

# *For a Digital Renaissance*



## *Manifesto for Digital Florence*



With the contribution of



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## EXECUTIVE SUMMARY

There are many cities around the world that have created documents that strategize innovative actions at the city level. The city of Florence, where the pragmatism of the citizens has been famous since the Renaissance, has begun to produce numerous actions to innovate and this Manifesto, which outlines *smart city*, will give the city a strategic document. The Manifesto outlines a complete vision of the actions to be implemented and identifies the fundamentals of Digital Florence, which if properly shared between public and private services, will provide concrete benefits to citizens and “users” of the city.

### Why it is helpful to have a strategic document for Digital Florence

Innovation too often happens only when the circumstances are particularly favorable and people demonstrate a lot of motivation to initiate the process of transformation. On the other hand, standardizing innovation has been tried by establishing requirements for the public administration and for the public. Only with this combination, and with some chance, have these factors produced the best results. To make innovation in Florence less dependent on dynamic contingents, it is necessary to define a set of principles that value the digital assets available to citizens and tourists, as well as the operators and providers of public and private services to the city.

Florence has always been an international city, and to remain on par with the other great cities of Europe and the rest of the world, Florence must be equipped with a digital strategic document. Amsterdam, Barcelona, New York, and also Turin, Genoa, Bologna and Rome have already produced documents for *Smart City*, or are involved in multi-year plans to build cities of the future. Florence can follow their lead to stimulate innovation and create a base for the new digital economy.

### What is contained in the Manifesto for Digital Florence

The Manifesto lists all the digital assets that are present in the city and why it is ideal to share these assets. With the sharing of these services, there will be direct benefits for the citizens through an integrated service and applications based on the shared assets. Examples of digital assets for the city are: digital identity used to enjoy online services, apps or navigation of city Wi-Fi, a system of online payments, online services, applications for online devices, public data for every subject, personal data of citizens transmitted through cooperative applications in safe mode, technological infrastructure and network communication, etc.

### What is the Manifesto for Digital Florence

The Manifesto will give, primarily to the city administration and then to all the entities that provide public and private services to the city, a point of reference containing the values of all digital services that are fundamental to the city. The end of the Manifesto will promise a campaign of engagement and innovation in the city to formalize the sharing of the city’s digital assets.

Thanks to the city’s system of digital governance, it will be possible to create a system in which citizens don’t have to request or give the same data multiple times, because it will already be in possession of the city. The city will have the possibility to use the services and information provided by the citizens without having to worry about which individual device is delivering the information.

## 1. THE CHALLENGES OF AN ITALIAN CITY

Italian cities and communities need to face some key challenges that characterize the historic time in which we live. The growth and aging of the population, polarizing economic growth, rising greenhouse gas emissions and steadily decreasing budgets are only some of the global issues that politicians and public administrators have to face in order to determine strategies and development policies.

Our country is part of these global problems and is distinctly worse than the European average in some aspects: low levels of growth and productivity, public debt near that of the worst in the world, unsustainable tax evasion, high spending from the Public Administration, excessive bureaucratic burdens for citizens and businesses, scarce synergies between public and private entities, as well as an education system that fails to live up to the high standards of the rest of Europe.

Policies and programs that will be developed by the European Union in the coming years will focus on the specific needs of individual territories and local communities. In light of the difficulties caused by the crisis and the opportunities offered by Europe, it is necessary to identify strategies aimed at enhancing sustainable development of resources and fulfilling the needs expressed by individual territories and communities.

Today, our cities are the main hubs of creating new development strategies that will help us exit this spiral of crisis and compete on the global scale. Unsurprisingly, a big part of the Italian brand is that our cities are very different in regard to their culture, history, art and food.

To reach the enormous amount of potential of the cities, we must combine the vocations and innovations to generate benefits for citizens, businesses and administrations. In this manner, the adoption of scalable solutions that use technological information and communication (ICT) to increase efficiency, eliminate costs and improve the quality of life are beneficial, not just in that they are innovative but also because they provide simplification strategies in regards to social and economic development.

The cities that have put these developmental strategies into effect are normally called *Smart Cities*, a term that has generated theoretical and technological debates. However, the creation of concrete initiatives often meets obstacles and difficulties; from the point of view of the market, there is difficulty finding a meeting point between supply and demand: cities have specific priorities of innovation, strengths and weaknesses in different areas, and digital companies only operate in certain areas, making it difficult to activate a go-to-market effect.

To develop the potential of our cities we must concentrate on growth, initiate innovative policies, but also strengthen local networks to promote synergy with all people who have infrastructure assets and offer services to the city, in order to promote new joint projects.

To define a model of governance and shared objectives with the city, the role of the government is to interpret and catalyze the interests of the major players operating in the city. The integrated agenda of *Smart City* needs to develop from the basis of a sound understanding of existing assets, and also the peculiarities and opportunities of different localities.

## 2. THE VISION FOR DIGITAL FLORENCE

### Characteristics of the City

“Churches of extraordinary beauty, museums and collections of art, historic gardens, piazzas, streets, old palaces: Florence can reasonably be called a museum, not simply having works of art but being a work of art itself...” With these words UNESCO defined the historic center of Florence a “heritage of humanity.” Cradle of the Italian Renaissance, Florence has housed artists, scientists, writers and thinkers that made the city one of the most important centers of cultural revival of that period, and it is now an inexhaustible source of places, people, stories and trivia that offer unique points of tourism, exploration and analysis. Suffice to say that the museums of Florence, from the Uffizi Gallery to the Pitti Palace to the lesser-known ones, contain some of the most extraordinary works of art, both from Italy and the world. But the wealth of the Florentine area exists beyond the borders of the historic city center as well: the city “outside the walls” and the provincial area keep alive the extraordinary stories of the Medici city, the rich merchant families that once lived in the territory and the sacred Renaissance art.



The Florentine economy and business environment is categorized by a large amount of businesses working in different sectors of the manufacturing, trade, construction and service industries. The Florentine area is set an important hub for craftsmanship in the fields of woodworking, bronze, silver and gold; the crafting of these materials is a centuries-old tradition and is a hallmark of production in the area. In addition, because of the rich natural environment, the surrounding area is home to the production of wine and olive oil, of which the quality is known around the world. Another important facet of Florentine business is the fashion sector. Florence is in fact one of the Italian cities most active in tailoring and production of high fashion. All of these traditions can be seen in the city center, which houses numerous different businesses, from art shops to high-end boutiques to jewelry stores. On the other hand, not far from the historic city and surrounding area there are major industrial companies of significant size, some among the largest in the world, that are knowledgeable of the surrounding area and have great relationships with the community.

The rich artistic and cultural heritage of the city and the quality of local products are the main drivers of the development of tourism in Florence. The hospitality industry of Florence is very developed and well structured, both qualitatively and quantitatively; there are hotels spread throughout the city, and the structure of the hospitality industry compliments the restaurants. In addition, between 2008 and 2013, a period of economic crisis for all production sectors, the extent of the hospitality industry was greatly strengthened, in response to the rise in tourism, mainly driven by the rise in foreign visitors after 9/11.

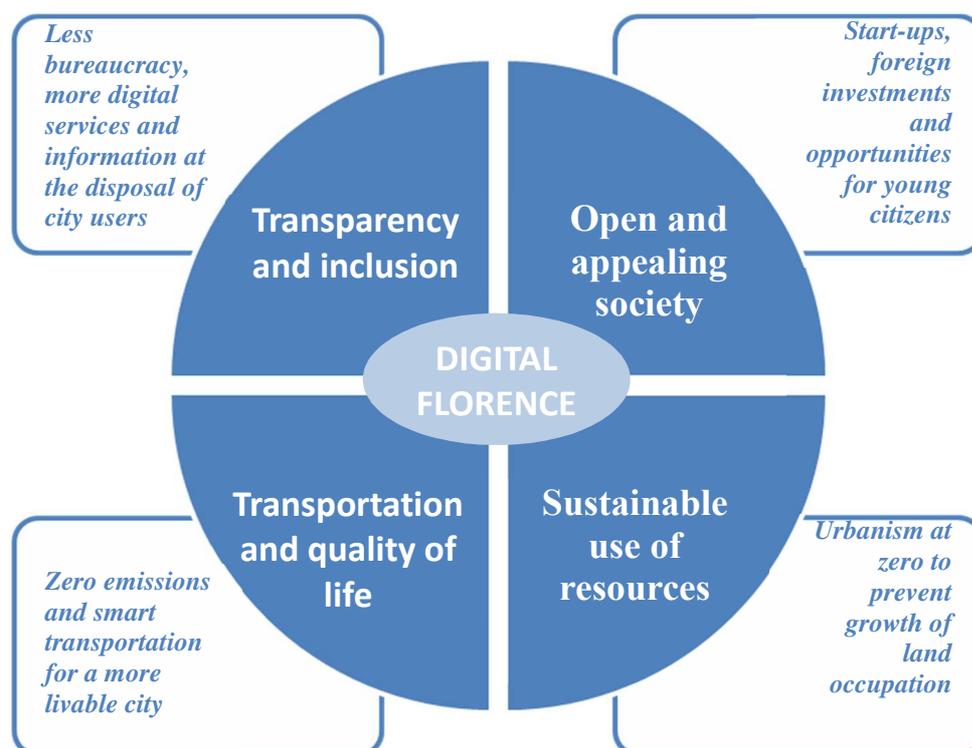
In light of the needs of the city, the public administration wants to create conditions that foster competitiveness and economic growth in the area, focusing on sustainable growth and new innovative services for *city users*. With this Manifesto, the city government intends to offer to the city a unified vision for a Digital City that pinpoints clear and ambitious priorities and defines a point of reference for future strategies.

*“Florence, not only capital of the past but also of the future”*

In Italy and Europe, there are cities with incredible pasts. Florence is certainly one of them, known as an indisputable symbol of the beauty of Italy in the entire world. To generate innovation, culture and history is not enough, although they can certainly be starting points and assets to be protected and enhanced to help build a city of the future. And the future can start now if the citizens and administration seize opportunities for pragmatic change.

In today’s cities, digital innovation, without a doubt, constitutes one of the most important aspects of change, but it can only become revolutionary if it meets the needs of the citizens and if it becomes tangible, measurable and concrete. Only in this case can change truly benefit the citizens, and can the city can become an engine of innovation for the world.

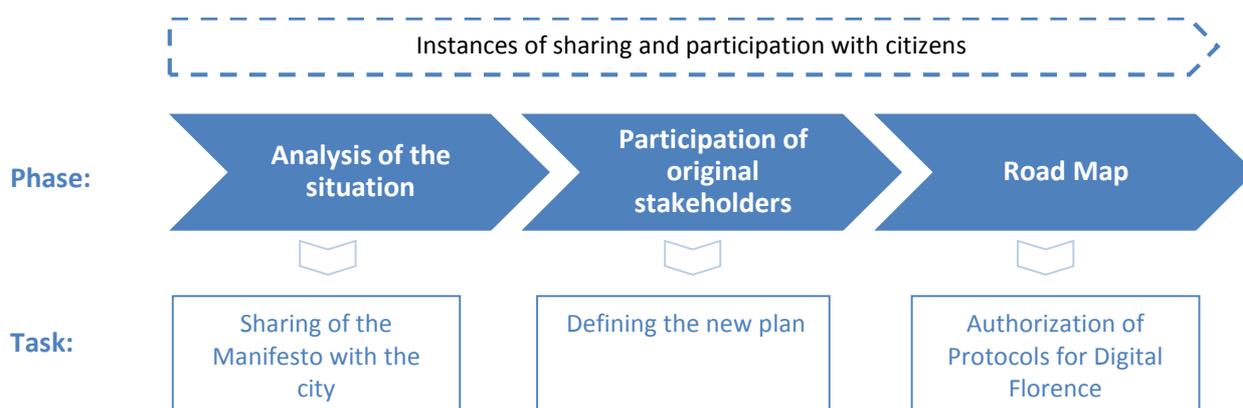
Today, Florence needs a unified vision that enhances the actions already implemented and gives the citizens, *city users*, administration and other local *stakeholders* a common objective and shared path to a digital and sustainable city. The city government intends to support a city network that joins the past and future into a new model of a “Digital Renaissance” for Florence that is developed around these pillars:



### 3. THE PLAN OF ACTION FOR DIGITAL FLORENCE

To start the plan of action for a digital and sustainable city, the city government of Florence wanted to define a plan of work that is specific for the urban Florentine citizen and frequently gives citizens a chance to share and participate.

The following are the phases and principle work projects of Digital Florence:



#### 1. Analysis of the situation

The Manifesto for Digital Florence provides a tool for analyzing a digital city based on the results of the *Smart City Index 2013* by *Between* (tool sponsored by the Agency for Digital Italy and by ANDIGEL) and gives the main players in the area a vision for the city and some main priority areas. The sharing of the Manifesto with the citizens constitutes the first phase of the *co-design* of Digital Florence.

#### 2. Participation of original stakeholders

The definition of a shared strategy for Digital Florence passes through the identification of local entities (the companies, businesses, and important local *stakeholders*) that trigger innovative processes for the city. Through this, the city can organize and prioritize projects that are focused on acquiring resources and supporting profitable operations through effective communication and synergy between the identified parties.

On the other hand, the city government of Florence has already begun to initiate profitable innovations with various players around the city: for example, the sharing of information with Publicacqua and with the Arno River Basin Authority, a shared traffic supervision system with the Province, and a shared Wi-Fi infrastructure with the University of Careggi Hospital and with the Province of Florence. In light of the benefits of these initiatives, it is necessary to structure and organize collaborations like these throughout the city.

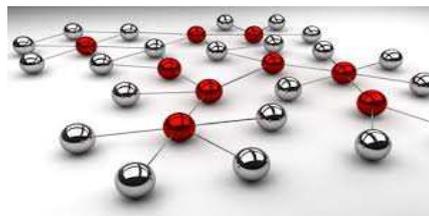
#### 3. Road Map

The enhancement of community projects is the goal of creating a shared catalog of the digital services available, aimed at citizens, tourists, and companies that want to invest in Florence. On the other hand, to avoid a proliferation of agreements not related to the field of innovation, the Manifesto for Digital Florence intends to give a comprehensive outline of the resources and

digital services available in the city. They will be identified and then put into specific agreements with innovative parties throughout the city, in order to collect the rights and duties of shared assets, information and digital infrastructure. These will point to the specific elements of technical, organizational, economic and timing of tasks and projects that will generate services of added value for citizens.

### 3.1 NETWORK DESIGN FOR DIGITAL FLORENCE

A “Smart City” is one in which the people, both individual citizens and the community as a whole, become the true actors of “urban intelligence.” A city is “smart” if it offers services that respond to the needs of the people and is the result of a *co-design* that is based on interaction, dialogue and collaborative processes.



To begin the process of digital innovation in the city of Florence, the City Administration intends to construct a network design in the area to stimulate the *co-design* of the “Digital City.” The concept of *co-design* applies to the urban planning of city services, consisting of the integration of citizen *stakeholders* in the process of defining public and private city services. The principle parts of this process include: the collaboration of key players in an open and dynamic manner, exchanging of relevant information and assets for the city, transferring of strategic decisions with regards to the network, and focusing on the users and the impact this will have on the community.

The Florentine Government intends to have a pragmatic approach to the concept of *co-design* for Digital Florence, focused on protecting the needs of the citizens and *city users*, along with anyone who uses the digital services of the city. To ensure that this happens, producers and users of city services must have an active role in the entire process, from design to implementation to evaluation.

There are various models of design for *Smart City*. The City of Florence recognizes that core layers, each of which is built on the shared assets that have already been built by various parties, should be the basic structure of a smart city:

- A **base infrastructure** that serves as an enabler for the construction of a smart city
- A **network of interoperable technological sensors** to collect data on the city and to remotely check the city infrastructure
- A **delivery platform** to process and enhance big data around the city
- A series of **applications and value-added services** for the city

To integrate a new infrastructure and sensory technology with structures that already exist is a real challenge, especially in a city like Florence, where the presence of history and art represents the identity of the city. For this reason, the first asset in the *co-design* of digital innovation will enhance, in different ways than in the past, the dynamism and interdependence of the city.

With these things in mind, this intends to define an approach of co-development of a digital and sustainable city for the long term. To begin this transformation in the short term, the planning of innovative services for the city need to quickly transform into a transition phase that puts in motion innovation and experimentation in the area. The beginning of *peer-to-peer* initiatives needs to be the path on which the first steps of a larger design of the city begin. *Peer-to-peer* collaboration in urban development projects is based on working together and a mutual trust that can foster a shared innovative know-how with the parties involved. When *peer-to-peer* extends to the use of services for citizens and *city users*, it becomes a way for the diffusion of knowledge and *best practices* to spread throughout the area.

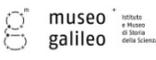
On the other hand, it must be noted that every process of sharing with stakeholders requires a major commitment. It is well-known that for years, the city of Florence— with the 100 Places initiative — has had a process of democratic participation distributed around 100 places in the city in which citizens can discuss urban planning.

In order to properly research the process of innovation, Florence has recently joined a network called “Major Cities of Europe,” composed of CIOs of 35 European cities from 18 countries. In terms of

innovation and *smart cities*, Florence regularly participates and partners with various European cities on different projects.

In this phase of development, Florence has identified a group of key players that have demonstrated particularly innovative practices, with regards to the support and enabling of digital projects in the Florentine area. The next chapter provides a list of potential partners for the path to Digital Florence.

### 3.2 KEY PLAYERS

Public Entities	Participating Societies	Universities	Museums	ASL	Associations	Businesses
						
						
						
						
						
						

## 4. THE NEEDS OF THE CITIZENS

Before proceeding with the analysis of Florence's digital assets, it is advantageous to look at the main needs of Florentine citizens. In particular, to understand the needs of the area mean evaluating the current digital offerings of the city. For this purpose, we propose a brief analysis of the main trends (both digital and not digital) that exist in urban Florence, supported by the method of *benchmarking* that comes from the Smart City Index, sponsored, as mentioned, by the Agency for Digital Italy and by ANDIGEL.

### *Socio-economics: wealth disparity and the social environment of Florence*

Florence is a city that has a per-capita income higher than the national average: 17.8 percent of Florentines can count on an average annual income above €35,000 per year (the national average is 10.6 percent). However, that is balanced out by a high degree of income inequality: the richest 20 percent of Florentines earn about 50 percent of the total wealth, and most of them live in the historic city center.

### *Education and work: the young citizens are more affected by the crisis*

The job market in Italy is particularly difficult at the moment, especially for younger citizens, and urban areas seem to be the most affected. Florence is in line with the national trends, and unemployment among young adults is high. The number of people aged 18 to 29 that are not studying, working, or training (the so-called NEET.-) is growing. Of these, almost three out of four are between 25 and 29 years old.

But, different than other cities, Florence boasts a solid university that is traditionally associated with the humanities and social sciences. The challenge is to create ways for young people to invest in an education that is increasingly innovative and on par with other European institutions, not only in traditional fields.

### *Internet: growing levels of private connectivity*

The use of new technologies is spreading to the daily life of Florentine citizens. In the past few years, the number of citizens who own a personal computer (88%) and that use it to connect to the Internet (95%) has risen. These trends are well above the national average (60%) and demonstrate how well versed Florentines are on new technologies and on the worldwide web in general.

The ASDSL connection is definitely the most-used broadband connection. With smartphones and other types of mobile devices, there has been a progressive decrease of other types of connections (UMTS via USB, modern analog and ISDN) which actually increases the level of private connectivity citizens have and makes them more receptive to new online services.

### *E-government: the services are there, but not all are used (especially younger citizens)*

The problems of the services of the e-government of the City of Florence do not lie with the quantity or the quality of the services, it resides with the level of communication the city administration has with the citizens. In fact, it is estimated that less than half the city population is aware of the availability of e-gov services, including two-thirds of the population aged 18-30. As a result, less and less citizens are aware of the city e-gov services.

To effectively communicate the existence of services they must be translated, in this case, to a citizen-user approach that highlights the potential benefits of the services in response to the needs of the citizens, and access and use must be simplified. However, it is estimated that because of the increase of mobile devices, the use of these services may improve.

### **Transportation: *public transportation does not satisfy the needs of the citizens***

Private transportation is the main mode of travel that citizens of Florence use to get to work. A minority of Florentine citizens use public transportation (8%-10%) and about 70% of those are women. In the past few years there has been a significant decline in the number of people who use public transportation, yet the system has not undergone any significant changes, except the building of the first tramline.

According to a survey on commuting done by municipal employees, the main reasons citizens prefer private transportation are a perceived lack of efficiency in the public transportation system (in terms of length of travel, access to certain areas, timing, etc.) and their personal character makes it better to have greater autonomy of movement. On the other hand, motorists expressed dissatisfaction with their journeys between work and home. They also expressed skepticism towards new forms of transportation, such as carpooling or a city shuttle. The real challenge of the city government is to interpret the transportation needs of the citizens and offer an innovative service that meets the needs of the citizen and city.

### **Health: *growing applications for health care by people most affected by the crisis***

The population of Florence enjoys a level of health that is better than regional and national averages, in terms of life expectancy and general mortality rates. However, the increased demand for healthcare by people most affected by the crisis creates many problems for the organization and functionality of health services in the metropolitan area. The elevated requests for hospital care and outpatient services make it increasingly necessary to qualify hospitals for intense care to ensure accessibility to services. The reorganization of hospital clinics must be included in a larger reform of regional services that recognizes an increased demand in health care and ensures an integrated package of efficient and innovative services.

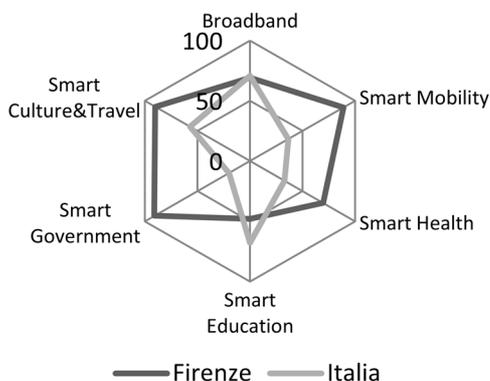
### **Culture and tourism: *an artistic-cultural heritage that gives value-added services to tourists***

According to a recent study (2013), tourists that visit the city particularly enjoy the hospitality and restaurant services. A majority of visitors found good artistic, cultural, and shopping experiences, and found residents and public service employees friendly, but they complained of the lack of toilets and the public transportation service. 59% of tourists express an intention to return. But the rich cultural-artistic heritage of the city means it is necessary to provide a high standard in hospitality, both quantitatively and qualitatively: digital services must have the potential to improve the quality of the visit (more interactive, more personal) and at the same time increase the number of visitors that optimize their time and tour routes through personalized information (e.g. services of “connected tourism”).

Because of this, the city council has focused its efforts to innovate this part of the city since 2011, with the onset of the POR-CREO project, called the PIUSS System of Knowledge. This project has given the city a *smart city* infrastructure that can serve as the technological base for all digital content through a variety of channels (app, web, digital signals). The government is also working on – in relation to the opening of the Museum of ‘900 before spring 2014 – a system of info-tainment and gaming that can offer tourists a fun experience while also offering citizens digital content.

## 5. A SNAPSHOT OF THE CITY

### FLORENCE VS. ITALIAN AVERAGE



Fonte: Smart City Index, Between

### RANKING OF METROPOLITAN CITIES

Bologna	
<b>Firenze</b>	<b>2°</b>
Roma	
Milano	
Torino	
Genova	
Reggio Calabria	
Bari	
Napoli	
Venezia	

- Prima fascia (1° - 39°)
- Seconda fascia (40° - 78°)
- Terza fascia (79° - 116°)

Fonte: Smart City Index, Between

#### RANKING

**2°**

#### SCORE

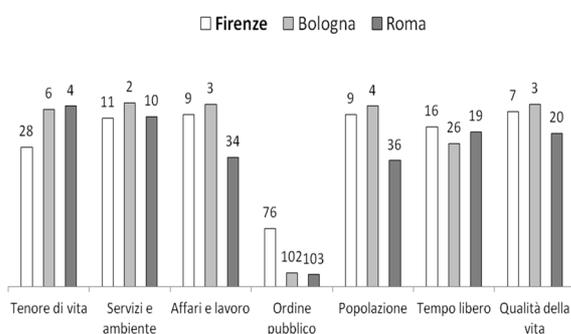
**93.7**

#### ΔSCORE

vs. Italian average

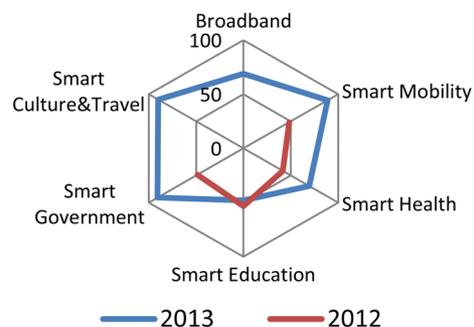
**+35**

### FLORENCE IN TERMS OF QUALITY OF LIFE



Fonte: Il Sole 24 Ore, 2013

### FLORENCE 2013 VS FLORENCE 2012



Fonte: Smart City Index, Between

In reference to the areas analyzed by the Smart City Index Between, Florence scored second nationally, doing better than the Italian national average in *Smart Mobility*, *Smart Health*, *Smart Government*, and *Smart Culture & Travel*. These excellent positions are also major improvements on their 2012 levels. This can be seen on the graph "Quality of Life, 2013" by Sole 24 Ore, in which Florence was ranked seventh in the country.

Below, we report on specific areas that were presented on this page, along with comparisons against other Italian cities, details on what indicators were used and what assets the city has already. Integrated with the graphs are some of the city's strengths and the major areas that it needs improvement. Below, we also outline the main projects the government and its partners have begun in the area.

### GENERAL OVERVIEW

Broadband represents the base infrastructure of a *Smart City*. Its strategic importance lies with its ability to accelerate the contributions of the ICT on innovation and on the economic rise of the city.

#### RANKING

**69°**

#### SCORE

**69**

#### ΔSCORE

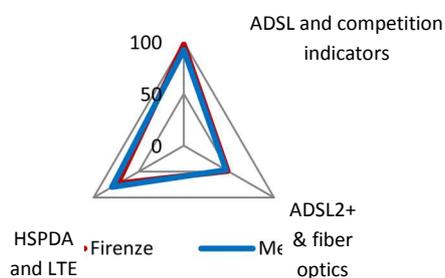
vs. Italian average      2012-2013  
**-1.8**                      **n.d.**

### RANKING OF METROPOLITAN CITIES

Milano	Prima fascia (1° - 39°)
Torino	Prima fascia (1° - 39°)
Napoli	Prima fascia (1° - 39°)
Genova	Prima fascia (1° - 39°)
Bari	Prima fascia (1° - 39°)
Roma	Prima fascia (1° - 39°)
Bologna	Prima fascia (1° - 39°)
Venezia	Seconda fascia (40° - 78°)
<b>Firenze</b>	<b>69°</b>
Reggio Calabria	Terza fascia (79° - 116°)

Fonte: *Smart City Index, Between*

### SCORE DETAILS



Fonte: *Smart City Index, Between*

### ASSETS

- 450 Wi-Fi public hot-spots throughout city
- 2 hours every day of free internet

Florence is slightly below the national average in this category. A comparison with the other cities reveals that this is because of the absence of a fiber-optic network, which the city is currently equipping. Florence has good ADSL coverage (7:20 mega) and in terms of broadband coverage, HSPDA reaches a good part of the population, although still lower than the national average, and there is still no LTE coverage. However, the presence of the city's public Wi-Fi network helps negate the relative lack of broadband services.

### THE VOICE OF THE CITY<sup>1</sup>

88.1% of citizens have a personal computer

95.1% of citizens use their computer to access the internet

#### Types of Internet Connection

	N	%
ADSL	206.877	91,8%
USB key via UMTS	11.770	5,2%
Other connection	1.449	0,6%
Don't know/didn't answer	5.168	2,2%
<b>Total</b>	<b>225.264</b>	<b>100%</b>

<sup>1</sup> Fonte: Rilevazione Forze di Lavoro nel Comune di Firenze e nell'area fiorentina. *Ufficio comunale di statistica* (2013)

### GENERAL OVERVIEW

Smart Mobility is one of the most important aspects of a Smart City because it directly impacts the quality of life of its citizens. The city needs to be able to guarantee a system of transportation that is fast, convenient and sustainable.

#### RANKING

4°

#### SCORE

88.9

#### ΔSCORE

Su media Italia 2012-2013

+ 52,5

+84%

### RANKING OF METROPOLITAN CITIES

Milano	Prima fascia (1° - 39°)
Torino	Prima fascia (1° - 39°)
Genova	Prima fascia (1° - 39°)
<b>Firenze</b>	<b>4°</b>
Roma	Prima fascia (1° - 39°)
Napoli	Prima fascia (1° - 39°)
Bologna	Prima fascia (1° - 39°)
Reggio Calabria	Prima fascia (1° - 39°)
Venezia	Prima fascia (1° - 39°)
Bari	Seconda fascia (40° - 78°)

Fonte: Smart City Index, Between

### SCORE DETAILS



Fonte: Smart City Index, Between

### ASSETS

- 522 km<sup>2</sup> of local public transportation network for 100km<sup>2</sup> or urban area
- 89 million annual passengers on public transportation
- 1 online infomobility platform
- 1 service of regional carpooling
- 6 positions of bikesharing
- 17 cars in municipal carsharing system

Florence placed fourth nationally, slightly behind Milan, Turin and Genova, cities that are larger in both land and population. The public transportation system in Florence provides users with information services (via web, app, SMS), online access to hours and routes, and various modes of electronic ticketing (magnetic bands, online recharge, SMS). In terms of private transportation, the city has enjoyed increased access to information regarding ZTL zones and traffic payments and recently started a mobile traffic information system. A vast local public transportation network is supported by an online mobile information service at the disposal of citizens and tourists.

### THE VOICE OF THE CITY

#### Modes of transportation used by the residents of the City of Florence <sup>2</sup>

	Car	Motorcycle	Walk/Bike	Public	Other	No Answer	Total
% of total	42.28%	21.61%	21.19%	8.3%	5.56%	1%	130,773

#### Main causes of dissatisfaction with citizens who use public transportation <sup>3</sup>

	Freq. response
Inefficiency (times, hours, coverage)	66%
Need a wider range of options	29.7%
Other (price, crowding, convenience)	19.3%

#### Willingness of citizens to try other modes of transportation <sup>4</sup>

	yes	no	other
Car pooling	35.5%	60.7%	4%
Shuttle	17.2%	48.8%	34%

<sup>2</sup> Fonte: Rilevazione Forze di Lavoro nel Comune di Firenze e nell'area fiorentina. Ufficio comunale di statistica (2013)

<sup>3</sup> Fonte: Indagine conoscitiva sugli spostamenti casa-lavoro dei dipendenti comunali. Ufficio comunale di statistica (2010)

### GENERAL OVERVIEW

A large part of the health services given to the citizens are focused in the urban areas. Booking services, payments and online documentation as well as access to electronic health records allow health facilities to relieve congestion and improve the quality of the services offered.

#### RANKING

**21°**

#### SCORE

**69.5**

#### ΔSCORE

Su media Italia 2012-2013

**+36,8**

**+66,7%**

### RANKING OF METROPOLITAN CITIES

Bologna	Prima fascia (1° - 39°)
Milano	Prima fascia (1° - 39°)
<b>Firenze</b>	<b>21°</b>
Bari	Prima fascia (1° - 39°)
Reggio Calabria	Prima fascia (1° - 39°)
Torino	Seconda fascia (40° - 78°)
Roma	Seconda fascia (40° - 78°)
Genova	Seconda fascia (40° - 78°)
Napoli	Seconda fascia (40° - 78°)
Venezia	Terza fascia (79° - 116°)

Fonte: Smart City Index, Between

### SCORE DETAILS



Fonte: Smart City Index, Between

### ASSETS

- 1 ASL of reference (ASL 10 of Florence)
- 6 hospital locations
- 2 university hospitals (Careggi and Meyer)
- 33 City Government services
- Targets the needs of 800,000 inhabitants

Florence is better than the national average and has the second-highest rating in the Central-South regions thanks to their wide range of telematics services with local ASL services. The comparison with other major metropolitan cities shows that Florence is ahead of both medium cities (Bari, Reggio Calabria, Venice) and large cities (Torino, Roma, Naples, Genova). The notable rise from the data registered in 2012 (66.7%) is a sign of the serious innovation that the health system has undergone in recent years. The health services of ASL Florence provide numerous phone and online services for citizens that range from making appointments and payments online to the choice of primary physician to the FSE (electronic health records). The city's health system also recognizes that innovative companies, such as the University Hospitals of Careggi and Meyer, have already begun to give online services, such online medical reports and FSE. Recently, the app "Careggi Smart Hospital" was launched, which works with the city's FirenzeWiFi.

### THE VOICE OF THE CITY<sup>4</sup>

	Province of Florence	National Data
<b>Average male lifespan in Province of Florence (2010)</b>	80.3 years	79.4 years
<b>Average female lifespan in Province of Florence (2010)</b>	85 years	84.4 years
<b>Deaths from cancer of people 20-64 years old (2010)</b>	8.8 for every 10,000 inhabitants (improving and in line with regional and national trends)	

<sup>4</sup> Fonte: Rapporto URBES: il benessere equo e sostenibile nelle città. Istat (2013)

## GENERAL OVERVIEW

The development of a high-quality education is one of the pillars of a Smart City. Thanks to the potential of the Internet and ICT technology, we can now offer new modes of teaching and add innovation to our schools and universities.

### RANKING

110°

### SCORE

47.9

### ΔSCORE

Su media Italia 2012-2013

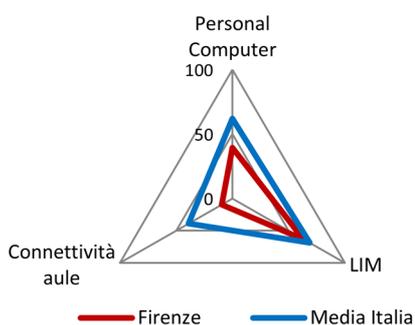
-20 -10,1%

## RANKING OF METROPOLITAN CITIES

Bologna	Prima fascia (1° - 39°)
Bari	Prima fascia (1° - 39°)
Reggio Calabria	Seconda fascia (40° - 78°)
Venezia	Seconda fascia (40° - 78°)
Genova	Terza fascia (79° - 116°)
Milano	Terza fascia (79° - 116°)
Roma	Terza fascia (79° - 116°)
Napoli	Terza fascia (79° - 116°)
Torino	Terza fascia (79° - 116°)
Firenze	110°

Fonte: Smart City Index, Between

## SCORE DETAILS



Fonte: Smart City Index, Between

## ASSETS

- 80 primary schools
- 31 middle schools
- 68 high schools
- 1 University
- 1 European University

In terms of digitalizing the school system, Florence is about even with the rest of the main metropolitan cities, in the lower part of the second half of the national rankings. The process of digitalizing the Florentine school system has already begun, but there is much more to do for the offerings to become truly innovative. The City Government intends to begin a new project in partnership with the principle educational institutions in the area, and to concentrate a large part of the renovation of the city on offering educational services that match the levels of the rest of Europe. To meet these objectives, the city recognizes that the schools, universities and research centers are the assets most important to improve.

## THE VOICE OF THE CITY

15.9% of residents aged 18 to 29 do not study, have jobs or follow training courses (NEET).<sup>5</sup>

70.3% of NEET residents in the city of Florence are between the ages of 25 and 29<sup>5</sup>

**School** 70.9% of residents aged 25-64 have at least a high school diploma (Italy: 56%; EU: 73.4%).<sup>6</sup>

**University** 40% of residents aged 30-64 have a university degree (Italy: 20.3%; EU: 34.6%)<sup>6</sup>

From 2000-2010, the number of foreign students at the University of Florence grew (from 2.4% to 5.2%).<sup>7</sup>

<sup>5</sup> Fonte: Rilevazione Forze di Lavoro nel Comune di Firenze e nell'area fiorentina. Ufficio comunale di statistica (2013)

<sup>6</sup> Fonte: Rapporto URBES: il benessere equo e sostenibile nelle città. Istat (2013)

<sup>7</sup> Fonte: Bollettino mensile di statistica del Comune di Firenze (Maggio 2012). Ufficio comunale di statistica (2012)

### GENERAL OVERVIEW

An elevated degree of digitalizing of services offered by the Public Administration and a complete simplification of the internal processes guarantees concrete benefits for our citizens in terms of saving time and money and improving efficiency of services provided and improving transparency and accountability of the PA.

#### RANKING

**2°**

#### SCORE

**90.9**

#### ΔSCORE

Su media Italia 2012-2013

**+71**

**+87%**

### RANKING OF METROPOLITAN CITIES

Roma	
<b>Firenze</b>	<b>2°</b>
Torino	
Bologna	
Genova	
Venezia	
Milano	
Napoli	
Bari	
Reggio Calabria	

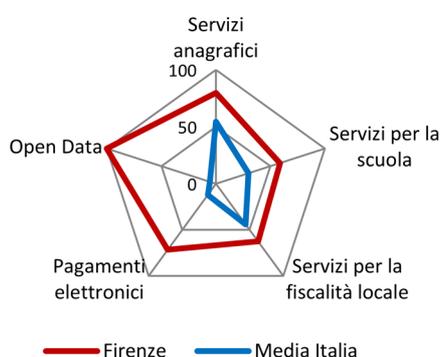
■ Prima fascia (1° - 39°)

■ Seconda fascia (40° - 78°)

■ Terza fascia (79° - 116°)

Fonte: Smart City Index, Between

### SCORE DETAILS



Fonte: Smart City Index, Between

### ASSETS

- 520 public databases on OpenData
- 347 online services for citizens
- More than 20,000 registered users and more than 620,000 interactions (only in the first half of 2013) on the online city services website

Florence occupies the second spot on the national classification and is a benchmark for all city governments in the country. In a dynamic comparison with other metropolitan cities that are in the top 10 of the rankings, Florence has shown that highest margin of improvement since 2012 (+87%). In the field of digital public administration, Florentine citizens can use a large amount of electronic services, such as registry, services for schools and kindergartens, and online payment of city taxes. Florence also enjoys the national record for *Open Data*, a free online service that is today composed of over 500 online databases in diverse areas, from public administration to mobility, environment and culture.

### THE VOICE OF THE CITY

#### Online Registry<sup>8</sup>

54.4% of interviewed persons have knowledge of the online registry services

Of these, 21.5% have the credentials to access them

39.3% that do not have access are interested in having it

67.5% of citizens aged 18-30 are not aware of the online registry services

#### Contact Center of the Comune<sup>8</sup>

Average rating of users: 8/10

82.3% of interviewed persons found the information they were looking for

<sup>8</sup> Fonte: Elaborazioni statistiche a cura dell'Ufficio comunale di statistica.

### GENERAL OVERVIEW

A city that is “smart” in tourism and culture is a city that gives tourists innovative ways that guarantee the quality of their use of tourism and cultural services, and more generally improves their overall experience in the city.

#### RANKING

4°

#### SCORE

90.1

#### ΔSCORE

Su media Italia 2012-2013

+33,4 n.d.

### RANKING OF METROPOLITAN CITIES

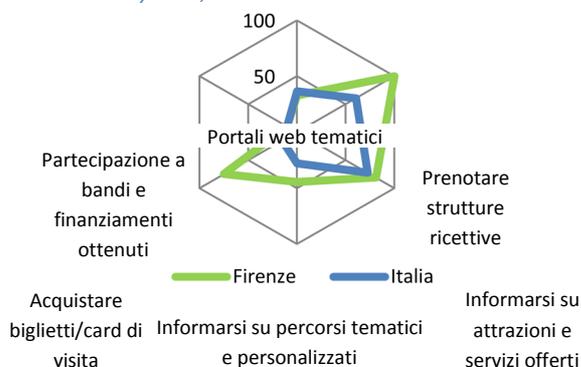
Roma	
Bologna	
Torino	
<b>Firenze</b>	<b>4°</b>
Reggio Calabria	
Genova	
Napoli	
Venezia	
Milano	
Bari	

■ Prima fascia (1° - 39°)  
■ Seconda fascia (40° - 78°)  
■ Terza fascia (79° - 116°)

Fonte: Smart City Index, Between

### SCORE DETAILS (revised position labels)

Fonte: Smart City Index, Between



### ASSETS

- Houses the most-visited museum in Italy
- 170 museums in the entire city
- 13 public libraries
- 3,019 tourist accommodations and over 88,000 beds across the city
- 4.5 million new arrivals and 12.2 million tourists in 2012
- 43 digital sign systems

Florence is ranked fourth on the national rankings, above a large part of major Italian cities. The digital strengths of the tourism and cultural center of the city include the ability to access the Internet to obtain information on the main points of interest and/or suggested tourist itineraries, making dining or accommodation reservations and buying tickets or cards to visit the museums and main attractions of the city. Florence is in line with the national average in terms of funding from MIUR and the EU, but is behind in terms of quality and level of use of tourist and cultural services. The governance model for FlorenceCard, which allows for access to numerous museums and a shared infrastructure for managing digital content and services attached to the card, and the smart city tourist project PIUSS\_SICS are the two cornerstones of the digital model of tourism and culture in the city.

### THE VOICE OF THE CITY<sup>9</sup>

#### Complete guide on the visit experience/vacation experience of tourists in the City of Florence

Ideal: 31.3%

Good: 56.4%

Positive: 11.1%

Bad: 1.2%

#### Statements on the intention to repeat the visit/vacation on the part of tourists to the City of Florence

58.5% of visitors declared the intention to return in the future for another visit/vacation;

39.4% said it was a possibility

Only two percent of visitors said they would not

<sup>9</sup> Fonte: L'impatto economico del turismo in provincia di Firenze. Centro Studi Turistici di Firenze (2013)

## 5.7 PLANS AND PROJECTS IN PROGRESS IN THE AREA

For an analysis of projects in progress in the area, it's necessary to highlight the involvement of the main partners of the city government and the main areas of work.

Municipality and its partners	BROADBAND	SMART MOBILITY	SMART HEALTH	SMART EDUCATION	SMART GOVERNMENT	SMART CULTURE & TRAVEL
	FirenzeWiFi®; Interconnecting, using Wi-Fi, the digital signs; changing digital signs using UTP cable	Bikes with pollution sensors and transportation (pilot project); FlorencebyBike and Showcase (app)		Gaming app and food communication in schools; Library loaning app	City database OpenData; Municipality app; FirenzeMia; online payment of fines	Online request for tourist buses; App for Digital Locations and tourist facilities; Online museum registrations; System that improves tourist use of digital services
			Integrating FSE on the FirenzeMia server			Digital signage
		Supervisors of traffic and infomobility (imobi.fi)				Digital signage
		GeoMobi system; app and web on infomobility		Payments on Mobile School	Mobile School	FirenzeCard system
		Parking spaces in real-time; Telepass for meters				
			Careggi App Smart Hospital; FirenzeWiFi			
			Careggi App Smart Hospital			
	FirenzeWiFi®		FirenzeWiFi®; Careggi Wifi			
<b>Museo Novecento</b>						Fiber optics and app to visit the museums

## 6 GAP ANALYSIS

This section proposes a system of analysis that identifies the strengths and weaknesses, opportunities and threats of the current situation in the areas listed above. The following three areas have been added to enrich the analytical framework with strategic information in the different areas:

- ***“Identity and brand”*** explores, from the viewpoint of Smart City, the degree of the development of a city identity and brand on an international level
- ***“Governance of Smart City”*** analyzes the quality of the future systems of governance for a Smart City
- ***“The Layers of Smart City”*** shows the city’s position with regards to the model of development outlined in *Smart City*

	<b>STRENGTHS</b>	<b>WEAKNESSES</b>	<b>OPPORTUNITIES</b>	<b>THREATS</b>
<b>BROADBAND</b>	<i>Public Wi-Fi; fixed broadband (ADSL)</i>	<i>Mobile broadband (LTE)</i>	<i>Fiber-optic projects and higher private connectivity leads to new value-added services</i>	<i>The low speeds of data transmission on broadband can harm levels of urban connectivity</i>
<b>SMART MOBILITY</b>	<i>Timetables and routes online on TPL; TPL infomobility</i>	<i>Contactless TPL tickets; perceived inefficiency of TPL</i>	<i>The dissatisfaction with public transportation will lead to new alternative modes of transportation</i>	<i>The city attitude on private transportation and the design of the city can harm the potential of TPL</i>
<b>SMART HEALTH</b>	<i>Electronic health records; health reports online</i>	<i>Scarce diffusion and integration of digital services in the area</i>	<i>The high degree of innovation of the main businesses in the area generates possibilities to create this system</i>	<i>The rise of people asking for healthcare can lead to congestion of the system and thus reduce the effectiveness of</i>
<b>SMART EDUCATION</b>	<i>University system offers high quality humanities education</i>	<i>PCs in schools; connected classrooms</i>	<i>A partnership with the regional schools to attract new talent with an innovative education competitive with the EU</i>	<i>The education services of the city risk remaining behind the European standard</i>
<b>SMART GOV</b>	<i>OpenData; online registry services; school services; services and online payments for local</i>	<i>Online city services are not well-known or used often</i>	<i>To become a benchmark of reference for European levels</i>	<i>The scarce sharing of digital content and data of participants leads to obstacles in the creating of an integrated offer</i>
<b>SMART CULTURE &amp; TRAVEL</b>	<i>Digital signs; online reservations; access to online information and interactive and personalized services</i>	<i>Lack of/poorly perceived quality of thematic portals of the Comune; dissatisfaction among tourists with regards to mobile systems</i>	<i>Improve tourism in terms of the influx of visitors and the experience of their visit</i>	<i>The dissatisfaction among tourists about the transportation system and other services harms the appreciation of the heritage of the city</i>
<b>IDENTITY AND BRAND</b>	<i>Preciousness of Florence in the world</i>	<i>Services for residents and tourists don't match the level of quality of the city</i>	<i>To do this in a way that makes the citizens aware that they live in a Smart City</i>	<i>The prevalence of local thinking impedes the growth of the city on an international level</i>
<b>GOVERNANCE OF A SMART CITY</b>	<i>Digital offerings of subsidiaries; European contact network has already been started</i>	<i>Too much of the digital identity is scarcely integrated; participants are not inclined to share data</i>	<i>Become a national benchmark thanks to digital protocols born from a network of innovative co-design</i>	<i>Partisan interests can delay the decision-making process in regards to the path to a Digital City</i>
<b>LEVELS OF A SMART CITY</b>	<i>Standard base infrastructure (Wi-Fi, broadband); platform for a regional multi-bodied data center</i>	<i>Scarce coordination of contents and digital services at the city level; structural plan to integrate to a Smart City</i>	<i>Enhance projects in progress and also new projects to offer integrated digital services</i>	<i>Developing a Smart City without considering the peculiarity and territorial limits of the city</i>


**ENDORSE**

**REDUCE**

**SIEZE**

**MINIMIZE**

**PLANS OF ACTION**

## 7. DIGITAL AGENDA AND SHARED GOVERNANCE

### 7.1 STRATEGIC OBJECTIVES AND PLANS OF ACTION

From the analysis of digital assets of the city of Florence, it is possible to define the main plans of actions that will concentrate on the digital renovation of the city. The City Government of Florence, starting from the pillars of vision for Digital Florence, identified 15 strategic points of intervention to begin the shared process that enhances existing assets, reduces areas of weakness, seizes opportunities and minimizes the risks that exist in the city.

#### TRANSPARENCY AND INCLUSION

- #1 Stimulate and regulate the sharing of digital content and assets on the part of participating branches of the City Government and other groups that do public service in the city
- #2 Effectively promote and communicate the city government's e-gov services to citizens and city users
- #3 Incentivize the participation of the citizens on the path to *Smart City* through sharing opinions on projects and results
- #4 Begin projects of *Smart Government* in partnership with other national and European cities to position Florence in the range of other intelligent international cities

#### APPEALING AND OPEN SOCIETY

- #5 Improve the digital services of businesses to reduce the burden of bureaucracy and improve the competitiveness of the territory
- #6 Promote services dedicated to emerging entrepreneurship to facilitate the growth of a innovative start-ups and attract foreign investment to the territory
- #7 Improve the digital services of schools to improve the quality of teaching and bridge the gap between national and European standards
- #8 Begin new partnerships with universities in the area to enhance university offerings in the city in light of the opportunities of Digital Florence
- #9 Promote experimentation and good practices of "welfare in community" that are innovative and sustainable, stimulate processes of networking the different health services in the area
- #10 Spread the model of "connected tourism" to the area through a digitizing of tourism and cultural offerings, in particular those related to museums, aimed at increasing and diversifying the visitors and improving the experience of their visit

## TRANSPORTATION AND QUALITY OF LIFE

- #11 Begin an analysis of the demands of transportation that makes use of surveys of the territory to identify what needs to be changed
- #12 Promote rules and fines of traffic management in line with the best Italian cities (e.g. Milan, Rome) and also European (e.g. Amsterdam, Copenhagen, Vienna)
- #13 Start pilot projects of alternative modes of smart mobility to test if it will be successful in the context of urban Florence

## SUSTAINABILITY AND THE USE OF RESOURCES

- #14 Adjust and remodel documents of urban planning from the perspective of *Smart City*
- #15 Promote and spread use of efficient energy, *Smart Building and Smart Lighting* in the territory starting from the sharing and enhancement of the best projects that have already begun and of available resources (for example, EU funds already allocated under the framework of *Smart city - Energy 2012 Strategic Sustainable planning and screening of the city plans*)

## 7.2 REASONS TO DO THIS SYSTEM

The establishment of these plans of action is aimed to attract the attention of the most innovative private and public firms in the area and enhance the best projects under a shared vision of priorities to be addressed on the path to Digital Florence.

The model of co-design of the smart city constitutes an operating method where the city government intends to collect and interpret the needs of the citizens, businesses and stakeholders of the city. For the city of Florence, doing this system in the territory means that it is essential to follow these three fundamental objectives over the medium- to long-term:

### 1. Offer a unified “catalog of digital services of the city” to all potential users

Many of the parties that supply public and private services to the city rarely demonstrate a willingness to share important information and data with the city administration. This phenomenon constitutes a significant obstacle in the process of developing a shared digital service for the city, which can be tackled from the implementation of the legal provisions with regards to the sharing and usability of public administration data contained in the Code of Digital Administration. However, the laws and rules are not enough to stimulate a real cooperation between agencies towards a common goal of city growth; this Manifesto sets the stage for a creation of a framework of city governance that brings the town’s main stakeholders to share their digital catalog with the city.

### 2. Generating value-added services for citizens and city users

The public finance restraints and the scarcity of available resources to use for investment dictates to the administration and to the territory to implement a wide range of projects, to avoid unnecessary and costly duplication, and to focus on complementary action and intervention strategies. From the shared vision for the city, it is best to extend that logic of cooperation to the single projects and initiatives in the go-to-market and planning phases of development. Only through this approach can we reduce the loss of value and implement innovative solutions that can really generate value-added services and have a positive economic and social impact on the city.

### 3. Making the Digital City sustainable over time

Maintaining the rights and obligations of shared assets, data and infrastructure and making the critical mass needed to generate additional action means to incentivize new models of business that are able to leverage the existing resources and funding opportunities with the particular needs of the territory. With this approach, Florence will be able to build a model of governing a smart city that will be successful because of its long-term sustainability and will be replicable in other Italian cities.

## 8. TOWARDS A SHARED PROTOCOL FOR DIGITAL FLORENCE

To begin the process of shared governance of the Digital City, it is important to start with a road map that involves the most innovative parties and aims to obtain results that are immediate, concrete and measurable, without generating costs that the city administration must pay. Strategic data and some innovative projects are already present in the area, but it helps to formalize the aims and shared priorities to generate short-term communicative impact on the city.

The Municipality of Florence intends to promote the signing of a series of protocols with principle stakeholders that provide public and private services for the city that will take a proactive approach on the way to Digital Florence. The following is a list of commitments that the city council intends to promote and formalize with the individual signers:



- ✓ *Share the digital content in the city and make it available to all*
- ✓ *Put public data on the appropriate site and/or on OpenData*
- ✓ *Offer to the citizens at least one mobile app that facilitates access to appropriate services*
- ✓ *In respect to the Code of Privacy, share and make interoperable a list of personal data of citizens so that they do not have to share it regularly with citizens and businesses*
- ✓ *Participate in the process of communications catalog of the digital offerings of the city for all citizens and city users*
- ✓ *Actively participate in setting up an inter-city center for the supervision of traffic and transportation (already outlined in the current projects for mobility)*
- ✓ *Place a common sensor in the city center for the supervision of traffic and transportation*
- ✓ *Strengthen the supervision of traffic and transportation in the city center so that it can become a format for the creation of a complete service delivery platform for the city*

### An event for Digital Florence

The sharing of the Manifesto with the city is intended to be the basis for the formalization of protocols for Digital Florence. During the entirety of this process, the Municipality of Florence considers it to be strategic to prioritize the co-involvement of citizens and all innovative parties (institutions, business, research centers, associations, local communities) that want to make a contribution to the identification of new projects for the digital and sustainable city.

The administration intends to promote this process through the establishment of thematic groups working openly in the territory and a presentation on Digital Florence. On the heels of other Italian and European cities, this even will introduce the community to the planning tools used, new ideas and projects for the city, expected results, new European funding and the next steps to a smart city.



## 9. ONGOING MONITORING AND EX POST EVALUATION

### Financing, starting and sustaining Digital Florence in the long term

- Define a model of economic sustainability in the protocols for Digital Florence
- Establish a working group within the Municipal building that promotes relations and working together between diverse groups
- Create an instrument to monitor the digital content in the city
- Plan ways (web/social) for the citizens to participate in the process and share their thoughts on the usefulness of actions taking place, what corrective actions are possible, any new objectives to plan, revive ideas that had earlier been scrapped
- Invest in a delivery service platform that will become the main instrument of monitoring the digital services of the city

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