

Old concepts, new paradigms: the business model challenge in the smart city era



How to monetise environmental benefits? What's the value of reducing traffic and emissions? Economic savings and traditional methods are not enough: to calculate the profitability of smart and sustainable cities, we need to rethink the concept of business model.

Forty trillion euros. It's the sum needed to **decarbonize the EU economy by 2050**, according to a [report by the Institut Rousseau](#) that the French think tank presented in February at the European Greens Congress. Investments that involve both private and public actors.

Cities are on the front line in the fight for zero carbon, not only because [almost 75 per cent of the EU population lives in urban areas](#) but also because "Especially in the South of Europe, metropolitan areas are going to become impossible to live in" due to the extreme temperatures they are going to be subjected to", as Nicolas Esquibado, an expert in the evaluation of public policies who has worked on the report, reminds us.



The shift to carbon neutrality requires both public and private investments, points out the report, implying that **public and private actors are going to have to collaborate** in projects involving cities, companies, citizens and funding from different sources, including the EU.

This is why **cities need “business models”**, as Philippe Fournand from [Scalable Cities](#) points out, even if a municipality is not supposed to make a profit: *“A business model is about how I set up a value chain to deliver a service or a product and behind it I have something called cost and revenue, and I have to balance cost and revenue as best as possible, and I have **organisational choices**. So ‘business model’ is probably not the right term for a city, but it works.”*

The problem is that **there is no blueprint for a business model for smart and sustainable cities** because every city has its peculiarities, and the actors involved are different every time. But there are examples.

One of these is the [STARDUST project](#). *“The main objective of STARDUST is to provide a holistic and integrated urban model for smart cities. Our goal is to create green technical solutions and innovative business models to tackle the urban challenges identified by the participating cities. **We aim to transform cities into smart, highly efficient, intelligent, and citizen-oriented urban centres**,”* explains Valentina Covelli from [Officinae Verdi](#), the financial advisor for the project.

Quite an ambitious goal, given the challenges they knew they were going to meet and others they probably didn’t anticipate.

The first hindrance, in a project like this, may come from **red tape or shortsightedness on the part of the public actors**: *“Many public authorities, when faced with projects related to energy saving, or in a broader sense to smart cities, somehow prefer to **take the shortest route** and carry out interventions through **classic business systems** that may be, for example, a concession or a pure works contract, rather than to embark on more complex systems that also involve private entities,”* denounces Covelli’s colleague, Carmine Brescia. He also points out that private actors, especially **investors, need a certain stability in rules and regulations** for an investment to be attractive: *“Many regulations are updated periodically, so that an intervention that today may be convenient may become less so in a year if for any reason the incentive system or anything else changes,”* he explains. And this applies to all levels: local, national, as well as European rules and regulations. *“Public bodies and the processes of public bodies must become smart first in order for a smart city to be realised effectively,”* is Covelli’s conclusion.

But it’s also true that **a business model for a city is not the same as for a company**. To make a city smart, suggests Philippe Fournand, we need to be able to **“create new indicators.”** For instance, **“If we reduce car traffic by 15% we should be able to monetize this in lost time, in wasted hours”**.

The same is true for the greenhouse gas emissions avoided, says Covelli, who gives as examples two projects they worked on where this has been done, [+CityxChange](#) and [Xpress](#). For the latter, she explains: *“We know that most public administrations use economic savings as a criterion for awarding a tender, so we have also included the impact of CO2 reduction in this evaluation system, that is, **we have tried to monetise CO2** so that the evaluation also takes into consideration technological innovation and environmental impact.”*

For a model to really work, it has to be replicable in other cities. *“Therefore, you have to **make a business out of it and upscale it**. But this is not the role of the city. The role of the city and also of*



many successful projects is to act as a hub, a go-between, due the diverse stakeholders involved when setting up a local innovation system with the right framework and tools. And this includes the financial schemes as well as service/operational models”, explains Scalable Cities expert in business models Damian Wagner

In this role, **a city has to invest money, time and resources** because, as Nicolas Desquinabo puts it, “Cities, for example, that have enormous pollution **transfer their costs to the public health system. A city that does not invest** ends up transferring its costs to others, it **outsources its costs** in particular to the State, whether it concerns public health costs or price shields on energy.”

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