration Joins SPV with Private Stakeholders (PPP)	**Description:** Public administration collaborates with private stakeholders to form the SPV, combining public sector oversight with private sector resources and expertise. This partnership provides access to private sector resources and knowledge, ensuring alignment with public policies and objectives. **Purpose:** To leverage the strengths of both sectors for efficient project delivery, share risks and costs, accelearate project implementation, ensure accountability and transparency and maximize value for money. **Example:** Barcelona City Council in Spain utilized a SPV as a PPP framework to refurbish, finance, operate, and manage various urban infrastructure projects. The city of Barcelona acquired a 30% stake of the SPV.	- Access to private sector resources enhances project efficiency. - Alignment with public policies and objectives.	- Potential conflicts of interest may arise, requiring careful management and negotiation.
The Public Administration assigns a contract to a private company through a procurement process, which then sets up a SPV to develop the project (PPP)	**Description:** The Public Administration initiates a procurement process to select a private company to develop a project. The selected company then sets up a Special Purpose Vehicle (SPV) to manage and finance the project. The Public Administration and the SPV establish a legal relationship, and the SPV carries out the project development. **Purpose:** Developing the project through an SPV set up by the private sector provides public administrations with access to additional financing, risk-sharing mechanisms, expertise, innovation, and off-balance sheet financing opportunities for city projects. **Example:** PPP project structure	- Access to specialized services enhances project quality and efficiency. - Offers flexibility in project implementation and management.	- Limited long-term control over SPV operations may lead to challenges in ensuring adherence to government policies and objectives. - Dependence on external contractors may result in higher costs or delays if not managed effectively .

The example diagram below illustrates the third PPP structure explained in the table, which involves the creation of a Special Purpose Vehicle (SPV) to manage the project. This diagram can help clarify the structure of the public-private partnership, including the role of the public administration and the SPV as a managing entity.



SPV advantages and disadvantages for public administration:

Advantages	Disadvantages
Risk Isolation: Helps isolate financial risk, protecting the public administration's assets.	Complexity: Setting up and managing an SPV can be complex and require specialized knowledge and resources.
Risk Management: Enables effective risk management by segregating risky projects from the public administration's core activities.	Cost: While SPVs can be cost-efficient to create, ongoing management and compliance costs may arise.
Freedom to Explore Opportunities: Provides flexibility for public administrations to explore new commercial opportunities that might be too risky under their regular operations.	Legal and Regulatory Compliance: Compliance with legal and regulatory requirements can be demanding and require continuous monitoring.
Limited Exposure to Bankruptcy: Helps limit the exposure of the public administration to bankruptcy risks associated with specific projects.	Accountability and Transparency: Maintaining transparency and ensuring accountability in SPV operations can be challenging.

4.3 SPV legal framework in the European Union

To develop a Special Purpose Vehicle (SPV) in the European Union (EU), several legal frameworks and regulations apply:

1. **EU Commission Implementing Regulation (EU) 2015/462**: This regulation outlines requirements for the legal and governance structures of SPVs, ensuring compliance within the EU. EU Commission Implementing Regulation (EU) 2015/462
2. **EU Regulation (EU) 2018/858**: While primarily focused on the approval of motor vehicles and related components, this regulation provides a comprehensive framework for certain aspects of vehicle development and operation, which may indirectly impact SPVs involved in the automotive sector. EU Regulation (EU) 2018/858
3. **Legal Research**: Scholars and legal experts conduct research to create effective SPV models tailored to specific purposes, such as public-private partnership (PPP) infrastructure projects. These studies contribute to the development of legal frameworks supporting SPV establishment and operation. Legal Research on SPV Structure
4. **Industry Standards and Guidelines**: Organizations like the European Securities and Markets Authorities (ESMA) may publish clarifications and guidelines regarding the use of SPVs within specific sectors or regulatory frameworks, offering additional insights into legal requirements. ESMA publishes clarifications on use of SPV within ECSPR