



CIDADES.PT
FROM SMART CITIES TO A DIGITAL NATION



Funded by
the European Union
via the Technical Support Instrument

National Smart Cities Strategy

FACTSHEET

June 2022



Context

This factsheet presents the main conclusions and lessons learnt from the **project to define the National Smart Cities Strategy (NSCS)**, which aims to be a **strategic reference**, in order to accelerate the transformation of Portuguese municipalities, with the objective of creating an **integrated planning** that allows scaling projects and defining practices and principles common to the various SC initiatives in Portugal

The project was funded by the European Union via the Technical Support Instrument, in cooperation with the Directorate-General for Structural Reform Support of the **European Commission**, whose implementation, after a public tender, was carried out by PwC's **strategic consulting** team, in partnership with Associação Porto Digital, Centro de Engenharia e Desenvolvimento de Produto (CEiiA) and Laboratório para Robótica e Sistemas de Engenharia (LARSyS), with **Estrutura de Missão Portugal Digital** as the beneficiary entity.

The project approach included 11 components:

- 01** Inception report
- 02** Stakeholders Communication Strategy
- 03** Report on analysis of current situation
- 04** Report on European good practices
- 05** Report dedicated to input of stakeholders
- 06** Smart cities reference architecture and technical specifications
- 07** Draft the National Smart Cities Strategy
- 08** Communication Plan and the Smart Cities brand
- 09** Stakeholder consultation report
- 10** National Smart Cities Strategy
- 11** Final Report

The approach is based on PwC's **Smart Cities Framework**, an holistic foundation that integrates different blocks of the Smart Cities ecosystem:

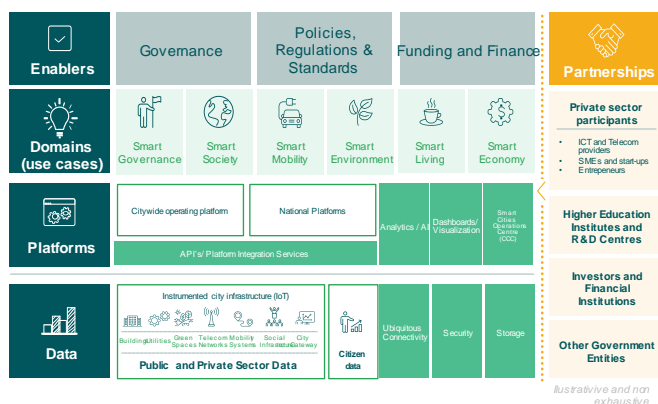


Diagram 1 – Framework Smart Cities

Project highlights

- 5** Guiding principles
- 6** Strategic Objectives
- 23** National strategic initiatives
- 26** Targets and their respective indicators
- 30** Local recommendations
- 40** National distinctive factors
- 45** Flagship projects
- 6** Critical success factors

8 Interactive moments with >250 entities



Communication with stakeholders

The stakeholders communication strategy, within the scope of component #2, consisted of a 3-phase approach:

- **Stakeholder mapping and prioritization:** >400 stakeholders, subdivided into 18 national and international groups, later allocated into 9 categories organized in an interest-influence matrix
- **Analysis of the impact of change:** made it possible to understand the motivations and resistance to change
- **Change management and communication plans:** allowed us to identify the moments of interaction applicable to each category

1 - 2 General Directorates, 2 CCDRs, 3 National Agencies/Public Institutes, 3 Regulatory Entities, 10 Intermunicipal Entities 1 Association of public members, 13 Associations, platforms or clusters, 4 HEIs, 3 R&D Centres and 2 National funding entities

Current situation and European best practices

Components #3 and #4 of the project started from the analysis of the context regarding the **role of cities in the double transition**, having subsequently proceeded to a detailed analysis of each of the **blocks of the framework**, culminating in a **SWOT analysis** with the identification of:

- Strengths and Weaknesses, based on the **national context of Portugal** in each block of analysis
- Opportunities and Threats, based on **the European and international context** of several case studies of smart countries or cities considered relevant in the respective block of analysis

In September 2021, a **questionnaire to national municipalities** was carried out that allowed us to understand the current challenges of municipalities, obtain contributions and recommendations, as well as analyze the **maturity** of municipalities when it comes to Smart Cities and identify national **use cases**, obtaining a **transversal view of Smart City activity in Portugal in the local context**. In this context, the following results stood out:

- **Municipal representativeness of 44%** (135 responses from a total of 308 Municipalities)
- **Representativeness of 63.4% of the population**
- **64 indicators** collected in the questionnaire and **39 public indicators**
- **National score, regional scores and scores by dimension analysed** (Strategic Vision, Technological Dimension and each of the SC Domains)
- **292 use cases** (from 73 municipalities) of which, after applying eligibility and analysis criteria, **45 Flagship Projects** were selected from **20 municipalities**, with the representation of 10 NUTs III, privileging different focus areas and incidence in different geographic areas of the national territory
- Segmentation of the sample into **4 clusters of municipalities**, depending on the similarities and differences between the groups

The national analysis was **complemented by the collection of European good practices**, which consisted of a **benchmark to the national strategies** of countries considered case studies (considering criteria of geographic proximity, existence of strategy and SC indices). Thus, it is possible to highlight:

- **8 countries/case studies**
- **12 main axes of the strategies**
- **5 key lessons learnt**
- **5 main risks** and respective **mitigation actions**
- **6 critical success factors**

SC Reference Architecture

Within the scope of component #6, a **Reference Architecture of an Urban Platform (UP)** was defined, which should constitute a common basis in order to **provide the key elements to guide the scope of the implementation of UPs**, guaranteeing a component of sharing and structured construction of services, allowing the creation of a national collective intelligence. In this context, **10 types of key stakeholders** were identified, based on their components, integrations and main users.

In order to ensure technological uniformity and digital maturity in the national territory, as well as alignment with legislation, best practices, standards and specific needs identified, a set of **62 conditions, 11 principles and 29 key requirements for the definition of the UP** were consolidated.

As a way of guaranteeing compliance with the principles and other key factors identified, the future vision involves the **creation of a national network of urban platforms, which interact and complement** each other, being at the heart of this network, the **conceptual model and the consequent architecture of reference** that allows the fulfillment of national requirements and objectives. The conceptual model **consists of 6 layers**, also identifying the **possibility of communication with a set of national and European building blocks**.

National Smart Cities Strategy

Within the scope of component #7, a **Draft version of the NSCS** was presented and, after the moments of interaction detailed in the stakeholder consultation report (component #9), the feedback was incorporated, which resulted in the **final version of the NSCS** (component #10).

The Strategy is based on a set of **5 guiding principles**, which constitute transversal factors, that guided the strategy design process, that should not be changeable, and guide its implementation as well.

The following **Vision for 2030** is presented:

“Smart and connected territories that provide inclusive and sustainable economic development, with interoperable services focused on citizens and companies, that position Portugal as a digital nation.”

To achieve the Vision for 2030, **6 strategic objectives** were established:

- 1 Boost sustainable territories that promote climate action with a focus on citizens' quality of life**
- 2 Increase multi-level collaboration and interoperability**
- 3 Foster a competitive economy leveraged on digital technologies**
- 4 Facilitate access to information and best practices at a “Smart City one stop shop”**
- 5 Promote leadership, talent and Smart City skills**
- 6 To be an international reference in Smart City infrastructure, data and services**

In turn, each strategic objective is supported **by a set of 26 targets for 2025 and 2030**. The fulfilment of each strategic objective and defined targets must be ensured through a set of **23 initiatives at national level**, within the scope of each of the blocks analysed of the Smart Cities framework. **Each initiative is allocated to each of the 13 initiative owners**, responsible for ensuring its execution, in close coordination with the participants in the initiative. Its implementation should follow the timetable and actions identified in the **Action Plan** document attached to the Strategy.

In addition to the 23 national initiatives, NSCS proposes a package of **30 recommendations at the local level** that works as a toolkit whose implementation will depend on the maturity and priorities of each municipality.

Governance model

The effective implementation of the National Strategy for Smart Cities requires a well-defined **governance model**, which guarantees the articulation of the territorialization of the Smart Cities policy between regions and territorial planning instruments. Additionally, to ensure success in the implementation of the strategy, **it will be necessary to mobilize financial, human, physical, infrastructure and information resources**, supported by the **functional articulation between private and public agents**.

The proposed model includes a total of **7 governance bodies** that are organized and interact according to **5 governance levels**:

- **Strategic Level of Policy Coordination**, ensured by the Policy Coordination Council
- Level of **Counseling**, ensured by the Advisory Board
- Level of **Technical Coordination and Monitoring**, ensured by the Strategy Coordinating Entity (to be defined)
- Level of **Coordination of Initiatives and Recommendations**, composed of the SC blocks analysed committees and the Territories Committee
- **Functional Articulation**, provided by the Intelligent Nation Forum

Communication Plan and the cidades.pt brand

Within the scope of component #8, the Cidades.pt brand was created, the associated concept and message, as well as brand applications according to the logo:



Also in this component, a Communication Plan was defined consisting of **8 communication initiatives** aimed at boosting **the performance and success of the implementation of the NSCS**, ensuring transparency and knowledge of strategic initiatives and the Smart Cities theme, by adopting information measures and communication aimed at mobilizing, involving and educating stakeholders, namely, the **8 identified target audience typologies**.

Lessons learnt

The main lessons learnt focus on collaboration and stakeholder involvement, highlighting:

- **Involve a large number of stakeholders in the definition of the strategy**, promoting a collaborative environment and understanding between the parties
- **Identify key stakeholders within the entities**, in order to ensure the representativeness of the entity's vision and value for the project
- **Create a collaborative environment not only at a national level, but also at a European level**, in order to allow alignment with European entities
- **Ensure a solid basis of diagnosis and representativeness** of cities through a questionnaire, ensuring a balance between scope and complexity to obtain insights, **and create a monitoring and contact task force** to reinforce the response rate
- **Ensure the contextualization of the speakers**, by sending pre-read documents, as preparation for the moments of interaction
- **Leverage work developed within the scope of other national and European strategies**, such as the definition of quantitative targets, which had in consideration targets defined in other contexts
- **Create recommendation toolkits** that give support and guidance, being a comprehensive enough reference independent of the particularities of specific cases, which aim to support, guide and facilitate the strategy adoption by the beneficiaries
- **Create and disseminate the brand and specific branding from the initial stages of the project**, promoting fixation, awareness and communication