

SMART URBAN INVESTMENTS: HOW TO REACH OUT TO THE SECOND TIER?

TEAM PROFILE

Preferably, the team should include at least two students with an urban-development background. Important skills that the team should possess or rapidly develop include: policy/strategy development, survey design, and using common IT tools (in particular: spreadsheet, bulk e-mailing software)

PARTNER

European Investment Bank
100 bd Konrad Adenauer L-2950 Luxembourg

MENTOR

Louis-Philippe Carrier, Advisory Services – JASPERS, Independent Quality Review

BRIEF DESCRIPTION OF THE INSTITUTION AND CONTEXT OF THE PROJECT

The EIB is the European Union's bank. We are the only bank owned by and representing the interests of the European Union Member States. We work closely with other EU institutions to implement EU policy.

As the largest multilateral borrower and lender by volume, we provide finance and expertise for sound and sustainable investment projects which contribute to furthering EU policy objectives. More than 90% of our activity is focused on Europe but we also support the EU's external and development policies.

This is the third in a series of capstone projects on the topic of smart cities. The 2017/2018 and 2018/2019 project teams collected data on the "business models" of smart city assets, showing the importance of public funding and of strong partnerships. The reports also suggested that cities often required significant resources to overcome the key challenges of deploying "smart" assets. This mitigates the assumption that efficient urban development policies can spontaneously emerge wherever loan financing is available and a political will exists. On the contrary, success stories appear to involve a variety of local factors, such as the strength of the relations with the private sector or the municipality's administrative and technical capacity. These findings raise further questions on the possibility to disseminate "smart" urban policies to cities that do not a priori enjoy the most favourable conditions. The project should inform the EIB about services and products that could efficiently complement its offerings in the area of urban development.

The students will collect and analyse information (including primary data) about the main obstacles to a generalised deployment of smart urban policies and investments. The exact scope of the study will be established in the initial phase. The team will pay particular attention to the needs of intermediate cities, as opposed to the most innovative and prominent cities, which are already well documented. The deliverables will include a report summarising the team's findings, as well as the information collected during the project.

To conduct this project, the team will need a good grasp of urban policy concepts, and some understanding of the EIB's work with cities. However, the aim is not to produce a theory of Smart Cities but to help the EIB contribute effectively to EU objectives in relation to urban development. The report shall therefore put forward implementable recommendations.

EDUCATIONAL CONTENT

- **Definition and structuration of policy questions:** The project places a strong emphasis on clarifying difficult policy questions. The students will design a research protocol on a practical issue, of a kind they are likely to encounter in their professional life.
- **Design and administration of surveys:** Collecting useful data is a crucial challenge in this policy area. In the process, the students will therefore gain useful experience in data collection, with a tangible purpose to work towards. Both the design and the administration of the survey should help them develop relevant professional skills.
- **Data cleaning and formatting:** As the quality of the survey responses is expected to be somewhat variable, what will and will not be usable is difficult to foresee. The students will have to use their judgment and analytical skills to decide what information to retain and how to process it to maximise its value.
- **Qualitative policy analysis:** The students will define the format and content that they deem appropriate, which may include interviews and other forms of qualitative information. Questions around legal or technical issues may mobilise the specific skills of individual students within the team.
- **Quantitative policy analysis:** If quantitative data are collected, statistical analysis may provide useful insights into urban development trends and benchmarking information.
- **Infrastructure economics:** Understanding the business models for different categories of urban infrastructure assets implies a reflection on their economic characteristics. Industrial economics is an important tool, likely to offer useful explanations via such concepts as: network effects, replicability, procurement and barriers to entry, two-sided markets (e.g. for data), static vs dynamic efficiency, etc.
- **Business strategy:** This capstone project needs to take into account the economic characteristics of urban-development assets, and the factors playing in favour or against their large-scale deployment. In that sense, it should help the students develop a good understanding of business strategies and of their components.
- **Team work, project work:** Given the variety of the tasks to be accomplished, the capacity to plan the work and to execute the tasks in parallel will be essential. In addition, the team will start from a broad question and split it into its components, which will be studied in detail. The survey component requires responsiveness to address potential difficulties.
- **Evidence-based policy recommendation and reporting:** A clearly presented, well written report is expected. The report should cover all the relevant issues and provide useful recommendations. The capstone project is therefore an excellent opportunity for the students to reinforce their drafting skills.

RESULTS AND DELIVERABLES

Intermediate deliverables to achieve that aim will include:

- a review of the recent literature on urban development and smart cities;
- a review or survey of "smart" urban infrastructure assets already deployed and foreseen to be deployed across a sufficiently large number of cities around the world;

The final deliverables will include the primary information collected by the team and a report covering:

- a synthesis of the findings, from the survey and from its analysis;

- a strategic analysis of the obstacles to the widespread deployment of smart urban policies and assets; and
- a critical analysis involving, where possible, recommendations for the EIB and its partners.

SCHEDULE

The project will cover the entire academic year, ending in May 2020 with a presentation at the EIB in Luxembourg.

METHODOLOGY

The first step is for the students to familiarise themselves with the topic and with the findings of previous project teams. The focus is not on defining what makes a city “smart”, but on studying how cities decide to deploy the assets (material or immaterial) that typically characterise “Smart City” strategies. The team will review the relevant literature (consultancy reports, academic studies, websites, etc.) and update an existing list of cities around the world that are implementing a Smart City strategy and deploying relevant assets.

The second step is to produce a detailed project plan identifying the key questions to investigate. To do so, the students will apply policy / project management methods in cooperation with the mentor.

The third step is to design, test, and administer a survey, to collect the views of municipal decision-makers and any relevant information.

The final part of the work will be to organise the information and to analyse it. If relevant and feasible, some degree of quantitative analysis should be provided. In any case, the final report should offer clear visualisations of the key findings, using stylised facts, statistical indicators and/or graphs as appropriate. A qualitative and a normative section will conclude the report.

LOGISTICS

Contacts with EIB or JASPERS stakeholders will be facilitated where appropriate. Much of the factual information about urban strategies, however, needs to be collected by the students themselves.

The EIB will provide guidance on key concepts, as well as relevant documents (including publicly available information from EIB Group) and other potential sources of information (e.g. interviews with EIB colleagues).

The students will have access to the Team Projects’ room, equipped with a computer, a printer and a phone.