

The Reference Model

**Context & Process of
Smart Cities Model**

- Excerpt -



THE CONTEXT

The goal of a Smart City is to seamlessly and efficiently mobilise a broad set of existing and new city resources - including people, finances and various organisations and systems that serve the urban area - to help achieve goals the city has set itself.

Many different matters must be considered when developing a Smart City vision, goals and strategy. Developments should be based on a well-thought out, integrated and expandable vision. A golden thread should run through the various phases, from planning and development to financing, rollout and evaluations that effectively support smart city aspirations. This should lead all the way from the requirements of a development or a neighbourhood plan up to the highest strategic level.

Smart City Success requires a city-specific vision, and long-term implementation strategy. Smart City goals and the route to achieving them must be determined, based on a thorough understanding of current challenges and possibilities brought by available technologies. Further key success factors include assessment and prioritization of actions based in strategies and initiatives.

The aim of the Smart Cities Association Reference Model is to help city leaders and other stakeholders understand the smart cities process to transform and build successful cities by creating new jobs, enhance citizen's quality of life and ensure sustainable development of their cities and economy.

To structure the above and arrive at a city-specific action plans, the SCA has developed a Smart Cities reference model, including specific recommendations and actions for each part of the process.

This model consists of five main steps:



THE PROCESS

1. Cities Reference model

This offers high-level guidance and the basis of course for the rest of the project and is based on existing frameworks and best practices. In this phase, the reference model is used as the basis for a consistent assessment involving relevant stakeholders and target audiences.

2. Roadmap development

A multi-year roadmap tailored to the city is required to ensure that the business case is fully articulated and that all key stakeholders are on board. This requires the asking of a set of specific questions. City leadership and stakeholders need to develop Smart City roadmaps together, looking at, for example, urban mobility, economic growth, air quality, security and affordable energy supply. In addition to a roadmap, governance structures are required.

3. Planning and Development

The first step is developing a local framework for the city roadmap that conforms to regional planning documents and national planning policy. Integrated frameworks across multiple levels of governance are required, along with stakeholder and developer engagement and ongoing monitoring of innovations in smart city technologies and practices. Critical success factors include the (ubiquitous) availability of high-speed, low-latency connectivity, sensor networks, services, security and privacy measures and performance measurement. Knowledge if and adherence to relevant standards is also essential.

4. Investments and Return on Investment

The cost of rolling out, maintaining and developing smart city infrastructure is significant. Financing this fully through taxation is not a sustainable model. Breaking down Smart City development into a large number of smaller projects and looking for smart ways of involving different stakeholders to finance these. Public-Private partnerships may also play an important role. Deploying a resilient, high-speed network can help can create revenue sources from underlying existing asset, working with a centralised operating platform.

5. Realization and Evaluation

Take-up of the first available smart city services and applications brings the opportunity to learn from smart data and user feedback, providing a basis for improvements to the business and technology architectures. After identifying priorities and targets, it is vital to determine the appropriate metrics. This supports a balanced scorecard method for systematically tracking progress and the extent to which the city goals are being reached.

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