



ROME SMART CITY

PREFACE

In the future, cities will be able to offer a decisive impact not only on the lifestyle of citizens, the economic and social fabric of a nation or even a supranational entity (e.g., the European Union), but-most importantly-on the sustainability of the planetary ecosystem. Choices made today, therefore, will affect the future of the next generations

Over the decades.

A conscious and transparent Administration cannot disregard taking clear and shared positions on the main issues of interest to the community: energy and environmental resources, reduction of pollutants, efficient and environmentally friendly forms of mobility and transportation, attention to weaker groups, the right to free and correct information, and access to technology with special attention to relational systems.

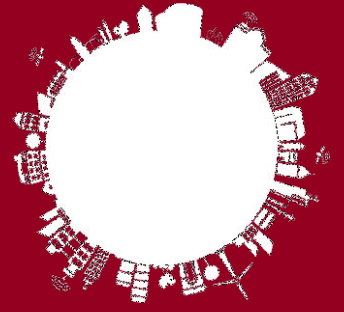
The Roma Smart City plan is a programmatic document aimed at creating a methodological and strategic framework in which to connect and bring together the priority objectives in the different areas of Roma Capitale (mobility, environment and waste, social, culture, tourism, security, etc.). The guidelines for the future of Roma Capitale described in the Roma Smart City plan are preparatory to the achievement of the Roma 2030 goals, in a temporal perspective that goes beyond the mandate of the Administration currently in office and in a broad territorial logic that considers Rome's natural vocation as the reference center of the metropolitan area.

The Plan is intended to be a "living" and dynamic tool that incorporates the needs and expectations of city users as members of an active citizenship, with citizens as protagonists in the co-creation process, in antithesis to an old-school dirigiste and top-down approach.

Any process of change must involve involvement, participation and sharing with all stakeholders in a reciprocal perspective. It was, therefore, imperative to adopt a cross-disciplinary and multidisciplinary approach to enhance the contributions, ideas and reflections of those who have an objective interest in improving the quality of life and services offered by the City.

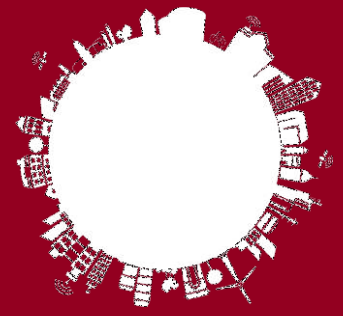
This Plan defines the smart city strategy of Roma Capitale and is the result of a co-design process, which involved universities, businesses, Laboratorio Smart City - Forum for Innovation and citizens and was an opportunity to pragmatically test an inclusive and participatory working method within the administration. In fact, as part of several workshops conducted with innovative tools such as, for example, design thinking, managers and officials from all departments tried their hand at analyzing the needs of city users and in the identification of actions and interventions aimed at their fulfillment, enhancing, moreover, the countless assets the City has at its disposal.

A true urban regeneration. The complexity to manage is high, yet Roma Capitale is ready to take up the challenge, and this strategic plan, with the wealth of initiatives already underway and an ambitious medium- to long-term vision, is also a clear demonstration of this.



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CHAPTER 1

WHY A SMART CITY

WHY A SMART CITY

Global goals and trends

THE CHALLENGE OF THE WORLD. The public is becoming increasingly aware of the many problems that plague the world, as their influence on everyone's daily life becomes more and more evident. It is before everyone's eyes how much the fragility and political instability of some states, the severity of crises and conflicts, including over the control and indiscriminate exploitation of non-renewable or only partially renewable natural resources (valuable minerals, fossil energy sources, forests, arable land, water), the effects of climate change on ecosystems in many regions of the world, translate into global issues, to which the international community must respond by mobilizing rapidly. With this in mind, the United Nations has identified 17 goals related to global challenges that affect numerous issues of importance to the world, including: ending extreme poverty, ensuring all children have a good education, achieving equitable opportunities for all, and promoting, in both consumption and production, better practices that contribute to a cleaner and healthier planet.



URBANIZATION AND OTHER GLOBAL TRENDS. To understand where and how to intervene to achieve these goals, it is necessary to consider the current global trends that are shaping urban development-those forces that are changing the world and significantly affecting society, the economy, and the lives of individuals.

A first aspect to be taken into consideration is that related to the phenomenon of urbanization and the search for a new balance with the immediately surrounding territory and the so-called "inland areas." According to the European Union, in fact, as of today more than 60 percent of the world's population, or 5 billion people, live in cities. It is estimated that by 2050, this percentage will rise further to 68 percent. The increase in urbanization in cities corresponds to a progressive aging of the population, accompanied by an ever-increasing life expectancy and an increasingly slow demographic turnover. Another indicative factor emerging from global trends concerns pollution: it is estimated that in 2016

more than 50 percent of the population was exposed to levels of air pollution two and a half times Above the standard thresholds by the *World Health Organization* (WHO).

Global trends show that the growth of urbanization is matched by the potential economic development of cities. In fact, it is estimated that by 2050 cities will generate 80 percent of global economic growth, and as early as 2025, 66 percent of global GDP will be driven by the 600 richest cities on the globe (EU, *Developments and Forecasts on Continuing Urbanisation*). The OECD (Organization for Economic Cooperation and Development) also estimates that with each doubling of population, a city's productivity grows between 2 percent and 5 percent.

The health and economic emergency caused by the Covid-19 pandemic has changed the way significant the habits and interactions within the city of city users. The use of technology, which is essential for overcoming social distancing, has brought an acceleration toward the digitization of cities, representing one of the most challenging frontiers on the horizon today from the perspective of public health protection, sustainability, emission reduction and improved quality of life for citizens. Here digital infrastructure is the enabling tool for building a new onlife routine.

THE ROLE OF CITIES. According to the Smart City Guidance Package, today more than 60 percent of the world's population live in cities and produce about 70 percent of the world's wealth. Despite occupying only 2 percent of the Planet's total land area, cities consume more than 60 percent of the energy produced and are responsible for more than 70 percent of global pollution.

It stands to reason, therefore, that cities have a central role to play in achieving the 17 UN goals and that, therefore, their development cannot be separated from sustainable growth that ensures a better future for all. To contribute, at least in part, to achieving the global goals, cities must focus on several aspects, such as:

- Reduce environmental impact by reducing pollution, increasing waste utilization (starting with separate collection and recycling) and improving air quality;
- use resources responsibly, making plant systems, urban infrastructure more efficient, and raising awareness of more virtuous use of resources;
- Developing a sustainable and inclusive community, ensuring safety and ensuring that vulnerable groups have an equitable opportunity to access and use services;
- boosting the Innovative Economy by identifying effective models for attracting national and international funding;
- Improve the City's Governance by adopting an open and collaborative management model.

The Smart City

THE SMART CITY. When can we talk about a smart city? There is no single, universally accepted definition for defining a smart city. A good starting point is that provided by the European Commission, which defines a Smart City as *"a city in which traditional services are improved and made more efficient through the use of new technologies for the benefit of city users (citizens, commuters, businesses and tourists). A city becomes Smart when uses ICT technologies to optimize the use of resources, distribute them according to actual needs and reduce pollution. The Smart City is characterized by smart and organized mobility, efficient ways of lighting and heating buildings, sustainable management of water resources, and recycling of waste from a circular economy perspective. Smart City also means anticipating the new needs of city users through continuous interaction of the population with Administration."*

Another authoritative definition is provided by the United Nations specialized agency for the communication information technology, which defines Smart City as *"an innovative city that uses information and communication technology (ICT) and other means to improve the quality of life, efficiency of urban operations and services, and competitiveness, while ensuring that the needs of present and future generations are met by paying attention to economic, social and environmental aspects."*

The goal of *Smart Cities* is to improve the quality of life and satisfaction of the needs of all *city users* by intelligently managing resources to be economically sustainable and energy self-sufficient.

Smart city development is a priority for action that can no longer be eluded, and this is demonstrated by the emergence of the Smart City paradigm and ad hoc strategic plans that all major cities now have in line with the European Agenda 2020 and the 2019/2021 ICT Three-Year Plan. It is essential to elaborate a strategic and systemic plan that allows for the definition of common goals and interventions that are integrated with each other, in order to avert solutions that, although high value-added from a technological point of view, risk becoming isolated experiments, incapable of producing significant and lasting impacts for the community. The Roma Smart City plan is therefore to be considered as an indispensable element in the planning process of the Administration's development and innovation policies.

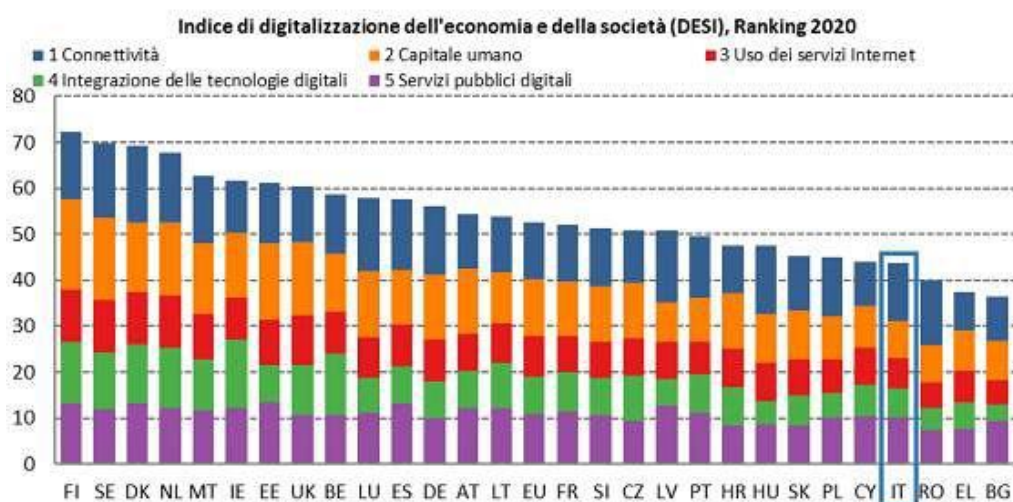
THE CITY-USER. There are many definitions, not unambiguous, of city-user; the broadest and most inclusive one takes into account any type of subject that can benefit and enjoy the services offered by the City: citizens (residents and non-residents), commuters, students, tourists, entrepreneurs, administrations, agencies, universities, research centers, associations and bodies that operate in various capacities in the area of reference. The consideration of the strong relationships between the city and the towns and neighboring territories (in economic, social, logistical terms) also derived from the analysis of the needs of city users, induces to expand the territorial scope of reference in a logic of "smart landscape" and functional urban area, as indicated by the Three-Year Plan for Information Technology in the PA defined by AgID and the Council Presidency's Digital Team.

The current path in Italy

Italy has embarked on a path for the country's digitization that lags behind in the international arena mainly due to cultural, social and infrastructural aspects. This gap emerges in the DESI (Digital Economy and Society Index) report, a tool through which the European Commission has been monitoring the digital progress of member states since 2014, analyzing at the European level 5 macro-categories of information, namely connectivity (worth 25 percent of the index), digital skills (25 percent of the index), Internet use by individuals (15 percent of the index), integration of digital technologies by enterprises (20 percent of the index) and digital public services (15 percent of the index).

In 2019, the Ministry of Technological Innovation and Digitization was established to coordinate and guide the digitization of public administration in order to enhance the digitization of the Italian economy and society by launching new initiatives.

For the 2020 edition of DESI, Italy ranks 25th among the 28 EU member states, with a score of 43.6, nine points lower than the EU average (which is 52.6) and one position lower than last year.



CONNECTIVITY. Italy is in a good position (17th place) in terms of 5G readiness, as all pioneer bands have been assigned and the first commercial services have been launched.

DIGITAL SKILLS. Italy occupies the last position in the ranking. In the 16-74 age group, only 42 percent of people possess at least basic digital skills (58 percent in the EU), a percentage that drops below 22 percent in the case of advanced digital skills (33 percent in the EU). This gap is confirmed by ISTAT's Annual Report 2020, according to which in 2019 the internet was used regularly by 74 percent of individuals aged 16-74, an increase of 5 percentage points over the past three years. From the household-level analysis, based on the Survey Multiscope "Aspects of Daily Life," it was found that during the pandemic 24.2 percent of households found themselves completely without internet users, i.e., regular internet users.

USE OF INTERNET SERVICES. Discounting the shortcomings in terms of digital skills, there is a modest use of Internet services. In fact, 17% of the population has never used the Internet and only 74% of Italians use it habitually.

INTEGRATION OF DIGITAL TECHNOLOGIES. Italy ranks 22nd in the EU, making progress in social media. Italian companies lag behind in the use of technologies such as cloud and big data and in e-commerce adoption.

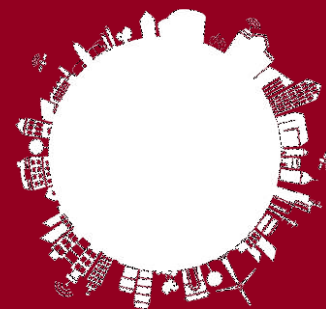
DIGITAL PUBLIC SERVICES. Italy ranks 19th and is below the European average, performing well in terms of completeness of online services, digital public services for businesses and open data. It suffers, however, from a poor level of online interaction between public authorities and the general public.

ENTERPRISES. According to ISTAT data, the share of enterprises with at least 10 employees accessing the Internet using fast connections increased in 2019: 41 percent those with at least 30 Mbps (13.5 percent in 2015), 13.8 percent those with at least 100 Mbps. 16.1% of manufacturing enterprises have a high or very high level of digitization. Based on new indicators, it appears that more advanced digitization profiles of enterprises are associated, on average, with a higher level of labor productivity. Among technology producers, Italy has 11,126 innovative startups, 1,514 innovative SMEs, 1,823 research spin-offs and 3,917 registered patents. As technology intermediaries, on the other hand, there are 22 Technology Parks, 50 Digital Innovation Hubs, and 64 Technology Transfer Offices.

PUBLIC ADMINISTRATION. In the ISTAT 2020 report on the relationship between public administration and ICT, the data for which refer to 2018, it is shown that in 54.6 percent of regions and 48.3 percent of municipalities it is possible to do online the entire process, from initiation to completion, of at least one service out of the 24 observed and largely dedicated to businesses. Despite the growth of network computerization 87.8 percent of local PAs still use analog tools in protocolling. 41% of local PAs access the Internet with fast connections (at least 30 Mbps), only 17.4% with ultrafast ones (at least 100 Mbps). Timid steps are being recorded, especially of the regions, toward the use of artificial intelligence and big data analytics.

DIGITAL DIVIDE. The picture of the national context represented is inevitably reflected at the local and urban level, albeit with different frequencies. In fact, it is recorded that the percentage of households in which no member uses the Internet touches almost 30 percent in the South and in municipalities up to 2,000 population.

The development of the smart city and related smart services must be accompanied by policies to counter the digital divide from an inclusive perspective, providing everyone with "access tools" to the digital world.



CHAPTER 2

AN INCREASINGLY SMART CAPITAL CITY

AN INCREASINGLY SMART CAPITAL CITY

The vision

CITY AS A NETWORK OF ECOSYSTEMS. A city can be defined as a network of ecosystems, that is, a set of complex communities, facilities and services that, interacting virtuously, can produce innovation with spillover effects on the territory and foster social and economic development. In order to activate this network of ecosystems, it is necessary to act, in a synergistic way, in different areas such as sustainable mobility, enhancement and respect for the environment, enhancement of technological infrastructure, energy and water saving, waste management, etc.

This laborious development process, coordinated and orchestrated by Roma Capitale, requires the participation of all the actors in the area, including end users, in a context in which *city users* become a fundamental active part. Each ecosystem is useful in its own right, but only the integration of all ecosystems makes it possible to generate the added value that can make it possible to improve the quality of life of *city users*.

THE CONVERGENCE OF STRATEGIES. Any strategy developed for a single ecosystem in the City also affects other ecosystems in a broader sense, so a strategy must be developed for each ecosystem that also gives due consideration to impacts on other ecosystems.

Given the growing importance of digital solutions to a city's development, the strategy of a "*smart city*" can also be understood from a technological perspective as a point of convergence of strategies, as a holistic and synergistic view of how technologies and data become cross-cutting platforms to support its day-to-day functioning and operations and sometimes even enable the achievement of the city's broader and longer-term goals. The availability of data and information plays a key role not only for decision makers and administrators, but also and especially for *city users* who can use it to assess Administration's actions.

Specifically, the *smart city* strategy, geared toward a vision of a sustainable city, must ensure the presence of a platform that brings together and harmonizes the enabling intangible and tangible technological infrastructures and their connection with all ecosystems, focusing in particular on:

- how to provide the *city user with* integrated services that are usable and easily accessible from multiple physical and virtual channels, built around the needs of users rather than the capabilities and resources of a single sector;
- how to ensure the interoperability of the city's data, systems and digital *assets*, to optimize their overall value to *stakeholders*, in a logic of master plan, and thus of coordinated and coherent public-private development;
- how to promote the spread of Open Source software within the Public Administration. The benefits of this approach to software development are many: Open Source projects are supported by large communities of developers around the world dedicated to testing, correcting and improving the code, ensuring quality

and reliability of the code itself; moreover, the proximity of these communities to the academic world allows for solutions in line with the most advanced technological advances. Secondly, being freely modifiable, the code can be easily "customized" to meet specific user needs; finally, open source projects, because they are freely distributed, make it possible to cut costs due to licenses to use proprietary software, and not to trigger mechanisms of dependence on supplier companies;

- how to consciously use the data collected by the City by ensuring new services that are ever closer to the needs of City Users;
- How to make City data accessible for the economic and social development of the community ("*open data*") and how to use them to make city government more participatory ("*open government*"), while improving legality and transparency in administrative processes;
- how to appropriately protect data from cyber attacks (*cybersecurity*), and ensure its governance and management with applicable laws, e.g., *privacy laws*.

SUSTAINABILITY. Achieving the goals of a Sustainable and Resilient Rome requires the following. place itself at a higher strategic level and question the main goal of any city: "to *provide the best quality of life for all its city users under all conditions*" (resilience). Sustainability, resilience, and inclusion are specific and often complementary dimensions of this ultimate goal.

"*Smartness*," on the other hand, indicates that these goals will be facilitated, even accelerated, by the increase and pervasive deployment of distributed intelligence, both human and artificial, which, however, relies on the widespread and synergistic use of technologies and data throughout the city. A *smart city* strategy must also include the use of technologies to support the city's sustainability and livability goals.

There are several dimensions to consider in order for Rome to thrive sustainably.

From the perspective of *environmental sustainability*, the reduction of pollution and the improvement of air quality are central aspects, along with waste management and the water cycle. Additional elements to consider are land use, climate change adaptation and mitigation, disaster resilience, and hydrological risk management.

From the point of view of *social sustainability*, they must be guaranteed to *city users*:

- security and adequacy of the city's physical and virtual infrastructure, both in terms of protection from predatory forms of crime, violence or harassment;
- enjoyment of cultural and natural heritage, accessibility and participation in the cultural life of the city and the redevelopment of blighted areas;
- equity and accessibility of services with special regard to the most vulnerable (disabled, elderly, children, etc.).

Social sustainability also means inclusion and ensuring the exercise of rights by *city users*. In this area, it is essential to ensure education and training services designed to spread the foundations of a digital culture that is increasingly necessary to use public services and individuals, participate in the Administration's initiatives and choices, exercise citizenship rights, and create an adequate pool of "*intellectual capital*" in response to the city's entrepreneurial and economic needs.

From the point of view of *economic and financial sustainability*, it is crucial to create the conditions to provide adequate and lasting employment opportunities and encourage the creation and development of entrepreneurial initiatives.

Rome must therefore leverage virtuous models of attracting funding, domestic and foreign, and collaboration between public and private entities (*PPPs, public-private partnerships*) suitable for ensuring long-term economic development prospects.

THE CENTRAL ROLE OF DATA. To achieve the goals of a Smart Rome, data *governance* understood on the one hand as the effective availability of data and its sharing among various stakeholders and, on the other hand, as the possibility and ability to use the information effectively to plan and manage the actions of the administration and To realize services in line with the expectations of *city users*.

An organic and integrated approach to city data therefore requires the construction of a platform that enables (while ensuring that security, privacy and confidentiality requirements are met):

- Ensure that data on the assets, performance and use of the city's physical, spatial and digital resources are available in real time (monitoring and control) in order to optimize and maintain the value of these resources for the *city user*;
- Ensure that city data are interoperable in order to enable the integration of real-time services;
- Govern big data to make full use of all information about the city (from public and private sources);
- make data "*open*" to enable innovation that is also driven from the outside, i.e., from the community. "Open data" allows *city users* to choose the data to which they are concerned and to consult them through representations as suitable as possible for the ability of Individual reading and comprehension (*data democracy*);
- Extracting information about the behaviors of *city users* and in the use of city services to assess the achievement of defined goals (*smart city KPIs*);
- Use data to enable people's participation in the city's government and strategic direction (*open government*).

The strategy

PILLARS OF THE STRATEGY. Rome is a city with an exceptional natural and historical-cultural heritage, inclusive and inclusive, which wants to hold past, present and future together, promoting environmental sustainability, economic development, civic sense and well-being.

Rome represents the World Capital of Creativity and Humanistic Culture, an ideal context for training and attracting the best artistic talents, as well as hosting the companies that feed on such creativity and that can ensure concrete professional opportunities for these talents. It is a city that reflects on the meaning of life, hosting not only the seat of a Church with a universal vocation, but also three multilateral organizations that make up the agribusiness hub of the United Nations (FAO, IFAD and WFP). Rome is the cradle of Digital Humanism because it is open to digital innovation at the service of its cultural heritage, representing a place of experimentation for the most innovative technologies applied to its priceless riches.

The Rome Smart City strategy builds on the 4 pillars defined during the process of drafting the city's Resilience Strategy, to which some 2,000 referents inside and outside the Capitoline Administration contributed.

I	AN EFFICIENT CITY AT THE SERVICE OF CITIZENS	
II	A DYNAMIC, ROBUST CITY WITH A UNIQUE CHARACTER	
III	AN OPEN, INCLUSIVE AND INCLUSIVE CITY	
IV	A CITY THAT PRESERVES AND ENHANCES ITS NATURAL RESOURCES	

STRATEGIC GOALS. To be "smart," the city must know how to interpret digital innovation so that it becomes the means and not the end of urban policies. In this sense, new technologies must support the transformation of space and time, to enhance social networks and human relations, enable the development of social capital by improving the usability of

systems of mobility, security, services, environment as well as contributing to the realization of individual rights. Smart City must become a model for improving the quality of life of the population without any discrimination, transversal to all areas of the Administration and enabling the unfolding of the vision of a sustainable, resilient, open, collaborative, transparent, participatory, connective, creative city. The Administration Capitolina has defined its strategic goals with this in mind:

- Making Rome Sustainable, that is, orienting its future toward an integration of suburbs and center, with child-friendly neighborhoods. Rome is sustainable if it gives centrality to the public transportation system, focuses on energy efficiency, and reorganizes the water and waste system;
- Make Rome Resilient by equipping it with all the tools it needs to understand the opportunities and resources on which to leverage in order to respond to the shocks and stresses to which it is subjected. To recreate a virtuous relationship of Resilience, to bring answers to the economic, social and environmental challenges of its time, to continue to chart a course that will lead the Capital to place itself on the same level and "system" with the greatest European capitals and metropolises of the 21st century, always respecting its uniqueness;
- Make Rome Simple, Open and Transparent by providing data to all, but most importantly by providing city users with operational and cognitive tools to make the best use of public information. Rome is open and transparent if it can overcome the existing digital divide;
- Making Rome Participatory and Collaborative by enhancing the collective and connective intelligence of city users;
- Making Rome Connected and Creative, an international laboratory of innovation, and at the same time the epicenter of social production, as an organic and inorganic fabric where people can socialize, collaborate, connect, meet and generate knowledge exchange on equal terms contributing to the formation of an added value that everyone can access.

CONVERGENCE OF PLANS. The Capitoline Administration has long had strategic plans for the definition of clear and shared goals and projects to be implemented in the main areas of intervention. Alignment and convergence between the goals and plans of the different strategic ecosystem plans is one of the main objectives of this Smart City Strategic Plan.

In fact, from this perspective, Roma Smart City has the task of networking the different strategic ecosystem plans by enhancing synergies and stimulating collaboration among the different *stakeholders*

in the common goal of increasing the quality and value of services rendered to the community. The main plans currently defined or under development are reported here:

DIGITAL AGENDA - the strategic-operational document constitutes the reference for Roma Capitale's action in the digital transformation of the administrative machine, and of the

services towards citizens and businesses, which is fully implemented in the Roma Capitale ICT Three-Year Strategic Plan.

RESILIENT ROME - Rome was selected in December 2013 from the first group of 32 cities to be part of the 100RC network of cities. II 100 Resilient Cities project, aims to help cities around the world become more resilient in the face of rapidly evolving environmental, social and economic challenges in the 21st century. The Program promotes city resilience through the appointment of a Chief Resilience Officer (CRO), the creation of a Resilience Strategy, and the sharing of knowledge and case studies through the 100RC global network of cities and access to a platform of partners. After an initial analysis phase, it was published the "Preliminary Resilience Assessment" in which the city's strengths and weaknesses, shocks and stresses as well as existing actions are listed and described. The Strategy is the result of close collaboration between the Capitol Administration, 100 Resilient Cities and their strategic partners. During the execution of the work, numerous stakeholders inside and outside the Capitoline Administration were identified and involved. The Plan consists of 4 Pillars, 16 Goals and 58 Actions of which 9 have been identified as priorities.

STRATEGIC ECONOMIC AND URBAN DEVELOPMENT PLAN (PSSEU) - The Plan, currently being implementation, aims to channel the shared visions of Roma Capitale's stakeholders and provide visibility on the administration's trends according to the direction and indicators defined for progressive long-term development in the city's most important areas. As a dynamic tool, the Plan will see at least annual updates capable of analyzing the economic and territorial context in which the administration of Roma Capitale operates, establishing strategic objectives and incorporating appropriate updates based on policy directions and of the evolution of the local, national and international context as well as facilitate the use of information and related metrics on the progress and activities undertaken between short-term and long-term planning. These functions of the Plan may be developed through the provision and gradual evolution of a decision-support data platform (so-called Big data Economic Development) with related management information dashboard, dedicated to support the monitoring and control of Urban development policies on Roma Capitale and their implementations.

FUTUROMA (Strategic Tourism Plan for Rome) - the Plan moves from the need to. Adjust the capital's tourism offerings to higher quality standards, to avoid overtourism, generate profitability in a sustainable way, ensure the sustainability of the city's tangible and intangible heritage, reconcile the needs of visitors and residents, and increase the perception of Rome in the world not only as a city of art, but as a living, innovative and creative metropolis that inspires and generates emotions. Among the planned actions is the launching of the "Made in Rome" stamp that will certify the quality of the offer of accommodation and catering activities, but also of tourist accommodation in general, the establishment of a tourism police task force to combat the phenomenon of illegal accommodation, and the establishment of a Destination Management Organization (D.M.O.), an operational arm with mixed public-private participation, for the cooperation of all industry stakeholders.

BUSINESS STRATEGIC PLAN - the plan identifies urban strategies aimed at the development of infrastructure and services to support entrepreneurial activities, with the aim of improving the attractiveness of the area to polarize investment and encourage the emergence of new economic realities, strengthening the network of Open Innovation among enterprises, startups, business incubators and accelerators, universities, research centers, institutions and other players in the innovative economy supply chain.

AGRI-FOOD STRATEGIC PLAN-The Plan, an integral part of the PSSEU, outlines the appropriate strategies and related projects for the development of the Agri-food chain aimed at enhancing the entire sector supply chain-from the cultivation and breeding stages to the production, processing, distribution and marketing stages-inserting itself in the definition of a food policy for Rome, to contribute to the achievement of the "Zero Hunger" goal in the world, set by the World Food Programme by 2030. The plan's actions aim at enhancing of the entire food supply chain, promote the different types of short supply chains, promote territorial specificities related to food and land, reduce food waste at all stages of the supply chain, develop policies aimed at countering phenomena of land degradation, and promote a higher level of public awareness of food issues, Of agriculture and the land.

REINVENTIAMO ROMA - The program is aimed at developing urban regeneration programs as an action aimed at redeveloping the abandoned and disused urban fabric through quality projects, to be harmonized with the existing heritage, and avoiding further land consumption, so that virtuous urban processes capable of: environmental sustainability, recovery of buildings and spaces, accessibility to rail transport lines, new social, environmental and cultural challenges, combining the active involvement of citizenship, the attraction of private sector investment and the development of innovative forms of managing places and spaces.

SUSTAINABLE MOBILITY URBAN PLAN (SUSTAINABLE MOBILITY PLAN (SUMPS) - The plan identifies strategies for creating an urban transportation system that can ensure: effective transportation options, improved safety conditions, reduced air and noise pollution, reduced greenhouse gas emissions and energy consumption, rapid and economical travel, attractiveness of the area, and quality of the urban environment.

ACTION PLAN FOR SUSTAINABLE ENERGY AND CLIMATE (PAESC) - The plan aims to reduce climate-altering gas emissions by at least 40 percent by 2030. The areas to be addressed are mobility, infrastructure, buildings and facilities, as well as new waste management (post-consumer materials) based on progressive reduction until the 'zero waste' goal is achieved.

CITY SOCIAL PLAN - The Social Master Plan of the city of Rome represents the City Administration's commitment to the planning, design and implementation of the city system of social services and interventions and is, at the same time, the tool with which to read city development policies from the perspective of need, social demand, social rights and urban standards based on processes of social sustainability,

environmental and territorial (land use planning, mobility, quality of life, etc.). The Social Master Plan represents the unitary design of the urban welfare system, a device-framework for the city's social policies, capable of guaranteeing at the same time the globality of the city dimension (the Integrated System of Social Services and Interventions of the City of Rome) and the specificities of local needs (the Area Plans of the individual Municipalities), in its decentralized and interdependent articulations. In this way, both the identity "metropolitan" city social policies, as well as the planning and management autonomy of city halls, with a view to promoting the construction of city social networks whose connections and nodes must weave harmoniously within organized units among multiple institutions.

THE VALUE OF THE ROMA CAPITALE "GROUP". In a systemic view of the context in which it will have to develop the Smart City, it is necessary to take into account the organizational articulation of Rome's Capital.

The territorial dimension and the volumes of phenomena that occur daily in the urban context impose, on the one hand, a strong proximity garrison and, on the other, the use of specific skills and professionalism.

Here, then, is the fact that the progressive evolution of the City in a *smart* key must necessarily consider developing organic actions with the structures of Roma Capitale institutionally dedicated to the management of the territory and the delivery of the main services in key sectors such as environment and waste, transport, energy, culture, tourism, etc.

All components of the Roma Capitale "Group," each within its area of expertise and based on the resources at its disposal, are called upon to contribute to the implementation of the Smart City plan.

The role of the investee companies (e.g., ATAC, AMA, Acea, Zetema, Roma Servizi per la Mobilità, Aequa Roma, Risorse per Roma, etc.) as well as the supervised public entities (e.g., Istituzione Sistema Biblioteche Centri Culturali, etc.) and the controlled private entities (e.g., Fondazione Cinema per Roma, Fondazione Roma Solidale Onlus, Fondazione Mondo Digitale, etc.) becomes crucial in the pursuit of the *vision* and strategies for digital growth.

The individual lines of intervention and the related projects need the harmonious and synergistic contribution of all the entities that are part of the Roma Capitale organization, starting from the conception and design phases to those of implementation and deployment.

On the other hand, most of the strategic and operational actions to be *smarter* need a strong cross-cutting connotation: actors and players with different competencies and roles are called upon simultaneously, and they must necessarily collaborate and cooperate, or else fragmentation and dispersion/overlapping of initiatives will occur, the assertion of phenomena of self-organization, the pursuit of seemingly *smart* but which, in practice, provide little benefit to the community.

The Centrality of the City User

Understanding the needs of *city users* is the basis for designing and implementing appropriate responses and solutions. With this in mind, both at the preliminary stage and during the implementation of services, it is useful to make use of the principles and guidelines of behavioral economics, which on the one hand facilitate the introduction and adoption of new technologies, and on the other hand, help to

Stimulate proactive behaviors of the community including through the introduction of rewards and incentives ("gentle nudge").

THE CITY USERS OF ROMA CAPITALE METROPOLITAN CITY¹. For Roma Capitale, the categories of *city Users* to pay special attention to are:

Resident and nonresident citizens - With the 2.8 million population, which rises to 4.3 million considering the entire metropolitan area, Rome expresses the most populous territory in Italy and among the most populous in Europe. The 15 municipalities are characterized by a high level of heterogeneity, in terms of economic, social, cultural, population density, etc. Each Municipality in Rome is comparable in territorial extent and population to medium-sized Italian cities. The average population size of the municipalities, in fact, is just under 192,000 inhabitants; the most populous municipality is VII, with a population of 307,184, while the least populous are VIII (130,784 inhabitants) and XIII (133,367 inhabitants). Structural population indices are highly specific and characteristic of individual territorial realities. The average size of Roman households is 2.1 members, a stable value compared to the last two years and in line with the national figure.

Commuters - The phenomenon of commuting strongly characterizes the capital: an estimated 350,000 people arrive in Rome every day. Most commuters are from the hinterland (over 200,000) while 14.4 percent are even from other regions. This phenomenon increases the city population with obvious repercussions on the quality and usability of some types of services.

Students and young people - Residents and commuters include more than 350,000 Students enrolled in kindergarten, primary and secondary schools in grades I and II, as well as over 200,000 college students.

There are a total of 32,275 in municipal preschools, including 4,172 (12.9 percent) foreign children and 1,564 (4.8 percent) disabled children. In the 531 elementary school there are a total of 128,943 pupils, 51.7 percent male and 48.3 percent female. There are 14,372 foreign pupils, of whom 9,989 are found to be born in Italy (69.5 percent). While there are 76,524 pupils in the 261 secondary schools of which 51.8 percent are male and 48.2 percent female.

Secondary schooling is divided into four types of institutes: high schools, technical institutes, vocational institutes and institutes

art. In Rome, there are a total of 301 school units dedicated to higher education, at the of which 121,126 students are enrolled, 49.2 percent females and 50.8 percent males. The students

¹ The data reported within the document and in the appendix were compiled by the Rome Capital Statistics Office and published in the Roma Capitale's institutional platform at the link <https://www.comune.roma.it/web/it/i-numeri-di-roma-capitale.page>

Foreigners enrolled in secondary school number 9,641, accounting for 8.0 percent of total enrollment, and students prefer technical colleges accounting for about one-third of enrollment.

Rome's universities see about 230,000 undergraduate students, including 33,270 enrolled for the first time in a university course. Rome records 33,270 matriculations and the propensity of students to undertake mainly scientific studies and in particular economics-statistics (14.4 percent) and engineering (13.5 percent) degree programs is confirmed.

It is therefore a significant human resource pool that, in addition to expressing specific needs and requirements, represents the future of the City, which therefore must prove itself to be increasingly attractive and rich in opportunities to contain any migratory phenomena.

Tourists - Rome ranks among the world's top capitals in terms of annual flow of tourists: 19,454,354 arrivals in 2019 from all parts of the world for a total of 46,539,097 overnight stays with a clear impact on the entire accommodation and hospitality services sector. In 2019, Italian tourists (47 percent of total arrivals) stayed in Rome less than foreign tourists (2.23 days compared to 2.54 days). Approximately 34% of tourists prefer to stay at complementary establishments such as vacation homes, room rentals, Bed & Breakfast, vacation home, compared to 1,030 hotel establishments. Municipality I has more than 60 percent of the capital's accommodation facilities followed by II and VII with about 6 percent.

Weak subjects - Rome has a significant number of "weak subjects": more than 350,000 children (0-14 years old) and 600,000 elderly (over 65). An estimated 125,000 families with resident children within the capital area and an income of less than 25,000€. In addition, there are over 1,000 minors in home care.

An analysis of the population over 65 years of age and with an individual income of less than €11,000 shows that Municipalities V and VI have the highest percentages of seniors in need, with 31.6 percent and 36.3 percent of the population over 65 residents, respectively. Given the growing number of seniors in need, Roma Capitale is initiating policies inspired by the Silver Economy. The Silver Economy is based on meeting the needs of the senior population, for which consumption is estimated at 3.7 trillion euros, based on a study commissioned by the European Commission.

There are about 70,000 people with disabilities in the capital area, of whom about 6,000 benefit from the Service for the Autonomy and Integration of the Disabled Person (SAISH). SAISH is a social welfare service, provided by the City Hall, for people with disabilities that is implemented through the coordinated action of the Social Services and the Social and Health Services of the ASL.

An analysis of the approximately 400,000 foreigners registered at the civil registry shows a considerable increase over the past 10 years (+43% since 2007). Most foreigners (44%) come from the European continent, of whom about 55% are from Romania; followed by Asia (33.5%), Africa (12.4%) and America (10.1%). There are also about 6,000 people belonging to *RSC* (Roma, Sinti and Camminanti) communities.

Universities and Research Centers - Rome has a high concentration of universities (16) and research institutes (35) that, in addition to providing employment to thousands of people, represent a wealth of technical, economic, legal and social knowledge of inestimable value and enormous potential impact on the development of the City's productive fabric. University education is offered in Rome by the 16 universities. Those that offer traditional teaching are 10, while 6 interface with students in a predominantly telematic mode. La Sapienza, Roma Tre and Tor Vergata together absorb about three-quarters of the area's educational demand (71 percent).

Businesses - With about 300,000 businesses operating in the area - generating about 60 percent of the GDP of the entire Lazio region - Rome represents one of the urban areas with the highest entrepreneurial density in the country. The Roman territory has a prevailing vocation for the tertiary sector: the largest number of active local units is in commerce with 31.6 percent of units compared with the total, followed by the construction sector (11.4 percent) and the accommodation and catering (9.6 percent). The I City Hall area is first in terms of the incidence of active local units of enterprises operating in the "wholesale and retail trade; repair of motor vehicles and motorcycles" (14.7 percent) and "accommodation and food service activities" (31.5 percent) sectors; while the VI Municipality area ranks first in terms of the incidence of active local units of construction enterprises (11.4 percent). More than 90 percent of the capital's productive fabric is represented by small and medium-sized enterprises, operating mainly in the trade, services and accommodation sectors.

Government Entities, Ministries, Territorial Administrations, Bodies and Foreign Representative Structures - As the capital city, Rome hosts, in addition to the employees of the Capitoline Administration and the Entities and Companies in which it has an interest (about 62,000), a set of about 450,000 employees of other Central and Local Public Administration Entities. There are also more than 400 Representative Structures including embassies and consulates.

Associations, Foundations and Other Third Sector Entities-Bodies, Associations and Companies of the Third Sector have established their headquarters in the political center of the country and which, in many cases, are expressions of organizations with an international scope.

All these categories of *city users*, who moreover interact with each other on a daily basis by animating even very complex relationships and phenomena, are bearers of interests and expectations towards the City.

Transportation, mobility, education, health, culture, training, assistance, professional and economic opportunities, access to administrative services, digitization, and new technologies are the key words that guide Roma Capitale's political and administrative actions to intercept the expectations of its *city users*.

GAPS WITHIN THE CITY. Within a city such as Rome, which is characterized by a high level of heterogeneity, disparities between different types of *city users* (e.g., income, gender, etc.) can occur that significantly affect the perception of the city itself.

Relative to economic well-being Rome, in 2017 records an average total Irpef income of €27,766 that is 28 percent higher than the national average and 10 percent higher than the large Italian municipalities. The number of households that report making ends meet "*with great difficulty*" also turns out to be considerably lower in the Capital (6.0) than the national average (9.7) and the average of large Italian municipalities (13.5).

However, the good results at the national level are not achieved by the whole city uniformly. To analyze the gaps between municipalities, the Index of Social Distress (IDS) can be used. The index provides a measure of the possible socio-occupational criticality of a given area, highlighting different degrees of "potential exposure" to social distress and marginalization. Census data show that the highest values of "social distress" are concentrated more in the eastern area of the Capitoline territory; in fact, the macro-areas with IDS significantly higher than the Capitoline average are represented by municipalities IV, V and VI. Values slightly higher than the Rome average are also found in the western periphery of the city's territory, at municipalities X, XI, XIII and XIV. The municipalities with values of "Social distress" minors, on the other hand, are I, II, VIII and IX.

Relative to the fight for gender inequality Rome remains above the national average. In the capital, women aged 25-49 with preschool-age children are found to have a higher employment rate than those in large Italian municipalities (+13%) as evidenced by the ratio of employment rates of women aged 25-49 with preschool-age children to women without children². Moreover, in Rome, 45.8 percent of the members of city councils are women compared to 30.6 percent in other large Italian municipalities.

² Employment rate of women aged 25-49 with at least one child aged 0-5 years on employment rate of women aged 25-49 without children per 100

The governance of the Smart City

One of the main challenges facing the city is to be able to connect urban intelligence (in all its declinations) and gender approach in order to include in the smart city paradigm a real promotion of equal opportunities, a founding principle for the participation of all citizens. This is also the perspective of the gender mainstreaming approach, which emphasizes that the promotion of equal opportunities must be guaranteed in every area of political activity, across all public policies, along entire policy-making process, from the public agenda-setting stage to decision-making, implementation and evaluation.

The management of a complex system, such as that of a Smart City, requires an organization that not only ensures the active and collaborative participation of all *stakeholders*, but also fully overcomes the model of project governance based on the *siloed* separation of roles, competencies and responsibilities.

From this point of view, the Roma Smart City plan not only offers a perspective on the evolution of the City but also identifies a path of transformation that begins with the definition of a relational and managerial model vis-à-vis multiple actors, including in terms of Open Innovation.

The model is aimed at creating all the contextual conditions within which innovation actions can be developed, integrated and synergistic, participated in by citizens and the different components of society. It is therefore necessary to activate a "*system of relationships*" that enhances the contributions and complementarity of individual stakeholders.

Participation in a Smart Cities network is one of the starting points for setting up a reality of mutual learning through the sharing of experiences (including in terms of reuse and free software), with the aim of providing a common approach from the planning to actual implementation. In fact, comparative work with similar realities is essential to provide useful insights to decision makers and to allow learning from the mistakes made by others, with a view to a single system based on mutual contamination.

Likewise, collaboration between government institutions and private actors in the design and financing of interventions, programs and services is a foundational part of the smart cities strategy. Public-private partnerships (PPPs) are recognized as a useful tool to improve the quality of the services offered and, above all, to ensure their economic sustainability. Through the involvement of businesses and private capital it is, in fact, possible to co-define, co-produce and finance innovative projects that, otherwise, due to the reduced spending capacity of local authorities, would not be initiated.

THE ROLE OF THE ORCHESTRATING ENTITY. With this in mind, Roma Capitale, thanks in part to the support and knowledge that the Municipalities have of the territory, intends to give further impetus to the path of transformation-already undertaken in recent years-by assuming the role of "orchestrator subject" on the metropolitan Roman territory, of the instances promoted by different categories of actors:

- *European institutions*, for *smart city* policy planning and implementation lines;
- *National and local institutions and associations/ foundations*, for the definition and pursuit of concrete and measurable goals in terms of sustainable development of the city;
- *Italian metropolitan areas*, for the definition and implementation of *partnership-based* planning, enhancing success stories and testing new solutions with a common and shared approach;
- *Lazio Region*, for a systematic discussion on innovation policies to be implemented in the territory;
- *Metropolitan City of Rome Capital and the Municipalities of the Metropolitan Area*, with which to identify system synergies so as to optimize the sharing of best practices, digital platforms and services;
- *Private companies, Research Centers, etc.*, with which to initiate, including through the use of non-traditional but more "agile" and long-term tools (e.g., public-private *partnerships, pre-commercial procurement*, etc.), collaborations aimed at increasing *know-how* and technological culture, developing the economic and productive fabric of the area, incentivizing the creation of new businesses (*start-ups*) and encouraging the development of new value-added products and services for the many categories of *city users*.

THE GOVERNANCE MODEL. Coordinating a multiplicity of actors requires a governance model that is inclusive yet streamlined enough to provide timely responses to an ever-changing context. Roma Capitale will therefore have the following three-tiered structures:

1. Strategic Governance

Strategic governance will be entrusted to the Smart City Council composed of the Mayor, with the possibility of delegation, and six members of the Council defined by her on a six-monthly basis. The Council will be expanded, depending on the issues, to include the Council of Municipal Presidents, Directors of the Participated Companies.

The Council is to provide guidelines for the development of Roma Smart City and promote the development of smart projects both within and outside the Capitoline Administration.

The Council will be supported by the Technical-Scientific Committee and the Smart City Laboratory - Innovation Forum through opinions on existing projects and the proposal of new ones. The Technical-Scientific Committee will be composed of proven experts in the field, identified by Roma Capitale, who will provide "pro bono" support. The Smart City Laboratory - Innovation Forum will represent the institutional place of permanent confrontation with Citizens, Associations, Businesses and Universities.

2. Project Governance

Project governance will be entrusted to the Smart City Steering Committee, an *interdepartmental board* composed of six Senior Directors-defined by the Council, on a semi-annual basis, based on the responsibilities and composition of the Smart City Council-and which will be expanded, depending on the issues, to include the other Senior Directors and the ICT structure managers of the Participated Companies.

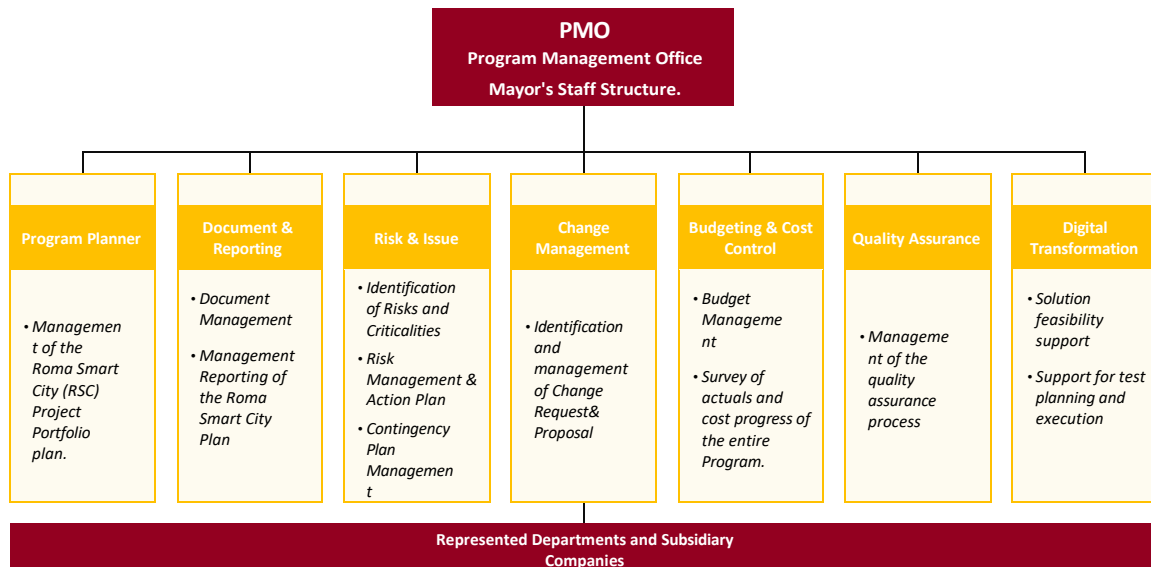
The Steering Committee is to implement the guidelines provided by the Council, promote interdepartmental initiatives, encourage the implementation of projects with private operators under public-private partnerships, and evaluate the smartness of projects.

The Steering Committee will be supported by the structure of City Lab and the laboratories, research centers and economic operators connected to the Administration through a Covenant of Action.

3. Operational Governance

In order to truly "govern" the Project Portfolio resulting from this Plan by ensuring the timely execution and achievement of the stated objectives, it will be necessary to put in place a Program Management Office (PMO), coordinated by the RTD (Responsible for the Digital Transition in accordance with Article 17 of the CAD), actively involving both the structures of Roma Capitale and the Participated Companies.

The structure will be set up according to international best practices as follows.



The objectives of the PMO are:

- Support the Smart City Council in coordinating areas of interest that are part of the Rome Smart City (RSC) program;
- Check the alignment of the various Areas of Interest against the direction set by the Smart City Council;

- support the Smart City Steering Committee in the activities under its responsibility (Technical Support, Quality Assurance, Project Planner, Report, Change Control, Risk Issue, Administration), providing for the verification of the Roma Smart City (RSC) program also with regard to variants in progress;
- Process reporting on the status of risks and critical issues, suggesting possible actions to the Smart City Council;
- Oversee the approval process for Change Requests & Proposals (ongoing variants of opera);
- Prepare the budget for the Roma Smart City (RSC) program and perform cost control of implementations.

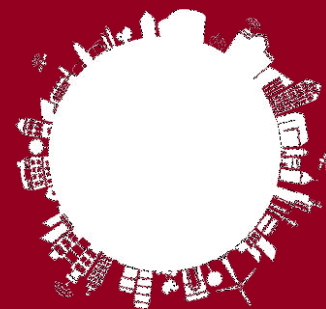
THE IMPORTANCE OF CROSS-CUTTING COORDINATION. In order to implement the above, however, it is essential to formalize an organizational presidium within the Administration that, endowed with strong and recognized *leadership* (based on the effective ability to express technological and digital skills and capabilities), is able, not only to carry out the activities of direction and coordination, but above all to give organicity and systematicity to all *smart* initiatives. This role can be carried out, with the support and involvement of all other Departments, by the Program Management Office (PMO).

TOOLS TO SUPPORT TRANSFORMATION. The implementation of digital development and growth strategies presupposes the implementation of policies and the use of social innovation tools designed to make Roma Capitale effectively "open" to receive all *inputs* (needs, cues for improvement, proposals, etc.) coming from the community, in a perspective of broad and effective participation.

It involves implementing an *Open Government* approach based on creating effective mechanisms and processes for collaboration and sharing, moving beyond the reductive approach of *open data* availability.

The approach that Roma Capitale intends to pursue is based on the use of tools of Communication and sharing that facilitate active employee involvement of the Administration and its extended perimeter (Entities and Participated Companies), and its *city users*.

This is the background to the establishment in 2017 of the Smart City Laboratory - Innovation Forum, as an institutional place for permanent discussion with all stakeholders (Citizens, Associations, Businesses and Universities).



CHAPTER 3

THE PATH OF IMPLEMENTATION

THE PATH OF IMPLEMENTATION

The key role of assets

THE COMPLEXITY OF ROME. Rome presents unique characteristics in the panorama of Italian municipalities. From its millennial history derive the multiplicity and value - as well as the management complexity - of the urban *assets at its disposal*. On the other hand, extending over an area of about 1,300Km², it is necessarily organized by Municipalities, each of which, in terms of number of inhabitants, is comparable to the main Italian provincial capitals. What is more, in addition to its strong vocation for tourism, Rome is distinguished by being one of the largest agricultural municipalities in Europe with about 50,000 hectares of cultivated land.

ROME'S ASSETS. Tangible assets are those that draw the attention of *city users on a daily basis*. Rome has about 415 million square meters protected natural areas and agricultural parks, 20 natural parks, 80,000 hectares of green areas, more than 300,000 trees, about 450 recreational areas, more than 12,000 hotel and complementary establishments, and 5,500 km of roads. The cultural offer is very heterogeneous: Rome is home to about 200 museum institutions/areas, of which 2 with over 8 million visitors (Colosseum and Castel Sant'Angelo) rank among the 5 most visited museums

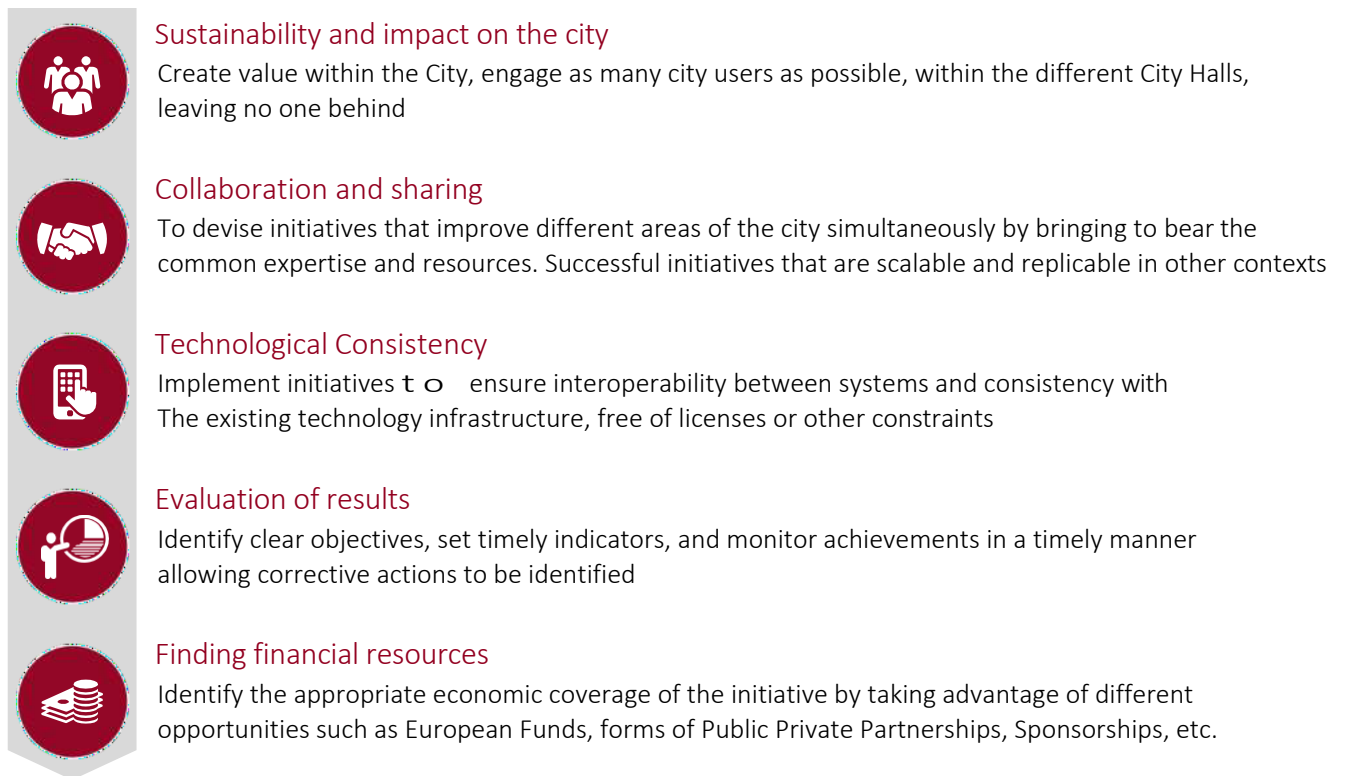
of Italy. Rome is also alternative mobility, with an offer of more than 1,000 buses, serving more than 350 local public transport lines, about 250 km of bicycle paths and numerous *car sharing* services. Rome has a unique offer in Italy with its 16 universities actively contributing to the enhancement and use of knowledge and the social and cultural development of the City.

Alongside its tangible assets, Rome has developed multiple intangible assets over time: its brand, skills, culture, innovation, network, and technologies. Precisely by leveraging new technologies today it is able to offer about 80 digital services through the Web Portal. All the *assets*, tangible and intangible, are managed thanks to the contribution of the skills and professionalism of the more than 60,000 employees of the entire organizational perimeter of Roma Capitale (including the Entities and the Investee Companies).

ASSET MANAGEMENT. In a city like Rome, which is constantly expanding and with relentless technological progress in all areas of civil society, asset management needs to focus on developing new and additional skills and grappling with the application of new tools and technologies (e.g., IOT). The expansion of technological *assets* and their cross-cutting application, for the creation of new services and the improvement of existing ones, are therefore enabling factors for making Rome increasingly *smart* and accessible.

The founding principles of the plan

Thanks to the collaboration and contributions of the various contacts inside and outside Roma Capitale, five founding principles of the Roma Smart City plan were identified. These principles express the essential characteristics for which Roma Capitale defines a project or initiative as smart.



THE MODEL FOR MEASURING SMARTNESS. Rome Capital and its Subsidiary Companies implement a considerable number of new initiatives annually, many of them pertaining to specific areas and related to the day-to-day management of the city. A model for measuring smartness inspired by the five founding principles was created to select the smartest initiatives and projects.

Each project was analyzed and evaluated by the Office of Digital Transition Support, and the information collected was reported within project sheets containing: project name, summary description, status of the project (timelines), smartness, economic value (€) and adherence to the Global Goals.

The score given by smartness represents adherence to the founding principles, regardless of by the intrinsic usefulness of the project. Therefore, projects related to the management of the ordinary essential for the management and administration of the city.

A maximum of 20 points per principle were awarded for the evaluation of Smartness, in accordance with the tables below.



SUSTAINABILITY AND IMPACT ON THE CITY

Score	Criterion	Sub-criterion	Score awarded
6	City Users Number of City Users estimated	Less than 400 thousand	2
		Up to 900 thousand	4
		Greater than 900 thousand	6
6	Territory Number of municipalities involved	1 City Hall involved	2
		2-3 town halls involved	3
		4-5 town halls involved	4
		More than 5 town halls involved	6
6	Project value Economic commitment of the project and potential induced income generated	Less than 1 million	2
		1 to 3 million	4
		Greater than 3 million	6
2	Categories of City Users involved 1. Citizens and Students 2. Commuters 3. Tourists 4. Companies and Institutions	1 category	-
		2 categories	1
		3 - 4 categories	2

COLLABORATION AND SHARING

Score	Criterion	Sub-criterion	Score awarded
11	Areas of intervention <i>Security</i> <i>Economic Development</i> <i>Cultural Participation</i> <i>Urban Transformation</i> <i>Tourism</i> <i>Education and Schools</i> <i>Social</i> <i>Energy</i> <i>Environment</i> <i>Mobility</i> <i>ICT</i>	1 scope	-
		2 scopes	1
		3 scopes	3
		4 areas	5
		5 scopes	7
		6 scopes	9
		7+ scopes	11
3	ICT Component ICT component presence	Not present	-
		Presence	3
3	Transversality Integration with other Smart projects	No Project	-
		at least 1 Project	3
3	Standardization and Scalability Ability to easily extend or replicate the project in other contexts	No	-
		Yes	3

TECHNOLOGICAL

Score	Criterion	Sub-criterion	Score awarded
12	Technological consistency with systems currently in use	No integration possible	-
		Integration not expected	5
		Planned integration into the project	12
5	Open Source, without constraints or licenses	No	-
		Yes	5
3	Safety Standards Adherence to ISO standards	No	-
		Yes	3

EVALUATION OF RESULTS

Score	Criterion	Sub-criterion	Score awarded
8	Clear definition of objectives	Goals in line with the Global Goals	3
		Goals in line with the goals of the City	3
		Clearly defined objectives	2
12	Objective Measurement System Criteria used to evaluate the achievement of objectives	Qualitative Criteria	-
		Quantitative Criteria/Scientific Methods <i>(e.g., counterfactual method)</i>	12

FINDING FINANCIAL RESOURCES

Score	Criterion	Sub-criterion	Score assigned
15	Source of Funding Funding source in line with the principles of the Smart City	No coverage	-
		Rome Capital	5
		European Funds, Sponsorships, PPPs and the like.	15
10	Good/service availability Score awarded in case the procurement process involves not only supply but subsequent maintenance in operation	Mere Supply	-
		Retention in Exercise < 3 years	5
		Maintenance in Exercise > 3 years	10
-5	Lock-in Penalty provided if the good/service can be maintained or developed by a very small number of suppliers	Open	-
		Lock - in	-5

The priority areas of

In order to ensure a "smart" development of the city, the Capitoline Administration has identified 10 priority areas of intervention, identified starting from the four pillars of the Roma Capitale Resilience Strategy, flanked by an additional cross-cutting coordination area, which will ensure adequate oversight of the technological, economic and communication aspects common to all areas of intervention.

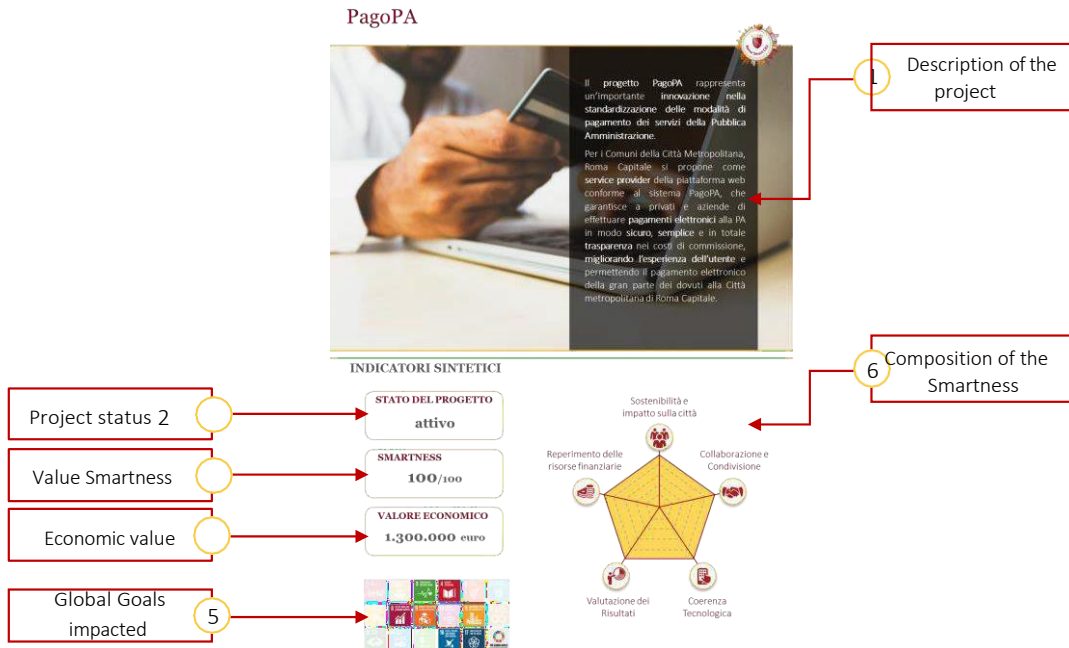


CONVERGENCE. The contents extensively described within the *Scope of Intervention* chapter are the result of the coordinated work of the entire Capitoline Administration, which has overcome the division of internal competencies by defining strategic objectives, lines of intervention, planning and indicators with the collaboration of Departments, Departments and Participated Companies.

INDICATORS AND KPI. Consistent with the principles of the Roma Smart City plan, it is essential to monitor achievements in order to replicate successful projects and intervene in the most critical areas. In this first edition of the Plan therefore, a minimum set of indicators has been reported divided between City Indicators and in SMART KPIs.

The City indicators represent the outcome, that is, they measure the livability and quality of life within the city. Smart KPIs, on the other hand, represent the level of digitization of the city, that is, the use of innovative technologies to deliver services instrumental in improving the city's indicators. To better understand this subdivision, a case is proposed illustrative: under Environment, indicators that measure air quality fall under the City Indicators, while air quality monitoring sensors or water purifiers are considered SMART KPIs.

SMART PROJECTS. Attached are summaries of the smart projects surveyed and evaluated by the Office of Digital Transition Support with the support of the Smart City Contact Persons (identified within the Departments and Participated Companies) and the scope Project Managers. The projects have a twofold objective, to provide evidence to the citizen, and the city user in general, of the main present and future projects and at the same time a commitment Administration to implement increasingly smart and interconnected projects.



Description indicators of the project sheet

N.	Tab points	Detail	Description
1	Project Description.	-	The objective and main activities of the indicated project are explained.
2	Project Status.	Active	The project is active and in the availability of the city user.
		Ongoing	The project is in progress, will be completed presumably Within the year indicated.
3	Value Smartness	XX/100	Value attributed to the project by applying the valuation method Derived from the founding principles.
4	Economic value	€	Investment made for the project net of human resources employed by Roma Capitale and the Participated Companies.
		To be determined	Economic value to be determined.
		Managed internally	The project is mainly managed by the facilities of Roma Capitale and the Participated Companies.
		Managed internally and through volunteerism	The project is mainly managed by the facilities of Roma Capitale, the Participated Companies and with the contribution of voluntary associations.
5	Global Goals impacted	-	Impact of the project on the Global Goals of the 2030 Agenda.
6	Composition of Smartness	-	Value attributed to the project divided on the basis of the five principles foundational.

Outline summary of projects

<i>Co says</i>	<i>Planning</i>	<i>Assumptions termination of work</i>	<i>Smartness</i>
TS I	Pago PA	Active	100/100
TR I	Smart Mature Resilience (SMR)	Active	100/100
TR II	Green Ring	Active	100/100
TS II	Institutional Portal	Active	95/100
PC I	Digital solutions to improve experience and knowledge Of the cultural heritage of RC	Active	95/100
TR III	Resilience Strategy	Active	95/100
IF I	Evolution of one-stop shop for productive activities - SUAP	Active	94/100
TS III	Rome Data Platform	Active	93/100
AM I	Water houses	Active	91/100
SE II	Rome Data Platform - Economic Development Dashboard	Active	90/100
AM II	Mobile container management	Active	90/100
PC II	Charter of Rome 2020	Active	90/100
EN I	GreenITNet	Active	89/100
PC III	MIC Card	Active	89/100
AM III	Waidy App	Active	89/100
PC IV	Rome Festival	Active	88/100
TU I	Tourism Portal	Active	88/100
TU II	Rome Data Platform - Dashboard Tourism	Active	88/100
TR IV	SMARTICIPATE	Active	88/100
PC V	SIMART	Active	87/100
SI I	TeTra system	Active	86/100
EN II	Project Life-Diademe	Active	86/100
PC VI	Observatory of (non)cultural participation	Active	86/100
AM IV	European project Soil4Life	Active	85/100
SI II	Urban Sentinel	Active	85/100
TR V	SIDIG-MED	Active	84/100
TS IV	Aequa Rome virtual counter	Active	83/100
TU III	Rome Capital Section on WeChat	Active	82/100

<i>Code</i>	<i>Planning</i>	<i>Assumptions termination of work</i>	<i>Smartness</i>
SI III	Street Control	Active	81/100
TU IV	QR Code	Active	80/100
SO I	INSPIRE Project.	Active	79/100
TS V	Digitization, dematerialization and inclusion project social	Active	79/100
TS VI	Digital skills development	Active	79/100
TS VII	Heritage Portal	Active	77/100
PC VII	Self-loan stations in libraries	Active	77/100
SI IV	European Project System	Active	76/100
SI V	Information and Training Platform	Active	76/100
SO II	Citizen communication support service for the deaf people	Active	73/100
TR VI	Road maintenance	Active	73/100
SO III	Project SIGeSS	Active	68/100
SE III	Home of Emerging Technologies	ongoing - 2021	100/100
SE IV	Incentive recycling of plastics	ongoing - 2021	89/100
TR VII	Reinventing Cities	ongoing - 2021	86/100
EN III	Instant Easy Connect	ongoing - 2021	84/100
TR VIII	RU:RBAN - Resilient Urban Agriculture.	ongoing - 2021	83/100
AM V	Web-Gis R3 Trees	ongoing - 2021	83/100
EN IV	Energy Desk	ongoing - 2021	81/100
SI VI	Behavioral Economics initiative on minutes	ongoing - 2021	79/100
AM VI	Local Composting	ongoing - 2021	78/100
TS VIII	Totem experimentation within Rome's city halls. Capital	ongoing - 2021	74/100
ES I	On-line service for reconfirming kindergarten registrations	ongoing - 2021	74/100
MO I	Intelligent infrastructure management platform and of the facilities	ongoing - 2022	100/100
TS IX	Smart Squares	ongoing - 2022	100/100
TS X	Citizen Relation Management & Citizen's Digital Home.	ongoing - 2022	100/100
MO II	New Central Mobility	ongoing - 2022	100/100
MO	II New Electronic Ticketing System designed with MaaS in mind.	ongoing - 2022	100/100

<i>Code</i>	<i>Planning</i>	<i>Assumptions termination of work</i>	<i>Smartness</i>
MO IV	New applications for permissive release	ongoing - 2022	100/100
TU V	Citizen Relation Management - Tourism	ongoing - 2022	100/100
TS XI	Single Environment of the Taxpayer	ongoing - 2022	94/100
EN V	PLATOON - Big Data for Energy	ongoing - 2022	93/100
TS XII	Participatory process	ongoing - 2022	91/100
TS XIII	Smart Citizen Wallet	ongoing - 2022	90/100
SE V	Lean Innovation Procurement	ongoing - 2022	90/100
PC VIII	Forma Romae	ongoing - 2022	88/100
IF VI	Invest in Rome - One-Stop Shop	ongoing - 2022	87/100
TS XIV	Digital communication (social, massive, chatbot, header)	ongoing - 2022	86/100
TU VI	Rome Pass	ongoing - 2022	85/100
TS XV	Training aimed at countering the digital divide	ongoing - 2022	85/100
TS XVI	Smart Working Pilot Project	ongoing - 2022	84/100
AM VII	Smart roadside containers	ongoing - 2022	84/100
TR IX	Rome Green Building	ongoing - 2022	82/100
ES II	Pedagogical geo-location of educational facilities and Rome Capital Schools	ongoing - 2022	69/100
MO V	New self-service machines for the sale of Travel Titles	ongoing - 2023	96/100
MO VI	New smart validators for validating Travel Vouchers electronic	ongoing - 2023	94/100
EN VI	PlatOne Project	ongoing - 2023	93/100
TR X	European Forum on Urban Agriculture (EFUA)	ongoing - 2023	89/100
MO VII	Occupancy control and management of parking stalls (blue stripes)	ongoing - 2024	96/100
EN VII	Smart pole	ongoing - 2024	93/100
MO VIII	E-mobility	ongoing - 2024	91/100
SI VII	Digital platform for emergency management	ongoing - 2024	89/100
AM VIII	Smart Comp	ongoing - 2024	84/100

Summary diagram of indicators

<i>City Indicator</i> City	<i>Indicator</i>
Number of fatal traffic accidents	Applications processed preschools
Number of non-fatal traffic accidents	Number of state schools up to secondary schools (kindergarten, primary, and junior high)
Number of criminal violations for driving under the influence of alcohol	Number of state secondary schools
Number of criminal violations for driving while impaired by drugs	Number of public universities
Number of criminal violations for fleeing personal injury accident	Number of Research Centers
Number of criminal violations for failure to rescue persons injured in traffic accident	Attractiveness of universities
Number of criminal violations for traffic homicide	Availability of housing managed by Roma Capitale
Number of criminal violations for serious/severe traffic injuries	Number of citizens taken into care by Social Services
Number of other criminal violations in road traffic	Number of Roma, Sinti and settled walkers within the Camps.
Number of criminal violations for introduction into the state and trade in fake products	Number of handicapped permits
Number of criminal violations for manufacturing and trading counterfeit goods	Identification of self-sufficient ROM cores
Number of criminal violations for fraud in the exercise of trade	Number of ROM pupils remaining in the school system.
Number of criminal offenses for violation of environmental regulations	Number of ROM accesses to job training courses resulting in employment
Number of criminal offenses for violation of building codes	Electricity consumption for public buildings (local PA)
Number of criminal violations for theft	Electricity consumption for city lighting
Number of criminal violations for encroachment on land or buildings	Electricity consumption for street lighting
Number of criminal violations for receiving stolen goods	Total city electricity consumption
Number of violations of the Urban Police Regulations	Renewable Energy Production from Public Buildings (Local PA)

City indicator

City indicator

Average preventive interventions per year	City Total Renewable Energy Production
Average emergency interventions per year	Air Quality - Presence of NO2 - N.Sup/yr.
Average interventions per year for weather emergencies	Air Quality - Presence of NO2 (IQAa)
Average interventions per year for forest and interface fires	Air Quality - Presence of O3 -N.Sup/yr.
Average interventions per year for general emergencies of other types	Air Quality - Presence of PM10 - N.Sup /year
Total number of enterprises, broken down by sector/industry	Air Quality - Presence of PM10 (IQAa)
City income (estimated GDP)	Air Quality - Presence of PM2.5 (IQAa)
Number of innovative enterprises	Gas consumption by public buildings (local PA)
Number of innovative enterprises/incubators/start-ups run by under-30s	Total city gas consumption
Number of enterprises with foreign ownership	Drinking water consumption by public buildings (local PA)
Number of start-ups	Water consumption for public area irrigation
Firms allocated in districts (territorial propensity)	Total water consumption of the city
Average time for handling administrative paperwork for opening a business	Annual number of nonpotable ordinances
Number museums/exhibition spaces/cultural venues Roma Capitale accessible to different abilities	Extension of areas not served by sewerage system
Presence of tools/data and information analysis/studies to improve and promote the cultural offerings of Rome Capital	Annual number of wastewater spills
Average degree of sociability per single appointment of Roma Capitale.	Waste from Separate Collection (DR)
Density of the existing cultural infrastructure in the area	Street Dumpsters for City User
Average daily attendance in the libraries of Roma Capitale.	Waste Sent for Recycling

*City indicator**City indicator*

Resident beneficiaries of museums and exhibitions Roma Capitale	Zone limit values established by Del.C.C. No. 12, 29.1.2004, in accordance with the Presidential Decree of 14.11.1997 and the R.L. No.18/01.
Average contribution issued to third-party organizations by Roma Capitale.	Waste Produced Per Capita
Number of public buildings regenerated	Separate Collection
Extension of abandoned spaces	Population served by Separate Collection
Reducing land consumption	Population served by Porta a Porta
Impact Social Sustainability	Inhabitants for Collection Centers and Ecological Islands.
Pillars of Paris impacted	Inhabitants per road station
Redevelopment of green areas	Coverage of surface tpl network
PPP development	km metro network
Number of annual domestic tourists	Population served by metro stations within a radius of 500m
Number of foreign tourists per year	Diffusion of fast lanes
Number of annual national attendance	Tickets sold for City User
Number of foreign annual attendance	Subscriptions sold by City User
Average days of stay of Italian tourists	Average number of shared vehicles (Cars, Mopeds, Bikes, Scooters, etc.) per City User
Average days of stay of foreign tourists	Average use of shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) per City User
Accommodation saturation rate	Average distance traveled by shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) per City User
Saturation rate of hotel facilities.	Average distance traveled with shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) by use
Saturation rate of non-hotel facilities	Average rental time of shared vehicles (Cars, Mopeds, Bikes, Scooters, etc.) by use

*City indicator**City indicator*

Number of resident children per municipal daycare center	km of bicycle paths
Number of resident children per licensed daycare center	Extension of pedestrian areas
Number of resident children by municipal preschool	% Vehicles on the road powered by engines with reduced environmental impact (EURO 6, LPG, CNG, Electric)
Enrollment of municipal preschools users of food service	# motor vehicles on the road per resident citizen
Municipal preschool enrollees using the transportation service	ZTL Exemption
Applications to daycare centers run by Roma Capitale processed	

*KPI smart**KPI smart*

Open Data	Presence of an Integrated Supply Platform.
Average connectivity speed in the city	Integrated system for managing enrollment and payments to daycare centers through Roma Capitale
Number of wifi points in public buildings	Integrated system for preschool enrollment management through Roma Capitale
Link and integration with SPID / CIE	Integrated system for managing enrollment and payments to normed food and transportation services (municipal/state preschools, primary, secondary schools).
Link and integration with ANPR	Integrated system for managing enrollment and payment for the transportation service for the disabled (municipal/state preschools, primary, secondary and second degree).
Presence of an integrated citizen profile	Integrated system for managing applications for book vouchers and student scholarships on the basis of ISEE.
Presence of a Smart City plan that has been updated for less than three years	Number of automatic debits for public housing contributions.
Number of Smart projects initiated in the city	Number of online public housing application systems.
Amount of Smart projects initiated in the city	Number of smart streetlights
Presence of a portal dedicated to Smart projects.	Number of energy-efficient interior lights in public buildings
Number of delinquent taxpayers	Power managed within an Electric Smart Grid.
Collection of amounts established in evasion	Energy produced by photovoltaic panels
Municipalities participating in the PAGO PA node	Number of solar panels
Citizens related to municipalities participating in the PAGO PA node	Energy produced from other renewable sources
Ability to pay taxes online	Number of air quality monitoring stations.
Number of visitors to the Portal	Presence of an Operational Intervention Plan for the reduction of critical air pollution issues
Authenticated access to the Portal	PAESC presence updated for less than 3 years

Visited pages of the Portal	Presence of rainwater harvesting systems
Reporting support services: SUS	Presence of drinking water pressure and flow measurement systems
Number of citizen services offered online	Smart irrigation systems for public green spaces
Number of users in citizen participation initiatives	Number of sensors for water leakage monitoring
Number of citizen participation initiatives	Number of sensors for water quality monitoring.
Presence platform for presenting and sharing ideas	Number of water purification plants
Number of followers on Social Channels	Extension of urban gardens
Annual percentage increase in followers on Social Channels	Number of home composting facilities
Number of people who opened at least one post per day on Facebook	Number of collection centers and ecological islands
Presence of a Control Room for monitoring city security	Capacity of organic waste treatment plants.
Presence of a system for coordinated incident management	Capacity of plastic processing plants
Number of surveillance cameras	Capacity of paper processing facilities
Presence of cybersecurity protocols	Capacity of glass processing plants
Presence of systems for the collection and integrated management of citizen reports	Number of creative reuse centers
Presence of direct communication channels to citizens in case of emergency	Methane / Biogas produced from organic waste
Cyber security	Number of noise pollution monitoring sensors.
Places used for coworking	Presence of a plan to reduce noise pollution
Number of Online Proceedings (Administrative Simplification) related to the opening of an enterprise/business	Number of metro stations with tap payment

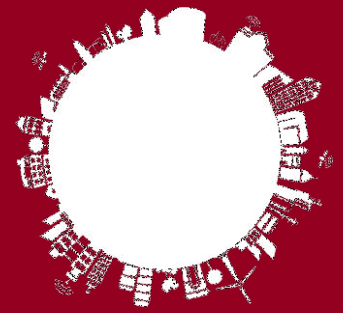
KPI smart

KPI smart

Number of requests submitted online	Number of intermodal parking lots
Presence Economic Development Plan updated less than 3 years ago	Average spaces for intermodal parking
Number of Knowledge Sharing events (conferences, meetings, etc.)	Presence of tpl ride schedule updating systems
Number of Incubators	Presence of the updated PUMS for less than 3 years
City brand presence on e-commerce platforms	Integration with major mobility players (google maps)
Number of subjects adhering to the city's brand	Presence of a citizen communication app
Sales value of city products	Integration of systems for booking sharing vehicles
Presence of a Control Room for economic development (vocation of the city, districts, etc.)	Sharing vehicle monitoring system
Number of initiatives for the enhancement of SMEs	Number of traffic lights managed remotely
Number Projects involving public-private partnership	% of smart stalls (remotely monitored)
Presence of a channel for direct communication with the citizen	% smart crossings (on call or with countdown)
Presence app for routes and presentation of works digitally (QR code, etc.).	Smart sensors (stereoscopic cameras) for monitoring pedestrian flows per km2 (LTZs, areas pedestrian and 30 zones)
Number of electronic tickets sold by cultural offerings of Roma Capitale	Number of charging stations per electric vehicle
Accessibility points for direct online purchase (RC-owned and non-RC-owned)	Number of electronic or digital parking payment transactions
Mobile friendly experience in purchasing	Presence of a Control Room for monitoring city mobility
Degree of RC's annual cultural activity per active social account (posts)	% LPT cars equipped with passenger counters
Number of cameras to ensure security at RC's cultural sites	% integrated MaaS services
MICs sold remotely	% Electronic and digital Travel Securities issued

*KPI smart**KPI smart*

Number of Museums and archaeological sites in Rome Capital accessible with virtual reality	% Surface means equipped with tap payment
Option not to print the ticket bought online and present it on the mobile device	% electronic tickets sold by self-service mode
Social engage (average)	Amount related to LPT % arising from electronic payments
Presence of an official page on Social Channels	Number of info-mobility requests handled via instant chat (WhatsApp)
Presence of the Tourism Plan updated less than 3 years ago	Number of social interactions
Presence of city guide apps (transportation, restaurants, monuments, etc.)	



CHAPTER 4

FOCUS AREAS OF INTERVENTION



TRANSVERSAL



ROMA 

48



THE GOALS.

The effective development of Roma Capitale's "Smart City" is also based on the adoption of a systemic approach, which succeeds in

To enhance synergies between different areas of focus and to pool *assets* technology and infrastructure.

Data governance plays a crucial role: careful data management enables the implementation of services in line with *city users'* expectations by promoting collaboration among different souls of the Administration.

To this end, the Capitoline Administration has provided a specific cross-coordination line to manage and develop initiatives that impact all other areas.

Specifically, this line is deputed to:

- Developing the soft skills of the Administration and city users;
- Improve the relationship with the city user by also reducing the digital divide;
- Developing and enhancing the urban technology infrastructure by ensuring interoperability and application cooperation among the Administration's ICT systems.



Thus, the "smart" development strategy is based on:

- Strengthen the city's infrastructure network and develop next-generation fiber optic and wireless connectivity tools to ensure a higher level of performance and increase the level of coverage in the city area;
- Building a city data platform, integrating data of administration and data from different sources (e.g., IoT), public and private;
- integrating the different "area" ICT systems to ensure a unified offer of services to the citizen through the implementation of application cooperation between platforms and enhancing the "single" access points to the digital services offered by Roma Capitale, while developing architectures that integrate cloud and edge computing approaches. With a view to integration, the Capitoline Administration has already undertaken several project initiatives such as the creation of unified channels for personalized use of online services (Casa digital citizen), single access to the Roma Capitale portal through SPID, the enhancement of cartographic services (NIC), the digital management of Roma Capitale's real estate assets, and the adaptation of payment systems to join the "*pagoPA*" node;
- Promote the emergence of new forms of collaboration between the various structures of Roma Capitale, the investee companies and city users, through the establishment of interdisciplinary tables to govern the city's digital transformation processes, the use of participatory forms of citizen involvement in the definition of the city's digital strategies (e.g., public consultations), the implementation of CRM solutions that will allow Roma Capitale to centrally manage in a structured manner the information and reports of citizens for the services offered by the Administration and its Participated Companies in order to ensure the continuous improvement of the services offered;
- Promote and support initiatives for the development of soft skills Of the capitol administration and *city users*.

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
TS I	PA Payment mode, secure, simple and transparent for services offered by Roma Capitale and the Municipalities of the Metropolitan City.	Active	100/1001,	300,000 euro
TS II	Institutional Portal New Portal of Roma Capitale, divided into 18 Thematic Areas, centralizes all information and services Administration.	Active	95/10010,000,	000 euros The
TS III	Roma Data Platform Platform capable of managing, analyzing, and exposing internal and external data to Roma Capitale.	Active	93/100400	,000 euro
TS IV	Virtual counter Aequa Roma can interact with an operator online, by appointment, in a real videoconference directly from home.	Active	83/100Internally	Managed The Citizen
TS	VP Digitization, dematerialization and social inclusion project Delivery of new services to users online and digitization of paper archive.	Active	79/100Internally	Managed
TS VI	Digital skills development course involving Roma Capitale employees to develop specific digital skills.	Active	79/100Internally	Managed Training
TS VII	Heritage Portal Portal for online management of procedures for assigning housing units and monitoring requests entered.	Active	77/100	300,000 euro
TS VIII	Totem experimentation within the Municipalities of Rome Capital Totems for remote and real-time interaction with Aequa Roma operators within the Municipalities.	ongoing - 2021	74/100700,	000
TS IX	Smart Squares technological and social innovation tools in some of the capital's squares to touch Rome Smart City.	ongoing - 2022	100/10010,000,	000 euros New
TS	XCitizen Relation Management & Citizen's Digital Home. Single knowledge system that provides a real-time update of the practices and service offerings of Rome Capital.	ongoing - 2022	100/1006,	800,000
TS XI	Environment Single taxpayer Integrated system for online management of all taxes of Roma Capitale.	ongoing - 2022	94/1001,	200,000 euro
TS XII	Participatory process Initiatives aimed at the full involvement of citizens in the management of public affairs and the informed exercise of their rights.	ongoing - 2022	91/10037,000,	000 euros
TS XIII	Smart Citizen Wallet System that incentivizes and rewards virtuous behavior of Roma Capitale city users.	ongoing - 2022	90/100300	,000 euros



TS	XIV Digital communication (social, massive, chatbot, header) Management of social channels and the Roma Informa newspaper in order to give voice to public interest activities.	ongoing - 2022	86/100	Internally Managed
TS	XV Training aimed at countering the digital divide Free training to all citizens in the use of new technologies and online services offered by Rome Capital and the Public Administration.	ongoing - 2022	85/100	Internally Managed o Through Volunteerism
TS XVI	Smart Working Pilot Project be defined Pilot project that will provide Roma Capitale employees with the necessary tools to be able to work in smart working by overcoming the logic of teleworking.	ongoing - 2022	84/100	to

THE MAIN INDICATORS

KPI

smartKPI smart

Open Data	Citizens related to municipalities participating in the PAGO PA node
Average connectivity speed in the city	Ability to pay taxes online
Number of wifi points in public buildings	Number of visitors to the Portal
Link and integration with SPID / CIE	Authenticated access to the Portal
Link and integration with ANPR	Visited pages of the Portal
Presence of an integrated citizen profile	Reporting support services: SUS
Presence of an updated Smart City plan by less of three years	Number of citizen services offered online
Number of Smart projects launched in the city	Number of users in participation initiatives citizen
Amount of Smart projects initiated in the city	Number of citizen participation initiatives
Presence of a dedicated project portal Smart	Presentation platform presence and sharing ideas
Number of delinquent taxpayers	Number of followers on Social Channels
Collection of amounts established in evasion	Annual percentage increase in followers on the Social Channels
Municipalities participating in the PAGO PA node	Number of people who have opened at least one posts per day on Facebook



SAFETY



THE GOALS.

Roma Capitale has a priority need to create and promote a safe urban environment that ensures the safety of individuals and the community by managing with

timeliness risks and unforeseen events, in synergy with the various actors involved in the Security (Law Enforcement, Local Police, Civil Defense, etc.) through smart vigilance and prevention solutions.

The achievement of this goal is tied to the implementation of an organic model and structured focused on the three cornerstones of urban-emergency-digital security, aiming to:

- Protect the personal security of the citizen, in order to safeguard and increase the "sense" of protection and comfort relative to the individual and collective sphere;
- ensure timely action and the adoption of proper safety measures in the face of unforeseen events and natural disasters that may strike the city, creating alert and emergency situations;
- Ensuring a secure digital environment, with particular reference to the exchange of sensitive information data, minimizing the risk of *data breaches* or other types of cybercrime.



With specific reference to the context of urban security, in April 2019 the Pact for Urban Security of Roma Capitale was signed with the Lazio Region and the Prefecture of Rome, aimed at ensuring joint actions to raise city security standards and initiate coordinated actions.

To properly address the various aspects that the topic of security recalls, the need appears inescapable to:

- Strengthen the infrastructure and functional networks to assist citizens in case of emergencies and/or requests for intervention, such as h24/7 active Operations Rooms of Local Police, Civil Defense, etc.
- Establish a One-Stop Shop deputed to the integrated management of unforeseen events and disasters;
- Implement safety and emergency plans;
- Develop *mobile* solutions (e.g., for Civil Defense) for effective and efficient communication in the event of natural or environmental disasters or other unforeseeable emergency events that require timely interventions and coordination activities among the different forces in the field;
- Promote measures to combat illegality using integrated geo-referenced video surveillance systems aimed at mapping cameras throughout the city managed through a single information node.

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
SI I	TeTra system Territory control system to coordinate patrols, convey priority communications, and handle alerts in a timely manner.	Active	86/100	18,000,000 euro
SI II	Urban Sentinel the detection and management of different types of driving-related hazards, including through audible and visual alarms.	Active	85/100	Internally Managed System for
SI III	Street Control Integrated, automated system for detecting traffic violations.	Active	81/100	40,000
SI IV	European project System System for detecting dangerous substances and drugs powered by an extensive network of smart sensors.	Active	76/100	70,000 euro
SI V	Information and Training Platform internal to the Rome Capital Local Police, to find technical-legal and operational information necessary to ensure the protection of the city user.	Active	76/100	Internally Managed Platform,
YES	VII Behavioral Economics Initiative on Minutes. Replication of the 2017 Nudge Award winning intervention in Rome to reduce recidivism of violations of the Highway Code.	ongoing - 2021	79/100	Internally Managed
SI	VII Digital platform for emergency management. Updating the platform, in use by the Civil Defense, for emergency management.	in progress - 2024 defined		89/100 to be



THE MAIN INDICATORS

<i>City Indicator</i>	<i>Indicator</i>
Number of fatal traffic accidents	Number of criminal offenses for violation of regulations in environmental matter
Number of non-fatal traffic accidents	Number of criminal offenses for violation of regulations in building matter
Number of criminal violations for driving under the influence of alcohol	Number of criminal violations for theft
Number of criminal violations for driving under the influence of Psychophysical alteration due to drug use	Number of criminal violations for encroachment on land or buildings
Number of criminal violations per escape in case of accident with personal injury	Number of criminal violations for receiving stolen goods
Number of criminal violations for failure to rescue people injured in traffic accident	Number of violations of the Urban Police Regulations
Number of criminal violations for traffic homicide	Average preventive interventions per year
Number of criminal violations for personal injury severe/severe road conditions	Average emergency interventions per year
Number of other criminal violations in circulation road	Average interventions per year for weather emergencies
Number of criminal violations for introduction into the state and trade in fake products	Average interventions per year for forest fires and interfacing
Number of criminal violations for manufacturing and trade in counterfeit goods	Average interventions per year for general emergencies of another kind
Number of criminal violations for fraud in the exercise of the trade	Number of criminal offenses for violation of regulations in environmental matter

KPI

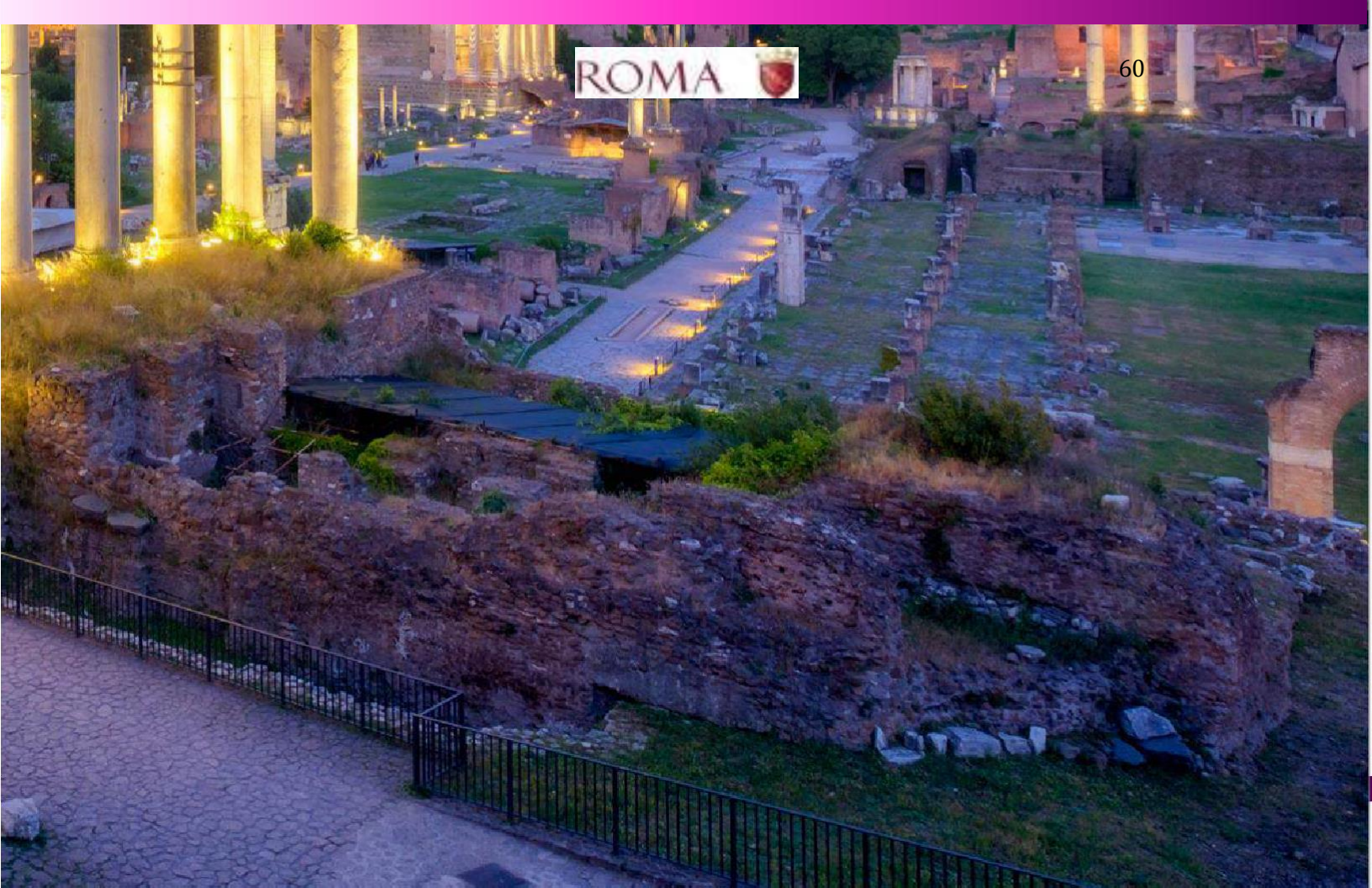
smartKPI smart

Presence of a Control Room for monitoring Of city security	Number of Citizen Access Points for Support computer scientist
Presence of a system for coordinated management of accidents	Presence of integrated collection and management systems Of citizen reports
Number of surveillance cameras	Presence of direct communication channels to the citizens in case of emergency

Presence of cybersecurity protocols	Number of Citizen Access Points for Support computer scientist
Cyber Security	



ECONOMIC DEVELOPMENT



THE GOALS.

With 300,000 businesses operating in its territory, Rome is one of the urban areas with the largest business presence in the country.

To make the most of this very special and distinctive context, the Capitoline Administration intends to invest in tools that will incentivize the revitalization, growth and development of the city's economic-entrepreneurial fabric, enhancing the assets at its disposal and promoting the best practices of the area, proposing its own model of economic development, aimed at:

- To simplify and facilitate relations between public administration and businesses in order to establish an ongoing, mutually beneficial dialogue for the benefit of the entire community;
- Promote the competitiveness of enterprises in order to improve employment levels, development constant human capital, efficiency and productivity;
- Promote the emergence and development of synergies, as well as the sharing and transfer of *know-how*, in order to facilitate the identification and adoption of virtuous measures for entrepreneurial development, with positive *spillovers* on the entire economic and social fabric of the territory.



The "smart" strategy apt to put enterprises and the fabric back at the center productive city, is based on the achievement of priority goals:

- decision support platform for investment and doing business, as a system of data, information and functions usable and malleable to the different types of queries that the investor user needs to analyze socioeconomic territorial data of Rome and to validate their investment strategies (Invest in Rome - Business Setup).
- Facilitated web procedures and related administrative Back-Office Online Services (B.O.O.S.), available to internal professional desks, dedicated to supporting investment projects of investor users and entrepreneurs within and no later than the stated standard timelines (Invest in Rome - Investor Journey). Also contemplated in the digital procedures are the escalation procedures that will be provided for the Investment and entrepreneurial projects competing in the Rome brand reputation.
- implement technology solutions, including the development of new web and mobile apps, that ensure integration of the offer of public services and the simplification of administrative procedures, thus facilitating the birth and development of new business initiatives. In this regard, Roma Capitale has already launched several initiatives: evolution of the telematic platform of the Sportello Unico Attività Produttive, to improve the services offered to businesses; implementation of new digital tools for the management of procedures (e.g., development of mobile apps for supervisory actions and on-the-ground control of the issued titles - cd. VAV on-site);
- Promote innovation and public-private cooperation by mapping and developing models of territorial, social and solidarity-based economic innovation and encouraging the emergence of OpenInnovation Technology Transfernetworks among economic operators, businesses, startups, incubators, accelerators, universities, research centers and institutions to foster the virtuous sharing of skills and know-how

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
SE	IEvolution one-stop shop for productive activities - SUAP Evolution of the telematic counter in productive activities and tourism for the management of administrative procedures related to commerce, receptive activities, public land occupation, billposting and advertising.	Assets	94/1002,	650,000
SE	II Roma Data Platform - Economic Development Dashboard Dashboard that through various specially designed dashboards allows for the analysis of data representing the productive fabric and phenomenon of Tourism in Rome on a geo-localized basis.	Assets	90/100500,	000
SE	III House of Permanent Living Lab aimed at providing talent and startups with a testbed to jointly develop and experiment with innovative products, technologies and services.	Emerging Technologies ongoing - 2021		100/1006,000,
SE IV	Incentive recycling of plastic Internally Installation of plastic-eating machines to incentivize plastic recycling in exchange for rewards.	ongoing - 2021		89/100 Managed
SE V	Lean Innovation Procurement Internally Implementation of a web platform aimed at integrating and managing requirements and procedures defined to profitably accommodate the high-tech offerings of innovative startups and SMEs.	Ongoing - 2022		90/100 Managed
SE	VII Invest in Rome - One-Stop Implementation of a web platform that allows investors to access, through a single portal, the various information and procedures useful for starting their economic activities on Roman soil.	Shopin course - 2022	87/100 Internally	Managed



THE MAIN INDICATORS

*City Indicator*City

Indicator

Total number of enterprises, broken down by sector/industry	Number of enterprises with foreign ownership
City income (estimated GDP)	Number of start-ups
Number of innovative enterprises	Enterprises allocated in districts (propensity territorial)
Number of innovative enterprises/incubators/start-ups run by under-30s	Average time for handling administrative paperwork for opening a business commercial
Total number of enterprises, broken down by sector/industry	Number of enterprises with foreign ownership

KPI


smartKPI smart

Places used for coworking	City brand presence on the platforms of e-commerce
Number of Online Proceedings (Administrative Simplification) related to the opening of an enterprise/business	Number of subjects adhering to the city's brand
Number of requests submitted online	Sales value of city products
Presence Economic Development Plan Update for less than 3 years	Presence of a Control Room for development economic (vocation of the city, districts, etc.)
Number of Knowledge Sharing events (conferences, meetings, etc.)	Number of initiatives for the enhancement of SMEs



CULTURAL PARTICIPATION



ROMA 

THE GOALS.

Universally recognized as unique because of the immense cultural heritage developed without substantial interruptions over the span of more than

2700 years old, and custodian of an archaeological, historical-artistic and monumental heritage largely part protected by UNESCO, Rome also expresses a substantial part of the national creation that generates new cultural heritage (from the audiovisual to the world of performance), as well as hosting one of the largest and most articulate scientific communities in Europe and a complex network of international cultural institutes, centers for research, higher education and study, and the processing and transmission of knowledge in every sphere of human knowledge. The challenges of the future point to:

- To encourage the integration of scientific-technological culture within the more traditional forms of cultural creation in order to enhance the development of new forms of knowledge and knowledge production that project into the world and into the future its vision of contemporary time, society, and human beings, contributing to progress;
- Facilitate the full and unfettered enjoyment of cultural rights by different types of city users, including anyone who lives in Rome, visits it, or spends short periods, through accessibility and participation in the cultural and scientific life of the city, its artistic, cultural and landscape heritage, and the new opportunities that technology makes possible for creation, learning and social innovation;
- support and remove obstacles to the production, creation and expression activities of the community of artists, scientists, creatives, operators and cultural enterprises in the broadest sense that recognizes Rome as a point of attraction and development of cultural, scientific and creative initiatives.



The "*smart*" development strategy of the culture sphere will have to be addressed to:

- implement coordinated, integrated and customized solutions by type of city user aimed at ensuring broader accessibility to the city's cultural life as a whole. Roma Capitale has already equipped itself with several solutions, such as the MIC Card for unlimited access for permanent or temporary residents for 12 months to museums and historical-archaeological sites at a symbolic cost; it has started experimenting with platforms for collecting and coordinating information of the city's cultural life, including the Forma Romae project, an information system on Rome's historical, archaeological and architectural heritage for its integrated management and sharing of the knowledge acquired about the city's history and art;
- Promote the realization of the cultural rights of each inhabitant of the city's territory through the strategic and operational coordination of Roma Capitale's cultural actors; the integrated reading of their actions and their impact; the development of international networks that allow the city to be an ever-active point of reference for the realization of these rights; projects that allow a diffusion Of the initiatives throughout the city;
- facilitating the organization of activities of an artistic-cultural nature throughout the city through the re-interpretation of the city's spaces and places in an innovative way- as is the case, for example, with the Feast of Rome, a 24-hour-long party to celebrate the arrival of the New Year; the simplification of the management of administrative acts related to the holding of events, as well as their communication, as well as through the implementation of forms of support and simplification aimed at cultural entrepreneurship and the collection and networking of data and information related to the cultural processes set up by the structures of Roma Capitale.

THE LINES. OF

CULTURAL PARTICIPATION

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
PC I	Digital solutions to improve the experience and knowledge of RC's cultural heritage Initiatives aimed at enhancing the artistic and cultural heritage through the use of augmented and virtual reality technologies of the history and Monuments of Rome.	Assets	95/1002,	700,000
PC II	Rome Charter 2020 Pathway involving more than 45 cities in order to create a more inclusive, democratic and sustainable city, in accordance with the Universal Declaration of Human Rights.	Active	90/10070	,000 euros
PC III	MIC Card Card dedicated to citizens of the metropolitan area that gives access to the City's 19 civic museums and 25 archaeological sites.	Active	89/100245,	000 euro
PC IV	Festa di Annual initiative aimed at the organization, promotion and dissemination of events organized on the territory of Roma Capitale on the occasion of New Year's Eve.	RomaAttivo	88/1001,	770,000 euros
PC V	SIMARTActive cataloging and management of cultural, monumental and territorial property.	87/100120,	000 euro	Information system for
PC	VI Osservatory of (non)cultural participation. Monitoring and data analysis of citizen participation and (non)participation in supply cultural proposed by organizations, bodies and cultural institutions in Rome.	Assets	86/100176,	000
PC	VII Self-lending stations in libraries. Stations set up in 25 libraries based on RFID technology embedded in book stickers.	Assets	77/100190,	000 euro
PC VIII	Forma Romae New geographically based integrated information system to manage and disseminate the knowledge gained about the history, archaeology, architecture and art of the eternal city.	ongoing - 2022	88/1001,	400,000 euros



THE MAIN INDICATORS

*City Indicator*City

<i>City Indicator</i> City	<i>Indicator</i>
Number museums/exhibition spaces/cultural venues Rome Capital accessible to different abilities	Average daily attendance in Rome's libraries Capital
Presence of tools / analysis of data and information / Studies to improve and promote the cultural offerings of Roma Capitale.	Resident beneficiaries of museums and exhibitions Roma Capitale
Average degree of sociability per single appointment of Rome Capital	Average contribution issued to third-party organizations by Roma Capitale
Density of existing cultural infrastructure on the territory	

KPI

smartKPI smart

<i>KPI</i>	<i>smartKPI smart</i>
Presence of a channel for direct communication with the citizen	Number of cameras to ensure security of places culture of RC
App presence for routes and presentation of works in digital mode (QR code, etc.)	MICs sold remotely
Number of electronic tickets sold per bid cultural of Roma Capitale	Number of Museums and Archaeological Sites in Rome Capital. accessible with virtual reality
Accessibility points for direct online purchase (of RC and non-RC properties)	Option not to print the purchased ticket online and present it on the mobile device
Mobile friendly experience in purchasing	Social engage (average)
Degree of RC's annual cultural activity by account active social (post)	



URBAN TRANSFORMATION



THE GOALS.

The city is, historically, the resilient place of great readjustment capabilities: it reacts to transformations, rethinking the

spaces in the ways in which they are used. However, the planning/implementation system traditional proves inadequate to new needs and changing socio-economic conditions. It is necessary to break the mechanism whereby unimplemented/unimplementable forecasts "freeze" important areas for decades by inhibiting their collective use, abandoning them to degradation and keeping them, instead, at the disposal of private initiatives now alien to the context.

Rome needs to define a new "smart" model of urbanization that improves the usability and attractiveness of the area as well as the quality of the urban environment.

The objectives are:

- Redesign and modernize functionality and services;
- Create a labor market by strengthening the ability to attract valuable and competitive production chains;
- Regenerate the settlement habitat by adjusting it to modern standards of quality of life, while also ensuring social relations and inclusion;
- Make the livability of public spaces safe and enable internal and connecting mobility inspired by sustainability.



The methodology has experimental value given the large size of the area, the heterogeneity of urban areas and implementation tools, and the complexity of the objectives.

A complex strategy, which must combine urban-scale needs with the local instances of neighborhoods as part of an articulated procedural path, with a focus on qualifying the infrastructure system of public spaces and the environmental system. By means of a network of public spaces and corridors dedicated to soft mobility, in conjunction with major environmental systems and local and urban public spaces, an ambitious process of urban "regeneration" is triggered, which follows principles of "sustainability," "quality," and "equity."

THE LINES. OF

Concrete actions:

- Regeneration of already built contexts;
- Qualifying the green plot;
- Integrating urban space and mobility;
- Design quality and continuity of pedestrian areas and open spaces;
- Redefining the rules of established fabrics;
- Enhance the historical, cultural and environmental heritage;
- Prioritize the functional mix;
- Connecting green-functions-services-neighborhoods;
- Integrate residual spaces;
- Promote urban quality through competitive procedures and/or through competitive comparison between regeneration proposals, encouraging the introduction of innovative forms of partnership among the various actors involved in the transformative process;
- Ensure effectiveness of objectives through a path of information, listening, discussion and participation with citizens and stakeholders, for the sharing and rooting of the *vision* in the territory and for the definition of common strategies.

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
TR	ISmart Mature Resilience (SMR) Development of an urban resilience management model through an in-depth research program carried out at the European level.	Asset	100/100	90,000
TR II	Green Ring Development of intermodality interconnected with the urban and regional network, through a system of interchanges and A network for soft mobility.	Active	100/100	Internally Managed
TR II	Resilience defined Defining and implementing the Resilience Strategy in order to address the social, economic and physical challenges, characteristic of the 21st century.	Strategy	Active	95/100 to be
TR IV	SMARTICIPATE Platform aimed at fostering citizen participation in urban development processes and renewing the relationship with between Roma Capitale and Citizens.	Assets	88/100	60,000
TR V	SIDIG-MED Improved management patterns of urban green/agricultural areas including through the redevelopment of abandoned and degraded areas.	Assets	84/100	400,000
TR	VI Maintenance of roads Monitoring and management of surveillance and emergency works on the roads of the Great Road System (about 800 km) of Roma Capitale.	Active	73/100	Internally Managed
TR	VII Reinventing Cities underway - 2021 International competition to promote zero-impact urban developments by presenting the best proposals for transforming underutilized sites as examples of sustainability.		86/100	to be determined
TR VIII	IRU :RBAN - Resilient Urban Agriculture ongoing - 2021 Project to transfer best practices, urban regeneration models and social inclusion for sustainable and integrated urban development.		83/100	125,000 euro
TR IX	Rome Green Building Identify buildings that have adopted energy and environmental certification protocols, promoting the integrated design of the entire building and assessing its environmental impact.	ongoing - 2022		82/100 to
TR	X European Forum on Urban Agriculture (EFUA) Construction of new European policies (Programming 2021-2027) in response to sustainable urban development.	ongoing - 2023	89/100	160,000 euro



THE MAIN INDICATORS

<i>City Indicator</i>	<i>Indicator</i>
Number of public buildings regenerated	Pillars of Paris impacted
Extension of abandoned spaces	Redevelopment of green areas
Reducing land consumption	PPP development
Impact Social Sustainability	



TOURISM



THE GOALS.

In the current global tourism environment, Rome wants to continue to be a leading destination in the international market. To do so, it is necessary to

Evolve from passively welcoming tourists to organizing a system-destination that can to choose its visitors, just as its main competitors are doing.

The "Strategic Guidelines for Tourism- FUTOUROMA," presented at the of the "FUTOUROMA 2019-2025" event, have been designed with the aim of turning the visit to Rome into a benefit for tourists and citizens, under the banner of sustainability and Of attractiveness.

Rome, which has always been touristy because it is the Eternal City, must become a destination eternally tourist: without losing her personality and the traits that identify her in the collective imagination, must know how to introduce new elements, reconciling the relationship between tourists and residents. Objective, to consolidate the Capital's position among the top three European destinations and among the top fifteen worldwide, applying a responsible growth strategy that brings all-round benefits.

The "Strategic Guidelines for Tourism- FUTOUROMA," approved by Resolution of G.C. No. 148/2020, outline a new model of a city and destination that is open and welcoming, international, creative and inclusive; an instrument created through the participation of institutions, operators, stakeholders and academia, guiding the entire tourism system, which clearly defines the responsibilities and tasks of each entity.

Objectives:

- Improve tourism management (attractions, mobility, urban decorum, accessibility, etc.) and move from simple promotion to integral tourism coordination;
- Promote inclusive and sustainable growth of the sector, having regard to respect for the City and its artistic, cultural and natural heritage;
- Refine their short- and long-term marketing strategy;
- Diversify tourism products, developing current ones with growth potential, to decongest the most overcrowded sites, including with the active involvement of citizens;
- Enhance elements of Roman identity to build memorable tourism experiences;
- ensure a multicultural welcome with international standards through a recognized system of quality in services and shopping;
- Increase average stay and repeaters through high value-added offerings that allows you to personalize your experience in Rome.



THE LINES. OF

Given the growing importance of digital solutions for the development of a city, the strategy of a "smart city" can be understood, also from a technological point of view, as a point of convergence of strategies, as a holistic and synergistic view of how technologies and data become a cross-cutting platform to support its daily functioning and operations and sometimes even enable the achievement of the city's broader and longer-term goals. The availability of data and information plays a key role not only for decision makers and administrators, but also and especially for *City Users* who can use it to evaluate the Administration's performance.

Specifically, as it emerges from the "Strategic Guidelines for Tourism-FUTOUROMA," the "smart city" strategy, oriented toward a vision of a sustainable city, must ensure the presence of a platform that brings together and harmonizes the enabling intangible and tangible technological infrastructures and their connection with all ecosystems, focusing in particular on how:

- provide the *City User* with integrated services that are usable and easily accessible from multiple physical and virtual channels, built around the needs of users rather than the capabilities and resources of a single sector;
- Ensure the interoperability of the city's data, systems and digital *assets* to optimize their overall value to *stakeholders*, in a logic of a master plan, and thus of coordinated and coherent public-private development;
- consciously use the data collected by the City ensuring new services that are ever closer to the needs of *City Users*, in an accessible form for the economic and social development of the community ("*open data*"), and how to use the same to make city government more participatory ("*open government*"), while improving legality and transparency in administrative processes.
- Promote initiatives that enable the user experience to be improved, offering a mode of travel in which the tourist is transformed from a passive spectator to an active participant with the goal of getting involved with the authenticity of places and cultures, arriving to discover the most deep. With this in mind, the administration has initiated specific projects that increase tourism offerings through the use of augmented and virtual reality, such as the "*Circus Maximo Experience*."

In this direction, the role of the D.M.O. (*Destination Management Organization*) with in charge of strategic, organizational and operational decisions through which to manage the process of *definition, promotion and marketing* of tourism products expressed by the territory, in order to generate balanced, sustainable and with special attention to the aspect of accessibility, the cultural, social and economic impacts of which will be the result of a structured approach in line with the *smart city* philosophy.

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
TU	I Portal Tourism Official tourism website of Roma Capitale that, in 5 languages, offers information on events, shows, accommodations, dining facilities, transportation and trivia.	Active	88/100840,	000
TU	II Roma Data Platform - Dashboard Tourism Dashboard for the management and monitoring of tourism activity throughout the Capitol.	Assets	88/100300,	000
TU	III Sezione Roma Capitale on WeChat <i>Channel dedicated to the reception and tourism promotion of Roma Capitale in Chinese language.</i>	Active	82/10036,	600
TU	IV QR Code <i>System to support Tourists and Citizens of Rome Capital for better enjoyment of tourist attractions.</i>	Active	80/100122,	000
TU	V Citizen Relation Management - <i>Integrated knowledge system to support Tourists and citizens of Roma Capitale.</i>	Tourism Ongoing - 2022	100/10062,	000
TU determined	VI Roma <i>Integration of Roma Pass with new features and integrated services.</i>	Passin course - 2022		85/100to be



THE MAIN INDICATORS

City Indicator

<i>City Indicator</i>	<i>Indicator</i>
Number of annual domestic tourists	Average days of stay of foreign tourists
Number of foreign tourists per year	Accommodation saturation rate
Number of annual national attendance	Saturation rate of hotel facilities.
Number of foreign annual attendance	Saturation rate of non-hotel facilities
Average days of stay of Italian tourists	

KPI

smartKPI

Presence of an official page on Social Channels	Presence of city guide apps (means, restaurants, monuments, etc.)
Presence of the Tourism Plan updated by less than 3 years	Presence of an Integrated Supply Platform.



EDUCATION AND SCHOOLS



THE GOALS.

The implementation of a "smart education" model for Roma Capitale is an important lever for cultural development

overall city. This model involves the use of technology not only for services earmarked for the education of young people (activities and programs) and the ways in which they are delivered, as well as the facilities and spaces for carrying out educational activities. For the success of the project, it will be necessary to provide for continuous collaboration between the territory and academia, which will make it possible to improve services to citizens and refine the educational offerings.

The priorities for Rome are therefore:

- Ensure compliance with safety regulations within school buildings to safeguard the conditions and methods through which educational activity is exercised, as well as innovate school spaces to make the educational experience more attractive and engaging;
- to educate for social responsibility and inclusion, leveraging education that is more sensitive to social and civic issues, with the aim of creating a more attentive, aware, open and active society, endowed with a "social conscience" and thus capable of contributing positively, including through responsible use of new technologies, to the well-being of the community.



The "smart" development strategy in this area will need to focus on the following On:

- Upgrade school buildings by making them safer and compliant with environmental and energy principles, including through the introduction of new sensor tools for monitoring the condition of facilities;
- Encourage the use of game-based learning and gamification teaching strategies to make the processes of learning, with special reference to the 0-6 age group;
- Establish cyber listening desks and promote awareness campaigns to prevent bullying and cyberbullying.

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>SmartnessEconomic Value</i>	
ES	IS Online service of reconfirming kindergarten enrollment. New online feature dedicated to the computerized management of reconfirmations of enrollment in the Rome Capital Day Care Centers.	Ongoing - 2021	74/10060,	000
ES II	Pedagogical geo-location of the Educational and School Facilities of Roma Capitale. New online feature to support families in choosing among Rome Capital's many directly operated educational institutions.	Ongoing - 2022 determined		69/100to be



THE MAIN INDICATORS

City IndicatorCity

Indicator

Number of resident children per municipal daycare center	Applications processed preschools
Number of resident children per licensed daycare center	Number of state schools up to secondary schools (kindergarten, primary and secondary degree)
Number of resident children by preschool municipal	Number of state secondary schools grade
Enrolled municipal preschools users of the food service	Number of public universities
Enrolled municipal preschools users of the transport service	Number of Research Centers
Applications for enrollment in kindergartens run by Rome Capital evaded	Attractiveness of universities

KPI


smartKPI smart

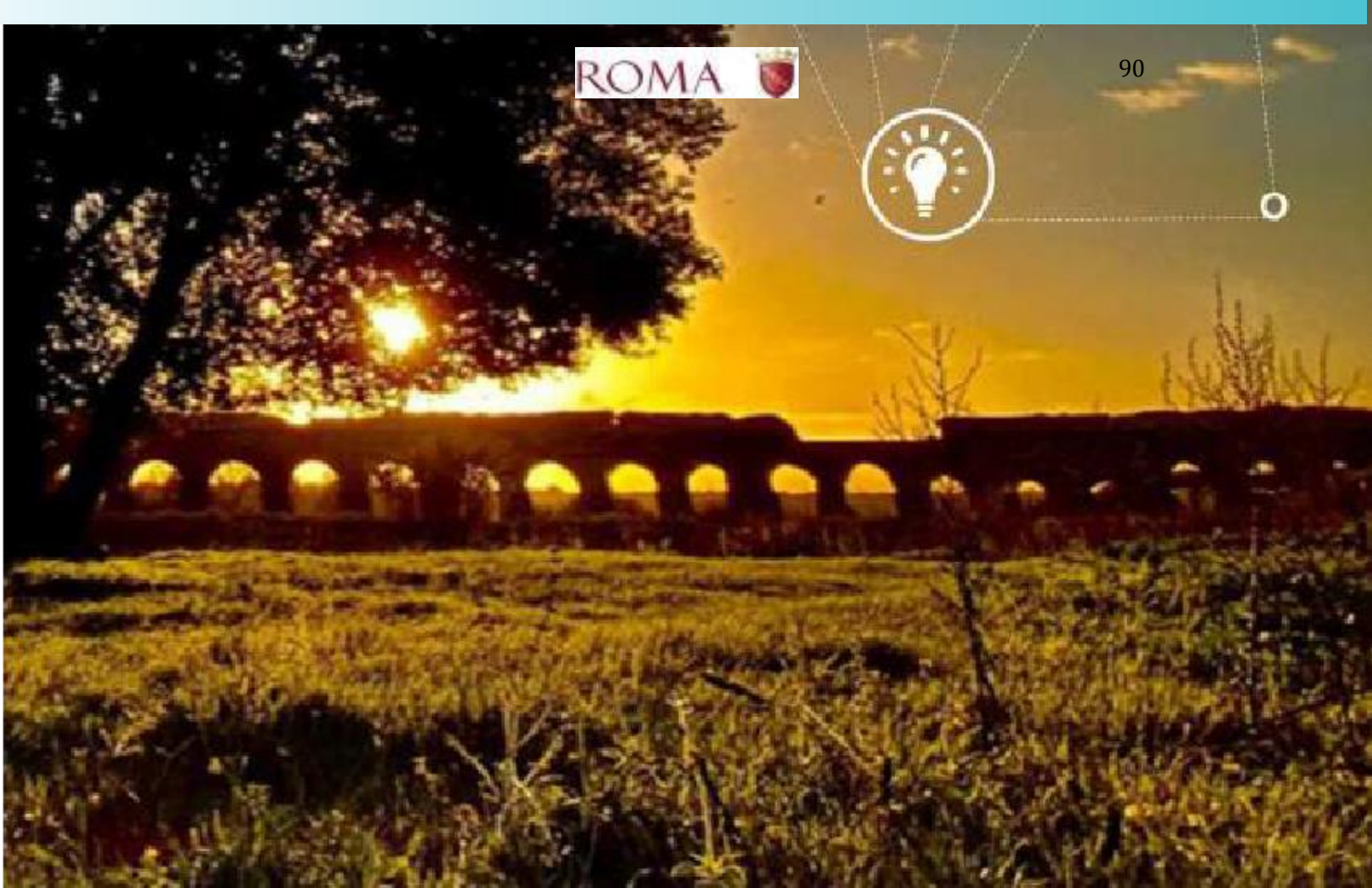
Integrated system for managing enrollment and payments to daycare centers through Roma Capitale	Integrated system for managing enrollment and payment for the transportation service for the disabled (municipal/state preschools, elementary school, secondary schools of first and second degrees).
Integrated system for preschool enrollment management through Roma Capitale	Integrated system for managing applications for book vouchers and student scholarships on the basis of ISEE.
Integrated system for managing enrollment and payment for normed food and transportation services (municipal/state preschools, primary, secondary).	



SOCIAL



ROMA 



THE GOALS.

The sociodemographic scenario of Rome's capital city is characterized by a high rate of aging and a reduction

of birth rate. It is therefore necessary on the one hand to implement initiatives aimed at integration and inclusion;

on the other hand, pay attention to "weaker persons" (children, the elderly, the disabled, those in economic difficulty, etc.) to ensure greater homogeneity in access to services and opportunities in the area.

The goals to be achieved are:

- Promote the inclusion of the most vulnerable;
- Foster the establishment and development of relational networks, supported by technology, to stimulate and speed up the processes of integration and belonging;
- Strengthen actions that enable people with disabilities to achieve and maintain maximum autonomy, full physical, mental, social and professional abilities, and to achieve full inclusion and participation in all areas of life (Art.26 - United Nations Convention on the Rights of Persons with Disabilities, ratified by Italy with Law No. 18 of May 3, 2009).



In this area it is necessary to act on:

- Promotion of cultural, social and ethnic integration and development through cultural interchange initiatives and the promotion of active citizenship actions with the participation of associations and social groups;
- implementation of a single channel, with functions of first contact, listening, guidance and first analysis for problems and reports, as well as management of housing policies. On this front, Roma Capitale is pursuing initiatives such as the "*One-stop shop for welcoming migrants*" that integrates functions of reception, listening and guidance to the provision of specialized consulting services, aimed at the inclusion and evolution of current systems for managing the allocation of public housing "SIGEPA" and social services "SIGESS."
- Creation of solidarity and welfare networks, which support the interventions of countering marginalization, social exclusion and poverty;
- creation of new shelters, which support women who have experienced violence, from the pathway out of violence to inclusion or the reintegration of the same into the world of work. In the City Social Plan have been planned actions to strengthen access to all social and health services and Citizenship Income, paying special attention to people in extreme marginalized and homeless conditions.

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
SO	IP Project INSPIRE Integrated system of services in response to new social needs to quickly "activate" all the subjects involved from the manifested need.	Assets	79/1002,000,	000 euro
SO IIS	Citizen communication support service for deaf people Multimedia communication service to support deaf people, who will be able to remotely and real time use the mediation of sign language interpreters.	Assets	73/100250,	000
SO	IIIProject SIGeSS System usable online by Entities in order to strengthen the administrative capacity of the capitol structures, the Social Policy Department and the Municipalities.	Assets	68/100700	,000 euro



THE MAIN INDICATORS

City Indicator

Indicator

Availability of housing managed by Roma Capitale	Identification of self-sufficient ROM cores
Number of citizens taken into care by Social Services	Number of ROM pupils remaining in the school system.
Number of Roma, Sinti and settled walkers within the Camps.	Number of ROM accesses to job training courses resulting in employment
Number of handicapped permits	

KPI


smartKPI smart

Number of automatic debits for public housing contributions.	Number of online public housing application systems.
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ENERGY



ROMA 



THE GOALS.

In 2017, as part of the Covenant of Mayors for Climate and Energy, Roma Capitale made a commitment to reduce emissions

greenhouse gases in its territory by at least 40 percent by 2030. Energy consumption in the city is the main cause of emissions, which is why the Capitoline Administration has decided to put in place a series of initiatives that will enable a more virtuous use of energy vectors and an overall energy upgrading of the city.

Specifically, the main goals to be achieved are to:

- Upgrade the grid infrastructure in order to increase the availability and accessibility of energy carriers by technologically adapting all energy transmission, distribution, storage and metering infrastructure to be able to ensure the continuity of traditional activities and enable new "*smart*" services;
- reduce energy consumption, stimulating citizens, as well as the city as a whole, to actively contribute to the decrease of city pollution and atmospheric emissions.



The "*smart*" energy development strategy will have to be implemented Through the following lines of intervention:

- implement a new grid infrastructure that enables the use of energy produced in a distributed manner by end users as well as the management of source randomness through shared storage. On this front, an electric and thermal smart grid initiative has been launched in the city of Rome to optimize energy distribution in the city;
- Upgrade municipally owned buildings and facilities, optimizing heat/cool generation plant, minimizing heat loss and implementing advanced energy-saving solutions. Roma Capitale has already implemented initiatives such as:
the installation of new "*smart*" lighting and sensor systems to capture data on noise, traffic and air pollution, as well as a system to govern the maintenance of municipal facilities is being implemented;
- Raise awareness of a more virtuous use of resources through specific communication campaigns and participatory actions community activities.

THE LINES. OF

PROJECTS

<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
EN	IGreenITNet Promoting the use of information technology to reduce energy consumption and combat climate change.	Active	89/1001,	800,000 Euros
EN II	Life-Diademe Project Street lighting control system aimed at reducing energy consumption, light pollution and will manage data on noise, traffic and air pollution.	Active	86/1001,	400,000 euros
EN III	Instant Easy Connect customer experience for Acea customers through an App that monitors the status of the intervention in real time, informing them when and who will come to perform it.	Ongoing - 2021	84/100	Internally managed Improved
EN IV	Energy Desk Support for citizens aimed at providing free up-to-date information on regulations and concessions on energy upgrades and renewable energy.	Ongoing - 2021	81/100	Managed internally and through volunteerism
EN V	PLATOON - Big Data for Energy Project for the promotion and efficient management of energy distribution systems, using Smart Grid Management and Energy Storage.	Ongoing -2022	93/100170	,000 euro
EN VI	PlatOne Project approach to managing distribution networks by optimizing the use of energy from renewable sources for electric mobility.	Ongoing - 2023	93/100	Internally managed New
EN VII	Intelligent pole street lighting poles that provide useful services and information (integrated modems, environmental sensors, video analytics, etc.).	Ongoing - 2024	93/100	Internally managed Intelligent



THE MAIN INDICATORS

*City Indicator*City

Indicator

Electricity consumption for public buildings (PA local)	Total city electricity consumption
Electricity consumption for city lighting	Renewable Energy Production from Public Buildings (Local PA)
Electricity consumption for street lighting	City Total Renewable Energy Production

KPI

smartKPI smart

Number of smart streetlights	Number of solar panels
Number of energy-efficient interior lights in public buildings	Energy produced from other renewable sources
Power managed within an Electric Smart Grid.	Energy produced by photovoltaic panels



ENVIRONMENT



THE GOALS.

At a time when the focus on environment and natural resources has become increasingly important, the protection

Of the land and the preservation of the landscape

constitute priority objectives for Roma Capitale, the achievement of which passes through the encouragement of the circular economy, the enhancement of public space, the minimization of the amount of waste going to landfills, increased recycling of municipal and assimilated waste, increased attention and sensitivity to urban decorum and hygiene, and conscious use of scarce resources.

In 2017, the Capitoline Administration launched the *"Plan for the Reduction and Management of Post-Consumer Materials of Roma Capitale 2017-2021,"* which strengthens the city's environmental commitment by providing actions and projects that, by directly involving citizens and businesses, will allow Rome to become a virtuous metropolis, capable of lowering the per capita production of post-consumer materials.

Specifically, the Capitol Administration intends to achieve the following goals:

- reduce atmospheric emissions (CO₂, nitrogen oxide, particulate matter, etc.), making a positive contribution to combating the greenhouse effect and ensuring a better quality of life and the environment as a whole;
- manage scarce resources and promote product reuse, in light of the substantial climate and environmental changes taking place and the necessary "smart" adjustment of lifestyles with a view to sustainability and savings.



The strategy in this area will be implemented through the following lines of action:

- raise awareness of urban decorum by implementing awareness and information campaigns, including through the promotion of initiatives on the reuse of urban spaces. In this sense Roma Capitale has established the "Towards Zero Waste" Observatory. In parallel, Rome plans to launch a system to incentivize virtuous behavior by citizens through the implementation of the ForumPA award-winning Eco Citizen Wallet;
- To implement and upgrade rainwater harvesting systems aimed at supplying the resource to support the irrigation of the areas covered by the diversified activities carried out in the urban green area;
- Implement and enhance actions related to soil permeabilization;
- Implement and strengthen actions related to afforestation interventions aimed at restoring plant and animal biodiversity and portions of land to implement green corridors within the "Ecological Network" as part of the peri-urban system; finally, at the level of the urban system, in addition to the above-mentioned interventions in areas with residual vegetation, carry out afforestation actions by giving preference to species proven to capture pollutants;
- to optimize and expand the degree of adoption of waste collection and processing solutions supported by advanced technological tools (e.g., "smart bins"). In this sense, Roma Capitale with the support of AMA has undertaken specific initiatives to extend the new "door-to-door" waste collection model to all city halls, with the use of containers equipped with *tags*, whose *microchip* allows the waste to be tracked and identifying the user;
- Returning the Tiber River to the City through safety and agility management and monitoring through advanced technological systems through cooperation between Roma Capitale and the Lazio Region;
- Implement and enhance resource (water) consumption monitoring solutions through the use of advanced technological tools, such as "*Smart Meter*" meters;
- Promote initiatives to reduce emissions of air pollutants including through the implementation of the Strategic Plans for Sustainable Mobility and Energy (PUMS and PAESC).

THE LINES. OF

PROJECTS

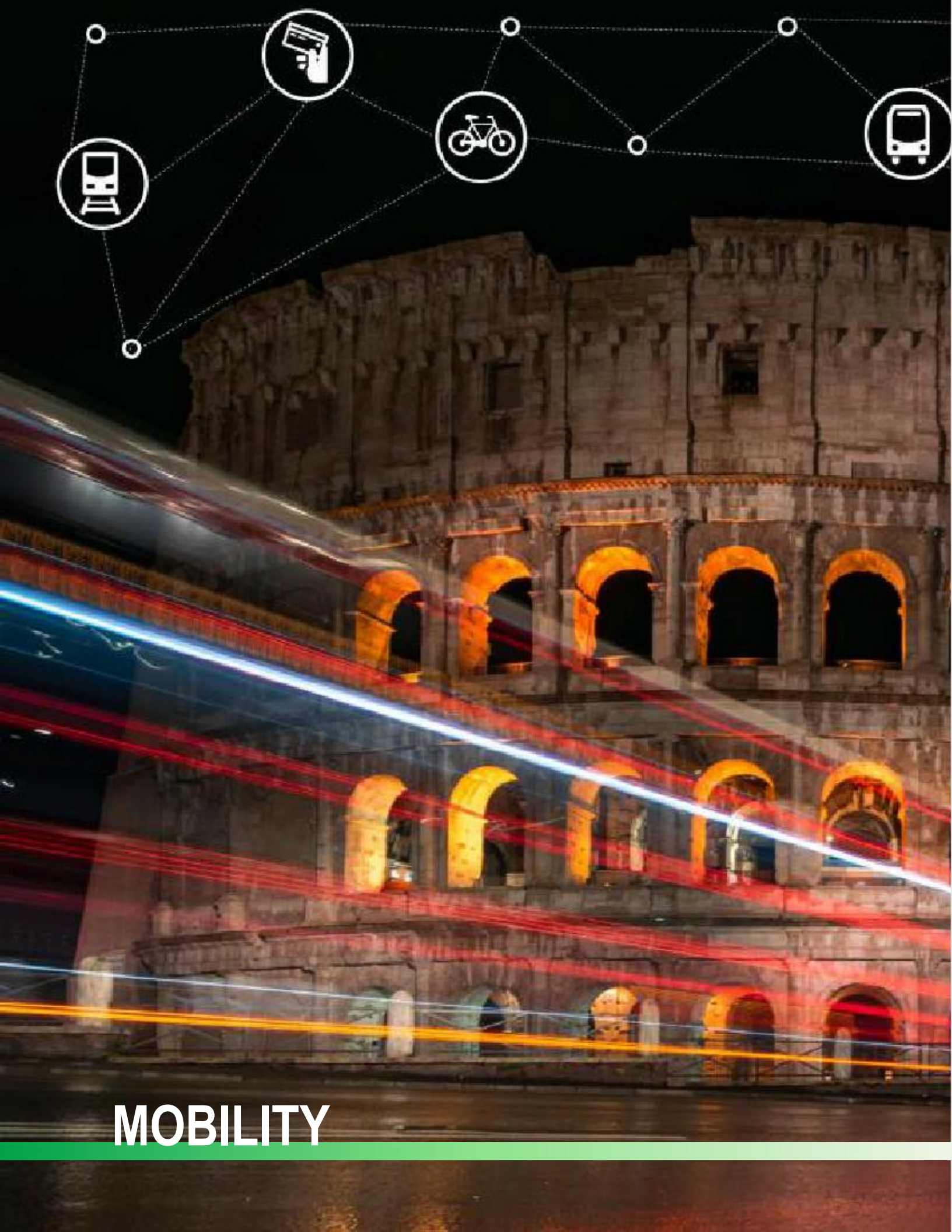
<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>Smartness</i>	<i>Economic Value</i>
AM I	Water houses fountains where you can drink free still and sparkling water, refill tablets and smartphones, consult information through digital displays	Active	91/100	Internally managed Hi-tech
AM II	Mobile container management App for real-time management of AMA S.p.A.'s container fleet through the use of RFID technology connected to the central systems of connected service frequency management.	Active	90/100	170 ,000 euro
AM III	App Waidy App to geolocate the 6,000 drinking water dispensers and learn about their history and the quality of water dispensed.	Active	89/100	Internally managed
AM IV	European project Soil4Life Project to promote sustainable land use and improved governance of soil decision-making processes at national, regional and local levels.	Active	85/100	270 ,000 euro
AM V	Web-Gis R3 Trees be defined Application for managing all information related to plants, location, status, analysis and related processing.	Ongoing - 2021	83/100	to
AM VI	Local Composting Installation of 15 electromechanical composters for collective composting in view of circular economy.	Ongoing - 2021	78/100	2, 100,000 euro
AM VII	Intelligent road containers be defined Road containers with filling, tipping, temperature sensor, GPS signal, controlled access for user recognition.	Ongoing - 2022	84/100	to
AM VIII	Smart Comp of mini-composting plants equipped with innovative technology that converts organic waste directly on site into compost.	Ongoing - 2024	84/100	Internally managed Installation



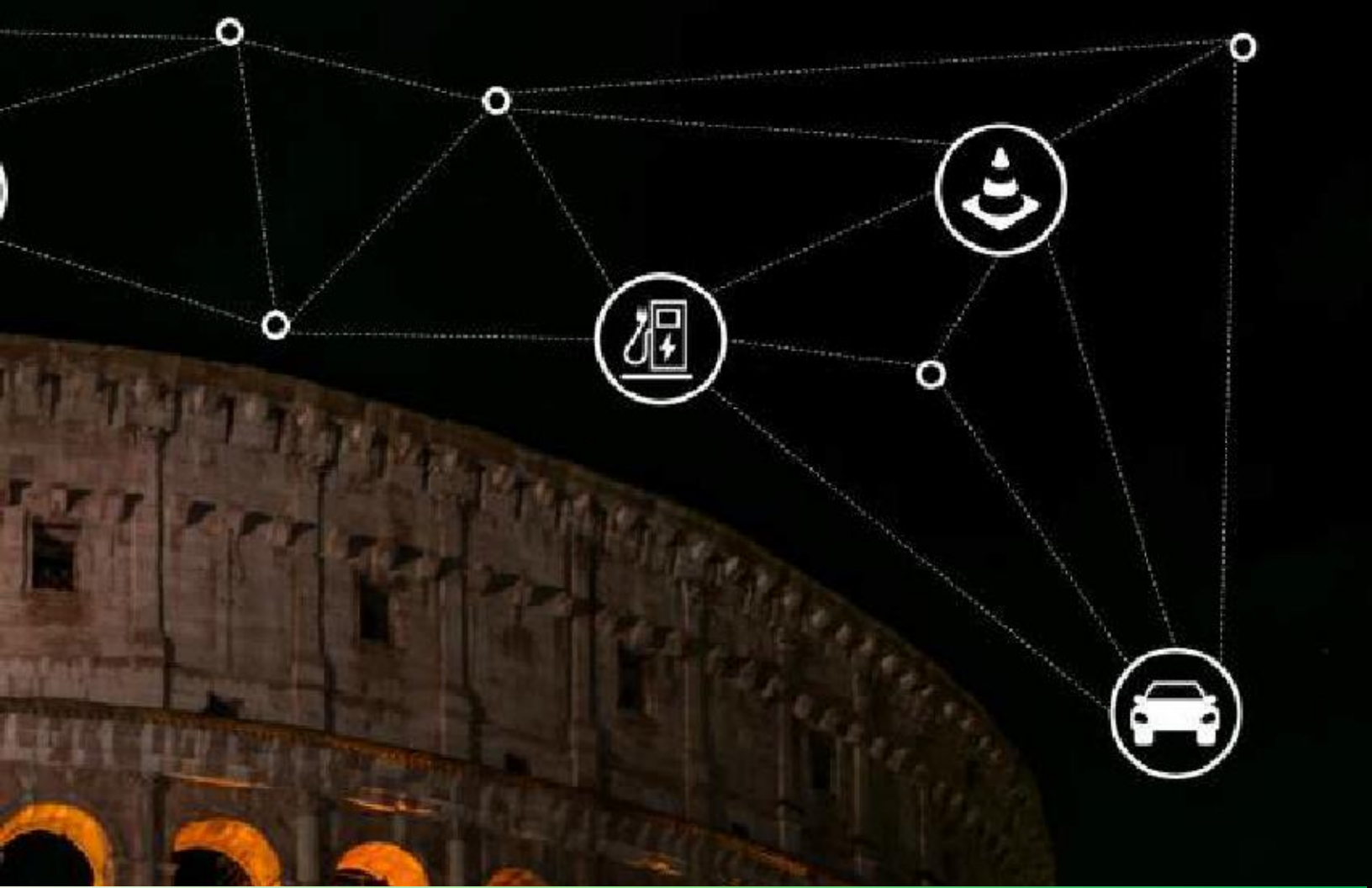
THE MAIN INDICATORS


<i>City Indicator</i>	<i>Indicator</i>
Air Quality - Presence of NO2 - N.Sup/yr.	Extension of areas not served by sewerage system
Air Quality - Presence of NO2 (IQAa)	Annual number of wastewater spills
Air Quality - Presence of O3 -N.Sup/yr.	Waste from Separate Collection (DR)
Air Quality - Presence of PM10 - N.Sup /year	Street Dumpsters for City User
Air Quality - Presence of PM10 (IQAa)	Waste Sent for Recycling
Air Quality - Presence of PM2.5 (IQAa)	Zone limit values established by Del.C.C. No. 12, 29.1.2004, in accordance with D.P.C.M., 14.11.1997, and of R.L. No.18/01.
Gas consumption by public buildings (local PA)	Waste Produced Per Capita
Total city gas consumption	Separate Collection
Drinking water consumption by public buildings (Local PA)	Population served by Separate Collection
Water consumption for public area irrigation	Population served by Porta a Porta
Total water consumption of the city	Inhabitants for Collection Centers and Ecological Islands.
Annual number of nonpotable ordinances	Inhabitants per road station

<i>KPI</i>	<i>smartKPI smart</i>
Number of stations for quality monitoring air	Number of home composting facilities
Presence of an Operational Intervention Plan for the Reduction of criticality from air pollution	Number of collection centers and ecological islands
PAESC presence updated for less than 3 years	Capacity of waste treatment facilities staff
Presence of rainwater harvesting systems	Capacity of facilities for the treatment of the plastic
Presence of pressure measurement systems and Of the flow rate of drinking water	Capacity of paper processing facilities
Smart irrigation systems for greenery audience	Capacity of glass processing plants
Number of sensors for leak monitoring water	Number of creative reuse centers



MOBILITY



ROMA 

THE GOALS.

Rome Capital, with more than 1.7 million cars on its road network (2016) and about 1,300 km² of surface area

territorial, needs to define a new "smart" model of mobility, which improves the usability and attractiveness of the area as well as the quality of its urban environment.

The priority objectives are:

- connect different mobility solutions, to ensure integrated and simple options for all citizens among different modes of transportation to access key destinations and services in the city;
- Make the roads safer, in terms of enhancing traffic control tools and accident prevention;
- Incentivize "clean" mobility, which can effectively contribute to the reduction of air and noise pollution, greenhouse gas emissions and energy consumption.

The definition of a "system" vision of mobility, which goes in the direction of the stated objectives, finds full concretization in the strategic planning defined in the Urban Plan of Sustainable Mobility adopted by Roma Capitale (PUMS).



THE LINES. OF

The "smart" development strategy must therefore leverage interventions among them complementary:

- enhance the bicycle network and encourage shared mobility solutions (*car-sharing*, public transport network such as bus, metro, streetcar, etc.) to the in order to create a transportation network equipped with "connected services" capable of responding to users' travel needs as a real alternative to private transportation. The Capitoline Administration has already undertaken some initiatives on this front such as, for example, the realization of preferential lanes and the implementation of smart traffic light systems capable of prioritizing the transit of public vehicles over private ones, providing travelers with a single system to take advantage of the services offered by ATAC, and finally equipping vehicles with IOT and 5G technologies capable of automatically validating the ride, identifying risky situations, conducting tele-diagnostics of transport vehicles and optimizing traffic light priority.
- create and develop an "intelligent" traffic control center capable of monitoring the city's entire traffic system (roads, ring road accesses and exits, express lanes, detection of private and pedestrian traffic flows and volumes, etc.) and providing accurate context analyses. Thanks to these new ways of service management, it will be possible, for example, to implement simulation/scenario analysis logics and predictive studies to facilitate policy-making processes for the regulation, control and planning of main routes for planning interventions based on the specific mobility demand (pedestrian, private and public transport);
- Rationalize urban logistics to optimize and improve traffic accessibility in the city area, containing the impact of circulating commercial vehicles and ensuring the efficiency of the distribution system. The initiatives undertaken with respect to this line of intervention concern, for example, the implementation of technological systems for the management and control of parking stalls, in order to optimize delivery times, ensure the availability of parking spaces for loading and unloading goods. Control systems can also be a valuable tool for combating the phenomena of: illegal occupation of parking stalls dedicated to loading and unloading goods and illegal entry of tourist buses within the historic center and uncontrolled parking of the same. In the process of rationalization of urban logistics, it is intended to give priority to the use of low environmental impact vehicles by city users also through *congestion charge* policies (pay to enter) aimed at reducing pollution.

PROJECTS

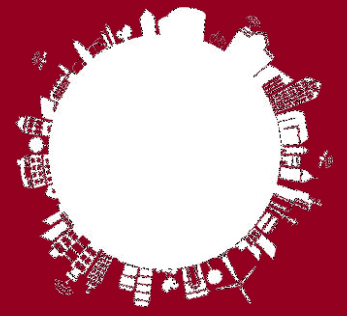
<i>Cod.</i>	<i>Planning Hypothesis</i>	<i>termination</i>	<i>SmartnessEconomic Value</i>	
MO	<p>IIintelligent infrastructure and facilities management platform</p> <p>New smart system for centralized remote management of infrastructure and facilities preparatory to LPT.</p>	ongoing - 2022	100/10012,000,	000
MO	<p>IIIRoma Data Platform - New Mobility Central.</p> <p>Unique operational control center solution for timely and real-time public traffic analysis and private on the urban territory.</p>	ongoing - 2022	100/1006,	300,000
MO IINew	<p>Electronic Ticketing System designed with MaaS in mind.</p> <p>New modern and evolved Electronic Ticketing platform with a MaaS (Mobility-as-a-Service) perspective for an integrated service and solution offering.</p>	ongoing - 2022	100/1006,000,	000
MO	<p>IVNew applications for the issuance of permissiveness.</p> <p>New tools and systems to support urban and suburban mobility management and planning activities.</p>	ongoing - 2022	100/1002,000,	000
MO	<p>VNew self-service machines for the sale of Travel Vouchers</p> <p>Renewal of the Ticket Issuing Machines (METs) at which it will be possible to purchase tickets and passes for City events.</p>	ongoing - 2023	96/10017,	700,000 euros
MO	<p>VINNew smart validators for validating electronic Travel Vouchers</p> <p>Technological renewal of equipment in sales and validation of Travel Tickets on surface vehicles.</p>	ongoing - 2023	94/10014,	500,000 euros
MO	<p>VIIControl occupancy and management of parking stalls (blue stripes).</p> <p>New IOT sensor system of online parking area control and management for real time monitoring of parking area status.</p>	ongoing - 2024	96/10030,000,	000
MO	<p>VIIIE-mobility-in-progress</p> <p>Project to ensure access to electric mobility and car-sharing services for the entire population and tourists of Roma Capitale.</p>	-	202491/100Internally	Managed



THE MAIN INDICATORS

<i>City Indicator</i>	<i>Indicator</i>
Coverage of surface tpl network	Average distance traveled by shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) per City User
km metro network	Average distance traveled by shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) per use
Population served by metro stations within a radius of 500m	Average rental time of shared vehicles (Cars, Motorcycles, Bikes, Scooters, etc.) per use
Diffusion of fast lanes	km of bicycle paths
Tickets sold for City User	Extension of pedestrian areas
Subscriptions sold by City User	% Motor vehicles on the road with environmental impact reduced (EURO 6, LPG, CNG, Electric)
Average number of shared vehicles (Machines, Motorcycles, Bikes, Scooters, etc.) for City User	# motor vehicles on the road per resident citizen
Average use of shared vehicles (Machines, Motorcycles, Bikes, Scooters, etc.) for City User	ZTL Exemption

<i>KPI</i>	<i>smartKPI smart</i>
Number of metro stations with tap payment	Smart sensors (stereoscopic cameras) for monitoring pedestrian flows per km2 (LTZ, areas pedestrian and 30 zones)
Number of intermodal parking lots	Number of charging stations per vehicle electric
Average spaces for intermodal parking	Number of electronic payment transactions o digital parking
Presence of tpl ride schedule updating systems	Presence of a Control Room for monitoring Of city mobility
Presence of the updated PUMS for less than 3 years	% LPT cars equipped with passenger counters
Integration with major mobility players (google maps)	% integrated MaaS services
Presence of an app for communication with the citizen	% Electronic and digital Travel Securities issued
Integration of systems for booking the shared vehicles	% Surface means equipped with tap payment
Sharing vehicle monitoring system	% electronic tickets sold by Self-service
Number of traffic lights managed remotely	Amount related to LPT % arising from payments electronic
% of smart stalls (remotely monitored)	Number of info-mobility requests handled through instant chat (WhatsApp)



CHAPTER 5

CONCLUSIONS

CONCLUSIONS

Path of convergence with other stakeholders

With the challenging goal of making Rome Smart City the City's strategic plan, a collaboration was initiated with the Roma Capitale structures responsible for drafting the Strategic Plan for Smart Business.

The Strategic Plan for Smart Business aims to attract investment for development of the hi-tech ecosystem by both institutions (e.g., European Union, Government, Region, etc.) and companies characterized by a high rate of innovation. The steps for drafting the Plan, which involved the involvement of a large number of stakeholders in the city, were as follows:

PHASE I - WORKING TABLES: Field experts who were part of the Technical-Scientific Committee (Universities and Research Centers) were initially involved with the aim of identifying initial input (policy proposals, suggestions, data, etc.). The tables were later expanded by involving institutions, major companies and trade associations;

II PHASE - TOWN MEETING: More than 80 key players from the relevant scene including universities, trade associations, businesses, operators and institutions, connected through an online platform, participated in the event. The event catalyzed insights and reflections for defining the operational lines of city development, in terms of economic, digital, urban and infrastructural innovation.

III PHASE - PLAN: drafting the Plan which has 3 main objectives: 1) identify urban strategies aimed at developing infrastructure and services to support business activities 2) Enhance the attractiveness of the area to polarize investment; 3) Encourage the emergence of new economic realities by strengthening the Open Innovation network among enterprises, startups, business incubators and accelerators, universities, research centers, institutions and other innovative economy supply chain. The Plan will subsequently be reviewed and discussed with the stakeholders and submitted for approval by Roma Capitale.

AREAS OF INTERVENTION. The plan is divided into six priority areas of intervention.



DIGITAL INFRASTRUCTURES AND CONNECTIVITY: collects contributions related to the main tools for the development of connectivity and advanced digital services in Rome (BUL and 5G Networks, Cloud, Internet of Things, AI, Blockchain);

START-UP AND INNOVATIVE ENTERPRISES: focus on the contribution to the development of the territory, characteristics and growth margins of Roman startups and innovative SMEs (perimeter definition, sectors, trends, clustering of companies, role of smart business ecosystem players and identification of possible synergies, analysis of the role of technology transfer and Open Innovation, estimation of the contribution of startups and innovative SMEs to export and investment attraction).

E-COMMERCE: investigates the use of digital sales channels by businesses and the adoption of ICT technologies, highlighting the main sectoral trends and gaps compared to European averages. It also assesses the share of business generated by the online channel and the contribution of e-commerce to exports, as well as the use of the online channel by consumers, highlighting trends in the current extraordinary phase. Focuses on policies to promote Roman business with the involvement of marketplaces and institutional players of internationalization, with reference also to growth opportunities for neighborhood businesses.

SUSTAINABILITY AND INNOVATION: Analyzes the trends of green enterprises in terms of incidence, investment, employees and exports and encourages a comparison among Italian provinces. It focuses on innovative green businesses, particularly SMEs and start-ups, identifying their sectors of activity and trends, and gives an insight into the state of alternative mobility in the Roma Capitale area. It then provides an in-depth look at international best practices in on promoting environmental sustainability, investment in eco-innovation and urban redevelopment. Develops numerous policy recommendations on promoting of energy efficiency and clean energy, on the implementation of forms of mobility Sustainability and improved quality of life by leveraging the use of innovation technology as an enabling tool.

ADMINISTRATIVE SIMPLIFICATION AND ATTRACTIVITY POLICIES: focused on the streamlining and dematerialization of bureaucracy to facilitate business activities and the attractiveness of the urban system with respect to international investors and economic operators, includes the strengthening of digital services to businesses by the PA and refers to companies with foreign participation, detailing the scenario by business sector, origin, type of participation. It also analyzes the dynamics of Foreign Direct Investment in the territory and provides policy insights useful for the definition of integrated policies for the attraction of international investment. It also provides a focus on key case studies related to adoption Of investment incentive instruments by European capitals.

COMPETENCES AND NEW JOBS: Analyzes the digital skills needed by present and future PA corporate and employee workers, the definition of a functional territorial governance set-up to strengthen the effectiveness of active employment policies, and best practices related to the promotion of ICT skills training and certification programs and their enhancement in PA recruitment programs.

The effects on the Metropolitan Area.

The Roman Metropolitan Area is the largest in Italy in terms of population and the second largest in terms of land area, a true metropolis of European dimensions, in fact it is sixth among the 31 "large" European metropolitan areas according to OECD classification.

In addition to the complexity dictated by its size, the Metropolitan Area sees very different realities coexisting within it, Rome Capital, where more than 65 percent of the population lives, and 120 other municipalities that are distinguished by different peculiarities, one-fifth of which have fewer than 1,000 inhabitants.

Roma Capitale, considering the importance within the area, has initiated a path to involve neighboring municipalities within the initiatives and projects implemented.

MIC CARD. The Museums in the City card is a clear example of this path of engaging the population of the entire metropolitan area. The card, with a contribution of 5 euros per year, allows unlimited entry to the 19 Civic Museums and 25 archaeological sites, including through guided tours. The MIC can be purchased by any citizen residing in the metropolitan city of Rome, by students at public and private universities in the metropolitan city, and also by those temporarily domiciled in the metropolitan city.



PAGOPA. PagoPA is an electronic payments system created administration simpler, safer and more transparent. The goal is to allow the citizen to choose modern payment methods and the market to be able to integrate the tool, easily adding new innovative payment instruments, making the system more open and flexible. Roma Capitale has decided to offer itself as a service provider for the Municipalities of the Metropolitan City, allowing it to contain costs while improving the user experience. Currently, Roma Capitale's technology solution serves 70 municipalities in the Metropolitan belt and enables the payment of all taxes and services of the entities.

WAIDY. Waidy is a platform that, thanks to the digitization of about 6,000 drinking water supply points and their geolocation, makes it possible to locate the closest ones, learn about their history and the quality of water supplied throughout the country. The app makes it possible to detect any malfunctions of individual fountains, report any faults and request, in real time, the qualitative-quantitative parameters of the water delivered.

These are some of the examples of how Roma Capitale with the Roma Smart City plan is implementing projects that are scalable, reusable and serving the greatest number of city users.

Managing and updating the Roma Smart City plan

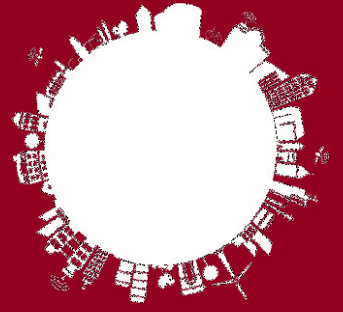
The Roma Smart City plan is a dynamic planning tool and therefore requires an annual update with particular reference to indicators, KPIs and projects.

Updating and monitoring the plan is one of the responsibilities of the Governance bodies, which will also have to give organicity and systematicity to all *smart* initiatives, implementing the guidelines and coordinating the management of the Plan.

The aforementioned bodies (Smart City Council and Smart City Steering Committee) are to be established and activities to identify the members of the Technical-Scientific Committee are to be initiated.

In addition, in order to disseminate the contents of the Plan more effectively, it is necessary to provide one or more online sections that make the contents more usable and searchable by citizens. For those initiatives deemed most relevant, a dedicated page could be created to increase the availability of information and data sharing for the benefit of the community.

Finally, with the goal of increasing the proliferation of increasingly smart and interconnected projects, dedicated funds may be allocated to the implementation of smart projects, through funds internal to the Administration or by using national or European funds.



CHAPTER 6

THANKS

THANKS

We would like to thank the various Departments and Structures of Roma Capitale for their invaluable collaboration and effective contributions that have made the implementation of the Roma Smart City plan possible:

CAPITOL JUNTA

Mayor

Vice Mayor

Department of Cultural Growth

Department of Economic Development, Tourism and

Labor Department of the City on the Move

Department of Personnel, Registry and Civil Status, Demographic and Electoral Services

Department of Green Policies, Animal Welfare and Relations with Active Citizenship in Urban Decoration

Department of Sports, Youth Policy and Major Citizen Events

Department of Budget and Strategic Coordination of Participations

Department of Person, School and Community Solidarity

Department of Infrastructure

Department of City Planning

Department of Property and Housing Policies

Department of Waste and Environmental

Remediation **STAFF STRUCTURES**

Digital Transformation Department

Organization and Human Resources Department

Department of Participation, Communication and Equal Opportunity

Department of Security and Civil Defense

SERVICES TO THE TERRITORY

Urban Planning and Implementation Department Infrastructure

Development and Urban Maintenance Department Mobility and

Transportation Department

Department of Environmental Protection

Department of Heritage and Housing Policy

PERSONAL SERVICES

Educational and School Services

Department Social Policy Department

Delegated Services Department

CULTURE AND ENHANCEMENT

Economic Development and Productive Activities Department

Tourism, Vocational Training and Labor Department Cultural
Activities Department

Capitoline Superintendence of Cultural

Heritage Department of Sports and Youth

Policies **ECONOMY AND FINANCE**

Department of Development Projects and European Financing

Department of Economic Resources

Participated Companies Department - Roma Capitale Group

ADMINISTRATION SUPPORT STRUCTURES

Tiber and Coast Special Office Energy

Policy and PAESC Directorate Urban

Decor Coordination Office Roma, Sinti

and Caminanti Special Office.

Office of Purpose Urban Economic Planning and Innovation

Office of Purpose Innovation for Behavioral Policies Rome Capital

Local Police Corps.

PARTICIPATING

COMPANIES ATAC

S.p.A.

AMA S.p.A.

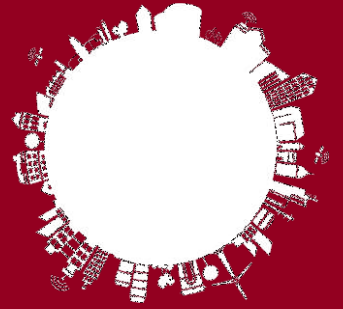
Zetema Progetto Cultura S.r.l.

Aequa Roma S.p.A.

ACEA S.p.A.

Roma Servizi per la Mobilità S.r.l.

Resources for Rome S.p.A.



CHAPTER 7

ATTACHMENTS

- Annex 1 - Summary Design Sheets