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# 1 INTRODUCTION

This document represents the specific guideline on technology that was announced in the Theme Guide and in the Cluster Guide. It is part of a pool of other documents related to Participants Services that will be released during the next few months that will cover all practical aspects related to the Event.

More in detail, this document is designed to provide Participants in Expo Milano 2015 with **guidance on all aspects related to the technology to be implemented within their Exhibition Space**. It aims to represent a point of reference to help Participants to better **understand the importance of technology in this innovative edition of the Universal Exposition**, to introduce Expo Official Partners and their solutions, and to explain how these solutions will be implemented and managed.

It is important to note that each Exhibition Space's technological project must be **highly integrated in the project of the overall Exhibition Space** and for this reason the Organizer recommends Participants to include the technological equipment solutions in the early design development. Technological solutions will be an integral part of the documentation required in the approval process for the design of the Exhibition Space. Please see the **Design and Construction Guide** as well as the **Guidelines on Technical Systems Requirements** for further details on the approval process and related documentation.

In summary:

- **Chapter 2** of this Guide describes the role of technology in Expo Milano 2015 and why in this edition it will represent one of the key success factors of the Universal Exposition of Milan;
- **Chapter 3** explains the collaborative model chosen by the Organizer to acquire technology capabilities and introduces its selected Official Partners;
- **Chapter 4** offers a description of the key implications for Participants in terms of benefits and duties related to the implementation of the technology in their Exhibition Space;
- **Chapter 5** introduces the set of technological products and solution available for implementation within the Exhibition Space; the chapter presents also an overview of the Product and Service Catalogue from Official Partners (full service catalogue is available on Participants Digital Management System –PDMS<sup>1</sup>) and how the commercial offering will be structured;
- **Chapter 6** represents the phases of the delivery process and defines the Participants interactions with the Organizer and its Official Partners required to define, agree, and implement the desired level of technology within their Exhibition Space;
- **Chapter 7** covers all practical aspects related to the post-sales support that will be in place during the entire Event lifecycle (e.g. products warranty, Service Level Agreement, etc.).

The complete **Technological Services Catalogue** is part of the present Guide as Annex 1. In this document, the Organizer describes in detail the hardware/ software characteristics and the maintenance service of each technological solution (i.e. voice bundles, security equipment, electric facilities). Furthermore in the Catalogue is indicated an estimated cost of the BASIC offering.

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<sup>1</sup>: For more information on the PDMS, please refer to the Participants Guide.

## 2 THE ROLE OF TECHNOLOGY IN EXPO MILANO 2015

Since the first Event held in London in 1851 and throughout the centuries, Universal Expositions have represented a showcase of innovation and human inspiration.

Most Expositions have made a significant contribution to human progress and their legacy lives beyond them. They have been important platforms, often ahead of their time, presenting new models and breakthrough ideas, thus contributing to progressing humankind. Over the past years of rapid technological progress, the environment and the landscape in which Universal Expositions thrive has dramatically changed: **greater attention is now given to an awareness of the themes of humanity, together with the presentation of the most advanced examples of technology and techniques.** That's why Expo Milano 2015 – guided by the Bureau International des Expositions (BIE) and with the contribution of BIE Member States – aims at presenting an innovative vision of Universal Expositions in the XXI century, thus upholding and reaffirming BIE values and traditions.

As explained in the Registration Dossier, **the all-encompassing Theme “Feeding the Planet, Energy for Life” will be developed along two major pillars: sustainability – intended as balanced relationship between human beings and nature – and innovation – intended as strategy of widespread spirit of collaboration and partnerships.** As stated in the Participants' Guide and later explained in the Theme Guide, “Everything is the Theme. The Theme is Everything”.

The Theme will pervade the Universal Exposition, its Exhibition Site and the events that will be organized inside and outside of the Event Site, offering a unique Experience to the visitors in terms of culture, education and entertainment, and launching ideas that will spark and contribute to a wider public debate in the upcoming years.

This attempt to incorporate the Theme into any aspect of the Exposition must be based on an innovative **use of the most advanced technological tools available to guarantee a winning interactive experience that is well tuned to the individual needs of each visitor.**

Expo Milano 2015 aims at offering an important platform for exchanging innovative ideas and preparing for a better future for the Planet. It aims at developing and showcasing the excellences of industrial, cultural, scientific, technological and social achievements worldwide. Expo Milano 2015 is

determined to be the place where knowledge and experience converge in 2015 and where the Theme can be shared by all Participants, Organizations and individuals.

The Organizer is convinced that a successful Universal Exposition requires a new model of participation in line with what the XXI century world calls for. Key to success is to achieve involvement of all Participants at an early stage and to make the Visitor Experience unique, incomparable and unforgettable.

**Technology will play a crucial role, being conceived as the key element to develop the entire Event and to support the presentation and the fruition of the Event's Theme.**

Expo Milano 2015 will seek to implement and display several technological solutions with the purpose of maximizing the quality of the Visitors Experience and enhancing the Theme development by Participants. Many of such solutions will be based on leading edge technologies.

Those solutions are related not only to the field of Information and Communication Technology (ICT), but also to environmental friendly building, waste recycling, energy management and many similar aspects.

Call for ideas development based on technology linked to the theme of nutrition and sustainability will be launched as well as call for green ICT projects, whose scope is to use sustainable information technology and telecommunications.

As previously mentioned, a specific focus will be applied to identify new technologies, intelligent and consolidated solutions capable of providing significant added value in the context of a new approach in the Expo Milano 2015 Theme vision.

Technological progress will open up new and exciting frontiers in the next years. The involvement of the private sector, through marketing projects, co-marketing and partnerships, has been deemed crucial to achieve those goals.

**The Organizer is working to develop three platforms to support Participants and the Visitors Experience:**

- **Ecosystem Expo:** a project to optimize the experience of visiting the Exhibition Site of Expo Milano 2015 by creating and integrating local services, which will be made available to visitors before and during the Event;
- **Smart City Expo:** the Organizer intends to realize a functioning Exhibition Site with the main goal of developing a Smart City model heavily based on digital technologies and able to improve the Visitor Experience, supporting the understanding of the Theme and to favouring a legacy of innovative solutions and systems for future cities;
- **Cyber Expo:** a platform to enable Cyber Expo Milano 2015 visits thanks to the virtual replication of the Exhibition Site, allowing millions of visitors to live a virtual event experience and interact with Exhibition Spaces physical visitors, other cyber users and web communities.



## 2.1 Ecosystem Expo



Millions of people will take part and will be involved in Expo Milano 2015. In addition to touring the Exhibition Site itself, visitors will also have access to services offered in the local area by the business community, public agencies, and other public and private organizations. Expo Milano 2015 represents an opportunity for local players to offer new services to complement and expand the portfolio of existing services, using the Event as a driver.

**The idea behind the E015 Digital Ecosystem project is to extend the experience of visiting the Exhibition Site by creating and integrating local services, which will be made available to visitors before and during the Expo Milano 2015 period.** One of the objectives of E015 Digital Ecosystem is to contribute to the legacy bequeathed to the Milan area and, more generally, to the Italian system of public and private entities.

The E015 Digital Ecosystem project is based on cooperation among different stakeholders: **members of the Ecosystem agree to adopt a unified technological system for sharing information and services and for offering a rich variety of applications to end users.** The Organizer provides the technological solutions to support the project, **integrating the Ecosystem into the technological platform of Event services** (Expo Service Delivery Platform) and making it accessible to involved parties.

Based on the need to create an open environment that supports and enables cooperation among involved stakeholders, implement a Smart City and enable a Digital Society, the objectives of the E015 Digital Ecosystem are:



- **to maximize** the Visitor Experience within and outside the Exhibition Site, taking advantage of a digitally enable environment;
- **to define** a mutually accepted technological approach and an interoperable platform that enables and facilitates connections between stakeholders so that Expo Milano 2015 will be online with an expanded selection of solutions;
- **to facilitate** and promote the interoperability and integration of the developed services and applications while respecting the autonomy and responsibilities of each involved player;
- **to enhance** the user-friendliness of the Event, providing support to users of offsite services and increasing their level of satisfaction;
- **to extend** the services of the Expo Milano 2015 Smart City to companies and local organizations by providing access to the technological architecture and specific Event features (Service Delivery Platform);
- **to propose** a working approach based on cooperation among different players while respecting the diversity of the business model and commercial strategies.

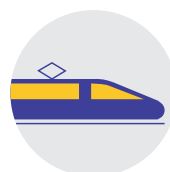
## Ecosystem



culture & tourism



accommodations



infomobility



# E015

digital ecosystem

Powered by EXPO MILANO 2015

Expo SERVICE DELIVERY PLATFORM

The genesis of E015 Digital Ecosystem lies in the engagement of various parties seeking to ensure that services meet demand and expand the economic and social growth opportunities offered by Expo Milano 2015.

The project is promoted by Confindustria<sup>2</sup> and was launched in July 2010 with the signing of a Memorandum of Understanding ("Strategic ICT Project for Expo Milano 2015") by Confindustria, Assolombarda<sup>3</sup>, Confcommercio<sup>4</sup> (Unione Commercio Milano), Camera di Commercio<sup>5</sup> di Milano and Expo 2015 S.p.A (promoting parties). Technical-scientific coordination and project supervision were provided by CEFRIEL – Politecnico di Milano.

## 2.2 Smart City Expo



**The Organizer intends to build and operate the Exhibition Site with the objective of developing a model for the Smart City of the future, thereby enhancing the Visitors' Experience and discovery of the Theme as well as leaving a legacy of innovative systems and solutions for future cities.**

Cities have in fact become the focal point of policies and economic strategies of the new millennium and smart and sustainable urbanization – the Smart City – is a necessary condition for this vision to become reality.

The new economic development trends follow the megatrends which characterize the cities of the XXI century: an increase in urbanization levels following population growth; a significant environmental impact by cities which use a high percentage of the worldwide energy and produce high level of the CO<sub>2</sub> emissions (with a relevant economic and social impact in terms of consumption and huge waste of vital resources); globalization, exposing urban realities to adverse dynamics such as continuous growth (with overcrowding, congestion, inadequacy of public transports) or decline (infrastructure deterioration, decrease of economic and promoting development resources).

The development of a digital Smart City is strictly related to the benefits it can bring in terms of improvement of the quality of life and the achievable targets of a sustainable urbanization. Those are the results of environmental and social sustainability combined with economic development.

**The Expo Milano 2015 Smart City must therefore be sustainable, comfortable, attractive, safe, informative and efficient in order to make the Visitor Experience thoroughly enjoyable.**

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**2:** Founded in 1910, Confindustria is the main organization representing the manufacturing and service industries in Italy.

**3:** About 5,500 firms located in the Provinces of Milan, Lodi and Monza and Brianza are associated to Assolombarda, which is the largest territorial entrepreneurial association in Italy. Assolombarda is part of Confindustria.

**4:** Confcommercio-Enterprise for Italy, is the Italian General Confederation of Enterprises, Professional Activities and Self-Employment, involving more than 700,000 businesses.

**5:** The Chambers of Commerce are public bodies that perform functions of general interest to the business system, taking care of development in local economies.

The construction and management of the Expo Milano 2015 Smart City will require numerous sustainable and best-in class solutions from design and construction of Self-Built Exhibition Spaces (please Participants refer to Guidelines - Sustainable Solutions - Design, Construction, Dismantling and Reuse), integrated energy management, e-mobility systems and logistics and queue management services as well as overall advanced visitors services.

In addition, the technological services must be integrated with a state of the art telecommunications network to ensure agile delivery of services and fast and secure connectivity throughout the Exhibition Site.

For this reason the Organizer embarked on many projects, involving Public entities, Official Partners and other private companies, with the aim of collecting and developing ideas connected to the enablers of the Smart City (smart economy, smart mobility, smart environment, smart living, smart governance, ...) as a legacy for future generations.

**The Organizer - in collaboration with its Official Partners - is developing the Expo Milano 2015 Smart City based on five layers**, as described below in detail.

### Layer 1 - SMART BUILDING and SMART ENERGY

The most sophisticated and modern measures currently available have been adopted in creating the Exhibition Site with the aim of **minimizing environmental impact and optimizing energy efficiency**. Sustainability criteria will be applied to all buildings and infrastructures, which will be built using recyclable materials. Furthermore, careful analysis and planning is underway regarding various options for facilitating and optimizing access to and circulation within the Site by visitors.



### Layer 2 - TELECOMMUNICATIONS AND IT SYSTEMS

All existing technological barriers will be overcome to offer visitors the best possible service and allow them to have a personalized and exclusive experience of the Expo Milano 2015 Smart City, through the use of all the technological supports made available to them: **a fiber optics network** based on advanced access technology, **a 4th-generation LTE** (Long Term Evolution) mobile network, **a Wi-Fi network** providing full coverage to Milan, and IT and application services via state of the art **cloud infrastructure**.



A professional communication network will be developed, based on Tetra, LTE and proprietary solutions for interoperability - independent of the commercial networks - assuring the possibility to keep communication active, for example, among security operators, the Main Operation Center and the First Responders (police, fire, medical ...), in any condition, with timing, quality of service and professional resilience guaranteed.

An integrated **Service Delivery Platform** will also be implemented with the aim of collecting all visitor data (profile, geo-location, presence, logistics, etc.) and manage them to the benefit of maximizing effectiveness of Exhibition Site operations and of all stakeholders participating to E015 Digital Ecosystem.



### Layer 3 - SECURITY and SAFETY SOLUTIONS

The Organizer will implement a range of services to ensure the safety of the Event and the people, through the **creation of a Main Operation Center in constant communication with the services of the Exhibition Site and, at the same time, integrating with external centers.**

In collaboration with its Official Partner, the Organizer will implement a solution based on a network of sensors spread throughout the Exhibition Site; data collected from these sensors and other systems useful for the evaluation of the security status of the Event will be collected and managed in a single integrated platform.

The Main Operation Center will play the lead role to ingrate all services including the security management of the Exhibition Site, coordinating the activities of all operators on the area, collecting and managing reports of any security event occurred within the Exhibition Site and **enabling the Organizer staff to handle emergencies in a unified, direct and controlled manner.**

As explained in Chapter 5 of this Guide, in order to ensure a high level of safety and security for visitors and Participants of Expo Milano 2015, **Participants will be asked to adopt a Security and Secure Communications kit, in order to integrate their own Exhibition Spaces in the unified Security System implemented for Expo Milano 2015.** The kit is composed by security equipment such as advanced video surveillance, access controls, automatic smoke detection system, acoustic diffusion emergency system, as described in detail in the Basic offering in the Technological Services Catalogue.

This will prevent the creation of gaps in the Security of the Event avoiding that the absence of sensors, the lack of communication or the heterogeneity of the information managed by different systems prevents the Main Operation Center from maintaining a single situational awareness vision of the Event, optimally managing the problems and emergencies.

**The presence of a Security and Secure Communications kit** - integrated with the central management processes of Expo Milano 2015 - **has also the advantage of reducing the risks in the management of the Event, ensuring that all Participants have equal access to all the First Responders in close liaison with the staff of the Organizer.**

Furthermore, it ensures to Participants compliance with local procedures for contacting and engaging the various emergency operators and it supports them in any difficulties which might arise from the use of a language other than their own or limited knowledge of the context and places where they will be located during the Exhibition period.

Targeted solutions will also be put in place regarding the wellbeing, safety and healthcare of people, such as special equipment for persons with disabilities.

#### Layer 4 - EDUTAINMENT

One of the themes close to the heart of Expo Milano 2015 is the knowledge sharing, culture, and fun. **Services for communicating and disseminating contents on the Theme are of key importance to the Organizer.** With the support of innovative technological services, visitors and Participants will have direct and privileged access to the content of Expo Milano 2015 throughout the duration of the Event. **Discussions on the Theme will be supported by the most modern technologies**, such as interactive walls, real-time transmission of seminars, conferences and conventions, or augmented reality.



#### Layer 5 – SERVICES

**In order to make the Expo Milano 2015 experience unique and interactive, visitors will find tools and services at their disposal that will make their visit more complete and enjoyable.**

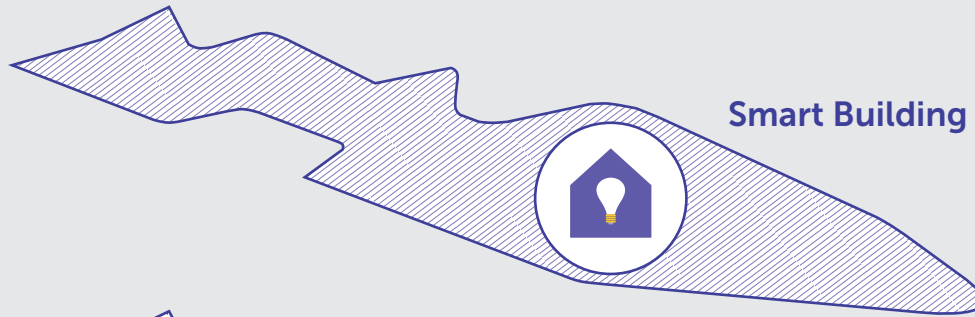


Working together with its Official Partners, the Organizer will develop an **information diffusion system** both within the Exhibition Site (starting with visitor smartphones and tablets) and in the City of Milan (including digital signage, multimedia totems, and digital surfaces). The various visitor devices will dialogue with the **recognition systems integrated into digital tickets** (with Near-Field Communication systems) and activate advanced Expo Milano 2015 access functions. The integrated application of these solutions will radically enhance the many contents of the Visitor's Experience (further details, personalization, interaction with user-generated content) as well as the comfort and ease of the visit<sup>6</sup>.

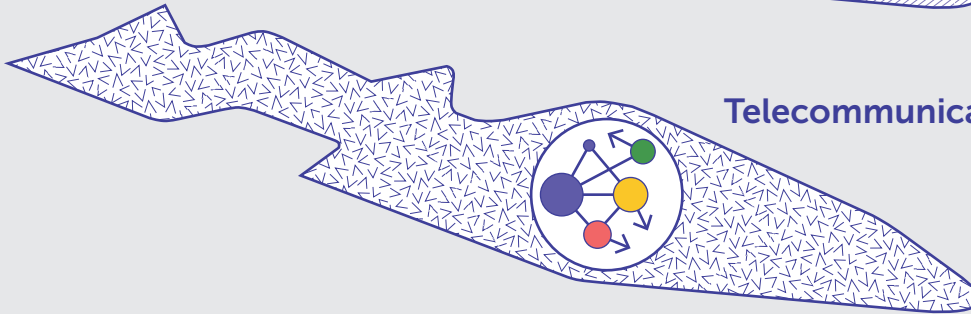
Furthermore, in many areas of the Exhibition Site the visit may be enriched thanks to **augmented-reality systems** developed by the Organizer and Official Partners of Expo Milano 2015. Visitors will thus be able to enhance their perception of the Expo Site and its content (audio, video, graphics), interact with digital information superimposed upon the real environment (waiting time status, events program), and also interact with offsite virtual visitors, who will be able to partake in the offerings of the Exhibition Site via the Cyber Expo.

Participants will have the option to integrate their services data into those managed by the Organizer, taking advantage of the SDP integration layers. Data structure and policies (data ownership, privacy rules and regulations, etc.) will be made available within the end of 2013.

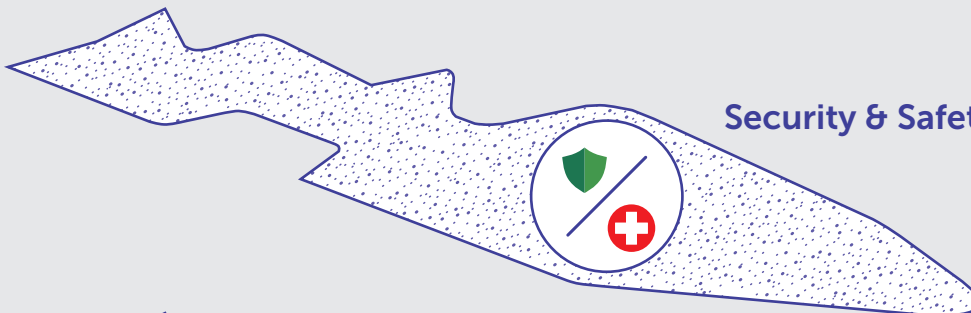
<sup>6</sup>: Among others, optimization of waiting times for Exhibition Spaces access, is under study and may be implemented according to overall site final operations set-up.



**Smart Building & Smart Energy**



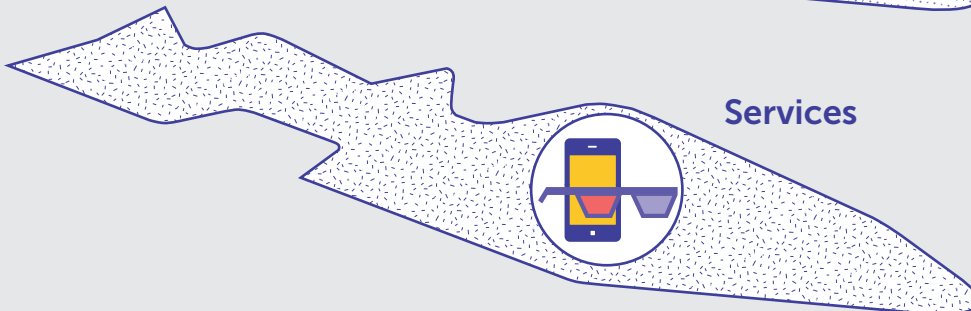
**Telecommunications & IT Systems**



**Security & Safety Solutions**



**Edutainment**



**Services**

## 2.3 Cyber Expo

The idea of a Cyber Expo grew out of the opportunity to engage as many visitors as possible from both a physical and a virtual perspective and from everywhere in the world. Indeed, the main goal of the Cyber Expo is to contribute to the 20 millions on-Site visitors target, through a virtual environment fascinating people and helping them organizing their physical visit.

The second goal is to enable cyber visitors from every part of the globe, to get in touch with Expo Milano 2015, with the Theme and Participants. In order to achieve this, the Organizer would like to create a new kind of Expo experience by providing people with new ways of learning, visiting, socializing and sharing.

Such digital experience will be provided on multiplatform environment aggregating contents and experience: Cyber Portal-Mobile, Cyber Smart App (made available for smartphones and digitally connected devices), broadcast and satellite platforms.

The Organizer is envisioning the Cyber Web Portal as the official web site to communicate - jointly with Participants - about the Event, the Theme and all the Exhibition Spaces.

**The Cyber Web Portal, will be the single point of contact in the internet where cyber visitors will attend webinar, play events on demand, comments on blogs and virtually visit the Universal Exposition, by means of an interactive and engaging 3D virtual tour.** This approach will maximize visibility and will ensure a wide spreading of discussions and proposals around the Theme.

The cyber experience is specifically based on a set of digital solutions such as:

- a **powerful communication and collaboration experience** integrating all services (information, on site and off site, on line and off line) also including webcast and High Definition (HD) streaming of events, to enhance interaction and effective sharing of content;
- a **Mobile Smart App solution** consisting of a digital guide exploiting cutting edge technology and experiences (e.g. augmented reality with e-glasses). The assisted Smart City guide will be integrated with the best existing local digital content for tourism, arts and culture to assist visitors in organizing their visits and providing complete logistics information. The Mobile Smart App will also constitute the Expo Site digital visiting guide, to that purpose Participants will be required to provide applicable digital content (text, pictures, video, etc.) relevant to their Exhibition Space and theme;
- **communities, aggregating – under various forms and modalities – focused interests** which will be developed to facilitate and boost dialogue and exchange of ideas and information in an interactive way;
- a **Satellite TV**, a broadband, real-time, two-way satellite connection between the Participants' Exhibition Spaces and home countries, enabling cyber visitors to live a complete virtual Expo Milano 2015 experience;



- a **Smart School project**, to include educational experiences by involving schools and youth associations.

**To realize this important objective it is necessary that Participants create their web site within the Cyber Web Framework.** For this reason, the Cyber Partner will be available to closely work with each Participant, in order to ensure that each one of them has its own web section with all the features and services needed for a modern and efficient communication.

The Cyber Expo will be an important leverage for the achievement of the Expo Milano 2015 goals and the Organizer - in collaboration with its Official Partner - is defining specific guidelines for the creation of a pioneering cyber experience developing cutting edge technologies to be used to shape innovative cyber solutions.

The Organizer will also develop an interactive 3D High Definition rendering to reproduce the entire Exhibition Site (i.e. Cardo, Decumanus, common areas, event venues, Thematic Areas) with high definition images, allowing cyber visitors to explore the amazing Site of Expo Milano 2015.

Participants must also take into account that many initiatives can be set up in their virtual Exhibition Spaces, such as advertising or communities development.

**To contribute to the target of the Cyber Expo, each Participant is expected to be an active part of this project, working with the Organizer and its Official Cyber Partner on building and integrating the 3D rendering of its own Exhibition Space.**



## 3 TECHNOLOGICAL OFFICIAL PARTNERS INTRODUCTION

In order to acquire and aggregate the state-of-the-art and leading edge technologies, the Organizer - respecting European and Italian principles in the field of the competition protection - selected through public comparative procedures some top companies focused on technology and innovation that achieved the best technical and economical evaluation.

Thanks to their knowledge, capability, and established leadership in their specific fields, Official Partners represent key players in the way technology changes the way we live, making a technology vision become reality.

Below the list of Expo Milano 2015 Technological Official Partners at now:

- **Accenture** - System Integration Official Global Partner
- **Came** – Physical Access Systems Official Partner
- **Cisco** - IP Network and Solutions Official Global Partner
- **Enel** - Smart Energy and Lighting Official Global Partner
- **Selex ES** - Safe City and Main Operation Centre Official Global Partner
- **Telecom Italia** - Integrated Connectivity and ICT Services Official Global Partner

Participants will directly interact with Official Partners during the whole Event lifecycle and Appendix 1 is dedicated to present each one of them.

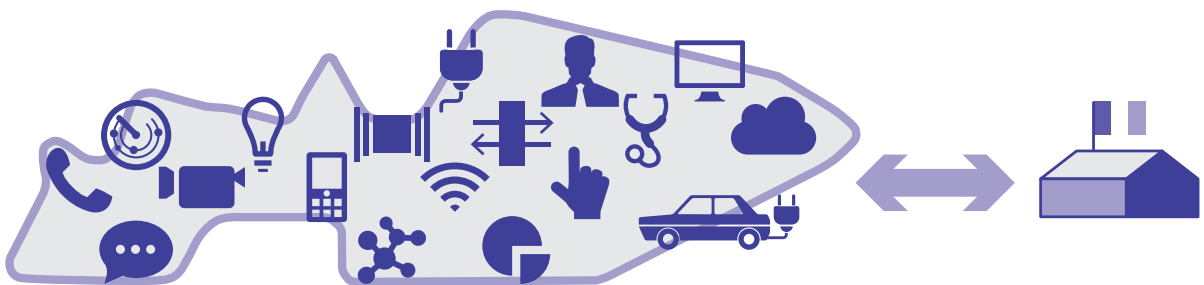
## 4 TECHNOLOGICAL SERVICES FOR PARTICIPANTS EXHIBITION SPACES

This chapter offers a description of the key implications for Participants in terms of benefits and duties related to the implementation of technology in their Exhibition Space.

As anticipated, Expo Milano 2015 will be characterized by an **extensive deployment of technology solutions aimed at maximizing the engagement of visitors and achieving a superior and efficient management of the Event**. These solutions must cover the whole Exhibition Site, including Participants' Exhibition Spaces. In order to realize this technology framework, the Organizer - together with its Official Partners - has conceived a number of solutions that will enable an immersive Visitor Experience.

Apart from the common areas of the Exhibition Site - in which the Organizer will be directly responsible for the technology solutions deployed - within Participants' Exhibition Spaces technology will be the responsibility of each Participant. Official Partners, under the supervision of the Organizer, have defined a number of technology solutions that will be made available to Participants in order to address their specific needs and requirements.

**The technology solutions proposed to Participants are designed to be seamlessly integrated with Expo Milano 2015 network and SDP (Service Delivery Platform) in order to guarantee a continuity of the Visitor Experience both inside and outside Exhibition Spaces.** The Organizer believes that this approach will enable a level of features, quality, efficiency, and support service



never experienced before at Expos. Moreover, **the Organizer will activate a Participants Service Center** to offer the services intended to strengthen the quality of their Exhibition Spaces.

To guarantee the continuity of the Visitor Experience, **the Organizer decided to provide guidance on the deployment and the integration of a 2 layered set of solutions:**

- **mandatory:** indicated as **basic technological solutions generally included by Participants in their Exhibition Space project;**
- **optional:** further subdivided in **Advanced Services** (with specific restrictions in terms of acceptable suppliers) and **Top** (no suppliers constraints).

As explained in detail in Chapter 5, **the Organizer has developed a mandatory offer for Participants in order to build with all of them the first layer of basic technological services that enables Participants to be fully integrated with Expo Milano 2015 Smart City.**

Moreover, some other recommended technology applications may have specific restrictions in terms of acceptable suppliers. This is to guarantee a smooth integration with the maximum level of service quality, the Organizer carefully selected its Official Partners and applied severe interoperability restrictions.

In summary, **the rationale that drives the strategy of the Organizer:**

- the strategic decision to build **one integrated technological infrastructure** on the Exhibition Site (e.g. telecommunications network and connectivity);
- respect of **environmental constraints** (e.g. infrastructure civil works on the Exhibition Site for the networks connections);
- necessity to **avoid interference** between providers (e.g. radiofrequency interference);
- need to **ensure a coherent Visitor Experience** between all Exhibition Spaces and the Expo Milano 2015 Smart City (e.g. smart solutions for building and energy);
- **ensure that persons with disabilities enjoy a full-fledged Visitor Experience** throughout the Expo Site, seamlessly moving through Participants' Exhibition Spaces as well as common areas;
- need to **ensure safety and security** through a single Main Operation Center;
- need to **guarantee efficient support and activities maintenance** with dedicated support organization (the Main Operation Centre and the Security Operations Centre are managed by the Organizer with its Official Partner);
- Participants' Exhibition Space **projects development facilitated and accelerated.**

## 4.1 Participants

The Organizer - with its Official Partners - will collaborate with Official and Non Official Participants building their Exhibition Spaces in designing and deploying technology solutions. Particularly for the solutions pertaining to the Basic package. **The Organizer will support Participants in their dealings with Official Partners and will foster the early engagement of designers and architects to provide any kind of information related to the technology solutions and how they can be merged within the planned infrastructure.**

Moreover, the Organizer and its Official Partners will be available to assess with Participants the technological solutions that allow them to represent the Expo Milano 2015 Theme in a very innovative way.

## 5 TECHNICAL SERVICES ON OFFER

The new approach on technology adopted by the Organizer represents a key element of Expo Milano 2015 and a major instrument for the interpretation of the Theme. By embracing technology and moving toward a Smart City model, Participants will be able to convey their thematic contents thereby supporting the Visitors' Experience.

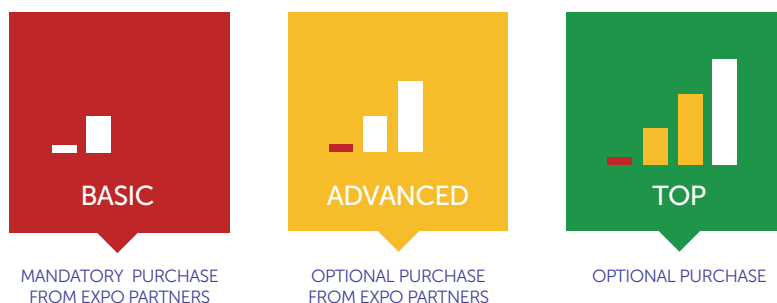
For this reason, Official Partners, under the supervision and guidance of the Organizer, have conceived specific offers to meet the technology needs of Participants: a broad set of products and solutions that will help Participants in building their own Exhibition Space and enhancing the concept of their exhibition.

### 5.1 Package-based offering

Please note that cost estimates for the technological services packages presented in this Guide cover budget lines related to:

- **the technological component of design and construction;**
- **equipment and materials;**
- **running costs, including support, operations and maintenance.**

As anticipated, in order to simplify the commercial proposal, three offerings have been developed: **Basic, Advanced and Top**.



As already introduced in the previous paragraphs, **the Basic offering includes packages which represent the minimum level of technology required to enable Participants to be fully integrated within Expo Milano 2015 Smart**

**City and for this reason is considered mandatory.** It covers technologies and materials usually present in all Exhibition Spaces.

Basic packages are considered to be mandatory. In any case the final Basic packages kit shall consider and keep into account potential exhibition spaces architectural projects and fittings constraints.

The Advanced offering includes solutions that are considered optional but would incur in specific restrictions in terms of acceptable suppliers. Technologies included in the Advanced packages must be supplied by Official Partners due to **environmental constraints, integration with the Organizer technological systems and solutions** developed on the Exhibition Site, **integration with the Basic offering** and the **efficiency on the operations activities**.

Packages included in the Top offering are optional and do not have any supplier constraints. The Organizer however highly recommends its Official Partners for such solutions and systems, given the comparative advantage they hold in being part of the design and management of the overall technological infrastructure.

Due to the nature of the services, Top packages allow a high degree of customization. Moreover, each package is designed to be implemented as a single module and can be also individually selected from the Advanced or the Top offering. In any case the Organizer and its Official Partners are open to support Participants in meeting specific requirements.

## 5.2 Technological Services packages

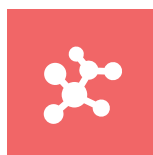
This paragraph introduces the technological services packages that have been included in the three offerings.

### Basic

The Basic package includes the first layer of technological services that ensure Participants and visitors to be fully and seamlessly integrated within the Expo Milano 2015 digital Smart City.

In detail, the Basic package is composed by the following packages:

- Security & access – by Selex ES
- Basic Smart Energy – by Enel Distribuzione, Enel Sole
- WI-FI – by Telecom Italia and Cisco
- Network, Internet & Cloud – by Telecom Italia and Cisco
- Fixed Voice – by Telecom Italia and Cisco



## Advanced

The Advanced package includes a selection of packages that further improve the Visitor Experience and meet Participants' needs.

In detail, the Advanced package is composed by the following packages:

- Mobile devices & services – by Telecom Italia
- Tailored cloud services – by Telecom Italia and Cisco
- Virtual desktop and Personal Computers – by Telecom Italia and Cisco
- Multimedia services – by Telecom Italia and Cisco
- Visit analytic – by Accenture
- On-site Visitor Experience – by Accenture
- Automation and Access management – by Came
- Advanced Energy Services – by Enel Sole
- Cyber Expo



## Top

The Top package includes a selection of solutions specifically designed to create the highest level of immersive Visitor Experience and to further meet the Participants' needs.

In detail, the Top package is composed by the following services:

- Messaging & collaboration –by Telecom Italia and Cisco
- Telepresence – by Telecom Italia and Cisco
- E-health – by Telecom Italia and Cisco
- Top Smart Energy – by Enel Distribuzione



The detailed description of the previous solutions is included as Annex 1 at the present Guide (Technological Services Catalogue).

Contracts models to be signed between Official Partners and Participants related to each package are available and will be provided upon request.

## 5.3 Technological Services dimensioning

**Technological services are customized according to several parameters**, such as for example the Exhibition Space size, number of staff and the architectural project (number of floors, materials used, ...).

The parameters of each Exhibition Space define the amount of hardware, capacity or service level related to the specific package (e.g. how many Wi-fi access points must be installed, or how many IP-Phones are required).

Official Partners, under the supervision of the Organizer, will be available to assess in detail the products and services' needs of each Participant according to the specifics of their project design in order to create tailored-made offers and to calculate the appropriate cost estimate.

**The technological project must be highly integrated in the project of the Exhibition Space** and for this reason **the Organizer recommends Participants to include technological equipment solutions in the design development from the early stage** (please see **Design and Construction Guide** as well as the **Guidelines - Technical System Requirements** for further details).

## 5.4 Pricing

As widely presented in this Guide as well as in other official documents, Expo Milano 2015 will be characterized by the use of technologies in a more pervasive way than in previous Expos. Technology will be key in the visitors experiencing the Theme of the Expo, it will be disseminated in common areas and facilities and it is therefore a required element in the individual Exhibition Spaces of Participants.

In the last few months, the Organizer built a complex technological architecture that will be offered to all Participants, thus easing their integration in the overall project.

This will allow each Participant to benefit from the efforts by the Organizer both in terms of design and implementation, thus reducing the amount of time and resources needed for their own design and set up.

After Expo Milano 2015, it is foreseeable that the next Universal Expositions will increasingly avail of technological solutions so that investments in the technological services for the Expo will take up a growing part of the participation budget. In view of facilitating this process, the Expo Milano 2015 Organizer envisioned this Guide and the annexed Catalogue to support Participants in optimizing the use of appropriate technologies as well as their available resources.

Please note that the average cost estimates presented in the Expo Milano 2015 International Participants Guide, issued in 2011, did cover technological



components, both in terms of infrastructure and management). The Organizer provides Participants with an updated estimate of the costs related to building, managing and setting up technologies in their Exhibition Spaces. This applies in particular to services offered in the Basic package, bearing in mind that as introduced in the previous Chapter, **pricing can only be defined according to the Participant's specific project**. For this reason the Organizer and its Official Partners are ready to collaborate and negotiate on a one-on-one basis with Participants to define both the appropriate dimensioning and the pricing that best fit Participant's needs and available resources.

Apart from the Basic offering, which will have bundled pricing, components of the Advanced and Top packages can be individually selected and priced. The technological services of those two packages are based on the infrastructure developed in the Basic offering.

The Organizer guarantees the fairness of the prices applied, which are in line with the average pricing, as defined by a benchmark study realized of the Italian market.

In order to provide Participants with information on the required budget for the Basic offering, the Organizer and its Official Partners have prepared different reference solutions with their corresponding price for Self-Built Exhibition Spaces (see Annex 1) on the basis of four average sizes that are likely to reflect a generally accepted dimensioning of most of the Exhibition Spaces (~ 750 sqm, ~ 1,400 sqm, ~ 2,700 sqm and ~ 4,000 sqm).

The sample estimates that follow are based on a standard project related to building and managing an Exhibition Space of various sizes; the total amount of square meter is considered developed over two floors.

For ease of reference, we have **indicated maximum cost estimates** related to putting in place and maintaining the technological services before and during the Event separately from the cost estimates for the related infrastructure. Details on the cost estimates are presented in the Catalogue.

COST ESTIMATES				
Self Built Exhibition Spaces				
Exhibition Space (total sqm) (*)	750	1,400	2,700	4,000
Participants Staff number	10	15	30	50
<b>BASIC OFFER (total) € Million</b>	<b>~ 0.6</b>	<b>~ 0.8</b>	<b>~ 1.2</b>	<b>~ 1.5</b>
TECHNOLOGICAL SERVICES Costs	~ 0.4	~ 0.5	~ 0.8	~ 0.9
INFRASTRUCTURES Costs	~ 0.2	~ 0.3	~ 0.4	~ 0.6
(*) Total square meters on two floors				

**To ensure a smooth and effective delivery of services, the Organizer and its Official Partners aim at planning as much in advance as possible the technological solutions tailored-made to any Participant's project:** advanced definition of the technological product and services (including equipment and systems characteristics) may also result in a potential reduction of the solutions cost, thanks to either an early design that can be integrated with infrastructure or a more efficient service delivery process.

To start collaborating on your specific project, Participants shall contact the Organizer also through the form in Appendix 2.

## 5.5 Roles and responsibilities

This sub-chapter introduces the role and responsibilities of each relevant stakeholder in the entire technology acquisition process: the Organizer, Official Partners and Participants.

**The Organizer is committed to guarantee the fairness of the costs in line with the market price** of the selected technology solutions, to **define interaction processes with Participants**, to manage the implementation of the project with a dedicated Project Office and to provide a first level of support directly located on the Expo Milano 2015 Exhibition Site.

**Official Partners will be in charge of providing Participants with the latest innovative technology solutions and with the highest service quality and professionalism.** Official Partners will support Participants during package selection, solution dimensioning, design and deployment. Moreover, they will also be in charge of making tests, resolving issues, and providing second and third level support during the entire Event lifecycle.

**Participants must acquire the minimum level of technology for their Exhibition Space (Basic offering)** in order to guarantee a seamless continuity of the Visitor Experience, a full integration with the Expo Milano 2015 Smart City and to allow an efficient management and cooperation of its staff with other organizations located on the Exhibition Site.

## 6 THE OFFERING PROCESS

This Chapter introduces the entire commercial offering process and the key milestones related to the period that spans from the initial engagement until the signature of the Services Contract.

As already mentioned, the final commercial offering will be the result of a collaboration between Participants, the Organizer and its Official Partners. As suggested before, **this collaboration should start as early as possible and should also involve architects and designers planning the Participants' Exhibition Space**. This is the key to coordinate all activities included in the design and integration of technological components (such as wi-fi hotspots cabling, security sensors, ...). **The Organizer and its Official Partners strongly encourage Participants to tackle this phase with the highest level of commitment in terms of resources and time availability.**

Below is reported a list of the most important phases of the offering process together with a short description of the required activities.

**1. Information request:** preferably within one month from the signature of their Participation Contract with the Organizer **Participants must submit a request for information about the Basic offering through the Form annexed in Appendix 2**. With this request, Participants provide contact details of the personnel appointed to follow the realization of the Exhibition Space and the integration of technology solutions.

Furthermore, Participants must submit their technological equipment needs in the Exhibition Project delivery. Those Participants that have already signed their Participation Contract must contact the Organizer as described above, at their earliest convenience.

**2. Beginning of collaboration:** once interfaces have been defined, cooperation will start between Participants, the Organizer and its Official Partners. This may require physical or virtual meetings. During this phase architects explain their ideas and introduce their concepts, while the Organizer and its Official Partners provide a deep dive on the available technologies and brainstorm on how technical solutions can be developed in the Exhibition Space.

**3. Packages selection:** in addition to the Basic, Participants have the opportunity to choose other technological services available in the Advanced



and Top packages. The selection of the most suitable offerings should come as the natural consequence of selecting the most appropriate technological applications to the specific project ideas under development. The Organizer and its Official Partners will provide all kind of information to support Participants in their decision-making.



**4. Technological Services dimensioning:** after the selection of the most suitable set of technological services, the Organizer and its Official Partners will take an active role in defining the detailed project in relation to the specific characteristics of the Exhibition Space (dimension, staff, processes, ...).



**5. Negotiation and commercial offering:** starting from the selected services, Official Partners will be able to realize and consolidate a commercial offering. This will be a process that takes into account the characteristics of each Participant (e.g. physical space) selecting technological services and dimensioning until the appropriate trade-off among all constraints is found.

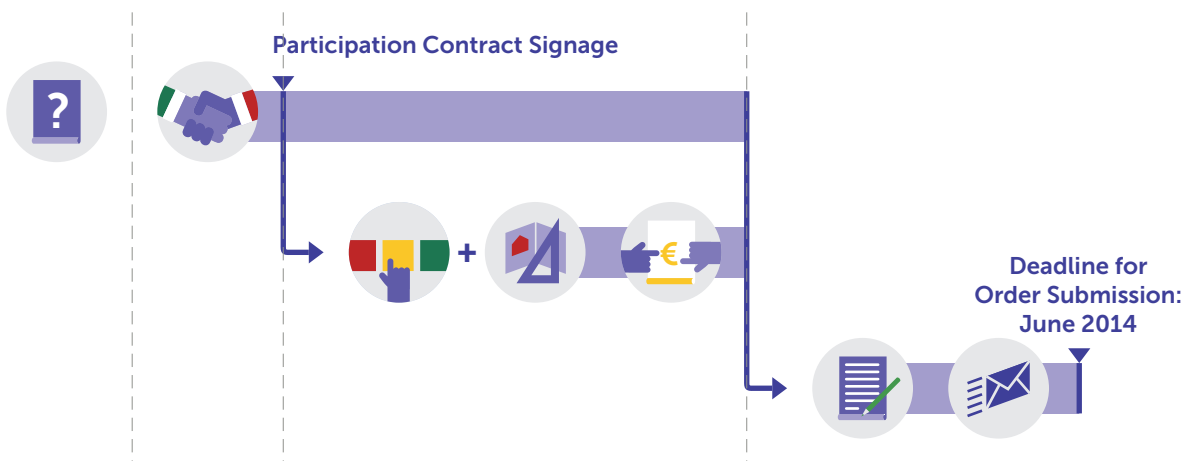


**6. Contract signature:** this phase includes the negotiation of the contract to be signed by Participants and Official Partners and the definition of other relevant details (e.g. Service Level Agreements, Scope Change charges, etc.).



**7. Order submission:** after the contract finalization, Official Partners submit the required hardware order and book the related professional services required to implement the selected solutions. Orders should be submitted with the right time advance to guarantee the necessary delivery and installation time. **The recommended deadline for hardware submission for Exhibition Spaces is June 2014** in order to allow for all preparation phases to be successfully put in place on time.

To allow a better understanding of timelines and activities the Project GANTT for Participants' technology acquisition is reported below.



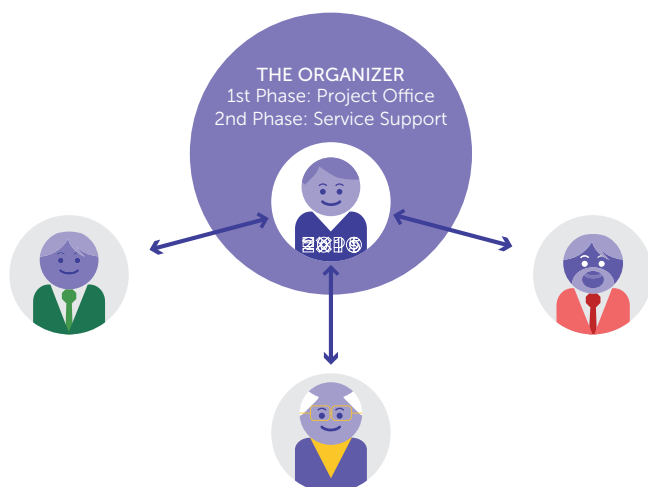
## 7 TECHNOLOGICAL SERVICES DELIVERY

The Organizer will activate a **Participants Service Centre (PSC)**, to offer **Participants the services intended to strengthen the quality of their exhibition**. The Participants Service Centre will be located at close distance to the Expo Site in a very accessible place, a building where all Participants will find services addressing all technical, logistical, administrative, commercial, security and health issues to suitably organize their presence in the Expo Milano 2015 context.

More information on the PSC will be contained in the **Guidelines on General Services** currently under development.

### 7.1 Project Team & Governance

In order to simplify the process and improve communication efficiency, **the Organizer and its Official Partners will always act with a single front-end interface with Participants**, coordinating various teams of professionals according to the specific project stage. During the initial phase, the front-end will be mainly composed by the Organizer contact points and Official Partner's Technical Solution Architects and Account Managers that will be ready to provide support in identifying the most suitable package, defining the appropriate solution dimensioning and shaping a commercial offering.

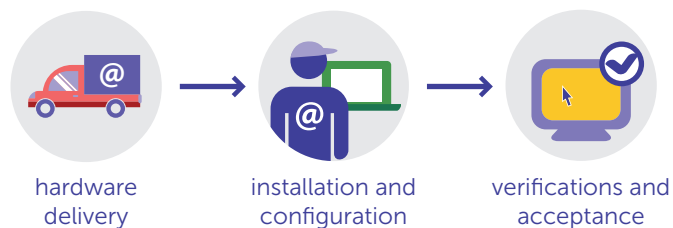


After the Service Contract signature, the main interface will become **the Official Partner Project Office** that will be in charge of delivering solutions in compliance with the agreed conditions. After final acceptance tests have been performed and the delivered solutions are considered fully functional, the front-end will be led by **the Organizer Operating Center and its Official Partner Service Support**, which will be ready to support Participants during the Event.

## 7.2 Key milestones

This sub-chapter introduces the key milestones related to solution delivery and provides a description of the related activities, in particular:

- **hardware delivery:** according to the order submission date, the required hardware will be delivered in the Exhibition Site. The delivery will be usually scheduled after the end of the works in the Exhibition Site;
- **installation and configuration:** once the hardware is delivered, a team of engineers and technicians will instal, cable and configure solutions and devices;
- **verifications and acceptance:** at the end of the installation and configuration phase, all technology solutions are deployed and ready to be used; before the delivery phase can be considered closed, a team of engineers will run tests aimed at verifying that the level of service (e.g. quality, resilience) in compliance with the Service Contract. Once verifications and acceptance tests are passed, the technologies will be released to the Participant. Starting from this moment, the management will be handled by the Service Support located in the Exhibition Site.



## 7.3 Integration test

As indicated in the previous sub-chapter, all products and solutions are subject to integration and verifications. The Organizer and its Official Partners will make extensive internal testing before the solution is deployed into the Exhibition Site. Internal testing, which will be performed in Expo Milano 2015 labs, will be aimed at verifying the correct level of service, quality, interoperability and resilience as stated in the negotiated Service Level Agreement.

**Internal testing will also verify solution behaviours under extreme critical conditions such as traffic overload and various types of simulated system failures and crashes.** After internal testing is passed the solutions are implemented into the Participant's Exhibition Spaces. At the end of this phase a new set of testing will be performed.

These field-tests have a dual scope:

- make an ultimate verification that the level of service, quality, resilience etc. of the implemented solutions meet the expected behaviour;
- perform the acceptance tests together with the Participant's engineers in order to obtain the official Pass.

These acceptance tests will be performed according to specific acceptance criteria defined in the Service Contract.

## 7.4 Scope change

During any stage of the project, Participants will be allowed to modify their project. Changes may be related to the package selection, solutions dimensioning, new features or other. In this case, Participants must make a Change Request, which may or may not imply extra charges.

Change Requests will be handled according to the change request process defined in the Service Contract.

## 8 SERVICE SUPPORT

**During the Event period, the Organizer with its Official Partners will manage and monitor the technological services through the Main Operation Centre and the Security Operations Centre.**

Participants will find an active interface in the Participants Service Center that will support all the needs raised across the Exhibition Site. A service request management interface, both on-line and on-Site, will assist Participants, responding to their operating needs, complains and suggestions in improving Expo Milano 2015 general services and specific needs. **Participants will find assistance and support both before and during the Event.**

### 8.1 Service Level Agreement



**Official Partners, under the supervision of the Organizer, are committed to provide the highest standard of customer service, support and care related to the deployed solutions.** To achieve this, a set of Service Level Agreement (SLA) will be defined and negotiated among the parties and included in the Service Contract.

SLA defines a common understanding about services, priorities, responsibilities, guarantees and warranties. Each solution will have the level of service defined. The SLA may specify the levels of availability, serviceability, performance, operation, or other attributes of the service. Service Level Agreements give total protection for the deployed guaranteed solutions.

To provide the highest level quality and a quick responsiveness to any technology issue, the Organizer dedicates a Main Operation Centre in which technical specialists and Official Partners' engineers will continuously monitor network and solution performances and be ready to handle any trouble.

SLA will also define the time window into which a raised issue will be handled. Generally two types of service support have been defined:

- **24/7 Technical Support** dedicated to those products and/or services that are considered critical for Expo Milano 2015 and Participants;
- **Business hours Technical Support** applied to all other products and/or services that have a second tier priority.

SLAs are specifically defined for each package and can be further negotiated with each Participant on the basis of its specific needs and priorities.



## 9 SPARE PARTS

Taking into account the lessons learned in previous Expos and the suggestions and needs put forward by many Participants, the Organizer felt the need to dedicate particular attention to the issue of spare parts for all equipment installed in the Expo Site.

**In order to minimize any possible downtime and to recover the service within the time frame specified in the Service Contract, the Organizer and its Official Partners have decided to create and maintain a stock of spare parts of the most critical components.**

This approach, together with the decision to establish a dedicated Service Support directly on the Expo Milano 2015 Exhibition Site, minimizes customer's operational risks. Participants will not need to order and maintain personal stock of critical components and will not face the risk of having a long downtime due to endless supply.

**Guaranteed availability of skilled engineers, high availability of spare parts as well as short response times is all part of the same strategy aimed at achieving the highest standard of quality service.** Such result will be the outcome of an extensive effort in terms of organization, technology and logistics touching all involved stakeholders - such as the Organizer, Official Partners, Participants and third parties - and sought since the initial stages of the design (e.g. modular design, interoperability testing, disaster recovery simulations) in a way to provide an incomparable value added for visitors and Participants.

# APPENDIX 1

## TECHNOLOGICAL OFFICIAL PARTNERS

As indicated in the previous chapters, the Organizer's Official Partners will play a critical role in the implementation of the technology vision and on the overall project success.

This Chapter is dedicated to present each one of them.

### Accenture



Accenture is the Official Global Partner of Expo Milano 2015 as System Integrator and mandated to design the overall IT architecture of the Organizer and the Event systems.

Accenture will leverage its extensive range of digital assets and high performance solutions to create total and tangible experience of the Universal Exposition for the expected 20 million visitors.

Accenture is a global management consulting, technology services and outsourcing company, with approximately 259,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US\$27.9 billion for the fiscal year ended Aug. 31, 2012.

Accenture operates a network of over 80 Global Innovation Centers around the world which include 40 Innovation Showcase Centers and 5 R&D Technology Labs, making the company a world leader in harnessing innovation for practical purposes.

Accenture is strongly committed in Smart City projects, perceived as both environmentally sustainable and attractive to citizens and businesses. This projects requires a new kind of intelligent infrastructure: an innovative, open platform based on smart technologies that can help forward-looking cities more predictably integrate a complex suite of services cost-effectively, at pace and at scale.

To develop the "Smart City of The Future" vision for Expo Milano 2015,

Accenture will draw on its proven experience on Smart City projects in countries such as the US, Denmark, the Netherlands and Japan, and will tap into its deep expertise in sustainability.

For Expo Milano 2015, Accenture will create and manage the IT architecture of the Event digital platform by capitalizing on its impressive track record in complex implementation projects for both public and private players, and on its deep expertise both in management consulting and technology.

The complexity of the project will require close collaboration with all other Organizer's Partners and third parties involved. Accenture will integrate all selected solutions into one seamless Visitor Experience, making its technological innovative expertise tangible for all its stakeholders.

Accenture provides Expo Milano 2015 with its unique end-to-end approach, by combining clear strategy, integration, open platforms and modular solutions in a collaborative environment of partnerships.

Accenture will support the Organizer and Participants by leveraging technology innovation in all involved areas and will realize a set of technological services integrated with a state of the art of ICT network in order to convey our concept of innovation and sustainability through a broad range of services including Value Added Services, Business To Business and Business To Consumer.

For more information visit: [www.accenture.com](http://www.accenture.com)

## Accenture for Expo Milano 2015

Before the Event, Accenture will:

- help Participants to select and train their teams;
- manage Participants project planning;
- help optimize the digital experience by using innovative digital focus groups and ad hoc surveys;
- design and run digital direct marketing campaigns.

During the Event, Accenture will:

- deploy its Service Delivery Platform (SDP), adopted by Expo Milano 2015, both to manage visitor profiles and experiences and enable additional service integration in the Exhibition Space;

- optimize operations and logistics to maximize sales generation;
- develop and manage ad hoc services and provide a wide range of unique, integrated solutions such as:
  - Events Booking: visitors can use the events reservation module to reserve events, entry times, "theme journeys", seats and additional services, depending on the event. Participants will be able to create, schedule, move, and cancel events on their own while the integrated system will update the sub-systems impacted (e.g. queue management, facilities reservation, etc.);
  - Presence and Location Management:

visitors are checked into the Expo Milano 2015 network and their positioning is updated in real time. Notifications are triggered when customers are nearing an area of interest and a navigational path guides them through the Event;

- e-Couponing: mobile and web channels can be deployed to manage couponing and loyalty programs, including points management and redemption, promotions and discount coupons. Participants can leverage a catalogue of Organizer local partners (e.g. food & beverage, hospitality, travel and transportation, culture and entertainment, etc.) to create their own spendable coupons;
- e-Commerce: mobile and web channels support end-to-end sales processes for goods and merchandising, including order creation, fulfillment, cancelation and payment. Participants can use the system to build their own catalogue and this fits neatly with Expo Milano 2015 cart mechanism (e.g. the impulse-based

augmented reality shop system);

- exhibitor facilities and solutions enabling them to promote their products/ services through dedicated, integrated e-Commerce MarketPlace sites, physical POS for Exhibition Spaces restaurants and stores, Digital Vending experiences, and feeding into a central catalogue;
- simple touch, Babel Kiosk, Holotheater, to create an exciting digital experience;
- Eye Tracking, Emotional Tracking and Path Tracking to monitor visitor behaviors within the Exhibition Space;
- Feedback Collection, sentiment analysis on the web and Tweet collection enabling exhibitors to improve Exhibition Space responses to visitor suggestions.

Post-Event, Accenture will:

- provide Participants with advanced analytics and visitor feedback;
- maximize Event Return Of Investment (ROI) by helping to develop partnerships and collaborations.

## Came



Came Group, with its company Came Cancelli Automatici S.p.A., is the Official Partner of Expo Milano 2015 for Automation, Management and Access Control of Visitors.

Came Cancelli Automatici, leader in the automation systems for residential and industrial entrances, parking lots and access control, with headquarters in Dosson di Casier (near Treviso, in the Veneto Region located in the North-Eastern part of Italy) was established in 1972. Since then, the company has been manufacturing the broadest range of automated products for residential and industrial front gates, parking systems, access control, and developing home and building automation and security systems.

From gate, door and window automation, including security systems and home & building automation technologies, Came Group offers its vast experience and project management capacity with a complete range of products and services from home automation, to building automation and urban furniture.

Came Group registered consolidated sales of over 200 million Euro in 2012, has 1080 employees and operates through a capillary network in 118 countries worldwide, with more than 480 branch offices and exclusive dealers.

For more information visit: [www.came.com](http://www.came.com) / [www.camegroup.com](http://www.camegroup.com)

## Came for Expo Milano 2015

At Expo Milan 2015 Came will take care of the automation services, access management and control of visitors to the digital Smart City Expo. Through the partnership with Expo Milano 2015 Came will develop an innovative access control model for modular surveillance, regulation of automation devices for pedestrian and vehicular entry, and for the Exhibition Site parking spaces. Came will also regulate the entry of staff and visitors to the Exhibition Spaces and other infrastructures.

The system managed by Came will use the most innovative technological solutions available in 2015 to handle the access of 20 million of visitors - with more than one hundred thousand visitors per day

on average - connecting to the Expo Milano 2015 service ticket system and to the Main Operation Centre platform for centralized control. The access points will be controlled by about two hundreds automatic turnstiles and Came will manage the integration of automation for sliding gates for the road barriers and bollards for the protection of the side roads.

Came hardware and software systems will allow to regulate the access at every Exhibition Space and in other areas using different technologies, from RFID to the QR code, integrated with support services in an augmented reality, one of the elements of Expo Milano 2015.

## Cisco

Cisco is the Official Global Partner of Expo Milano 2015 for the IP Networks and Solutions.

Cisco's mission is to create technologies that change the way we live, work, learn and play. Hardware and software solutions help to shape the Internet by creating a smart and intelligent platform that allows people to connect, communicate and collaborate.

The partnership with Expo Milano 2015 is based on a deep alignment of intent, strategic focus, and technology vision: Cisco wants to create an Exhibition Site that can become a reference and a model for the digital Smart City of the future. A place that is more liveable, with a lower environmental impact and that enables a sustainable economic development for society. This model is based upon the vision of a community built around people, which can directly contribute with their ideas to the transformation of the present society. Cisco strongly believes that the real technology evolution cannot be measured on the number of digital devices available but on the ability to use the technology



in a smart and rational way to improve sustainability and guarantee a better life for everyone.

Based on the experience on the use of technology to create innovative urbanistic models, Cisco will create infrastructures, services and applications that allow Expo Milano 2015 visitors to both enjoy the Event in an innovative way and to fully understand what is the meaning of being part of smart community. Moreover, Cisco's intention is also to spread such a Visitor Experience and its related opportunities also on the city of Milan, at a regional level and even further. The aim is to show how a community (or even a whole nation) can be rethought with the use of the digital technology. With its technologies Cisco will build the platform to create a smart and connected Universal Exposition, seamlessly integrating solutions that cover a large number of applications such as public health, security, energy management, logistic and facility management and much more. Moreover, Participants and Visitors will be able to explore Expo Milano 2015, stay connected, collaborate and share digital contents both inside and outside the Exhibition Site boundaries. All of this will be possible thanks to a pool of technologies designed for collaboration and to a video architecture that will enable everyone to live Expo Milano 2015 directly from their own devices from everywhere in the world.

For more information visit: [www.cisco.com](http://www.cisco.com)

## Cisco for Expo Milano 2015

The key elements of the integrated solutions for a "Borderless Network" that Cisco will deploy in Expo Milano 2015 and will make available to Participants are:

- a network architecture optimized for the provisioning and management of rich-media content (Medianet) with ultra-high definition video and multicast on any possible type of device and network;
- a powerful and flexible Wireless Infrastructure (Cisco Unified Wireless Network), that together with other network infrastructures is able to provide secure and full network coverage (indoor and outdoor) on a high density environment such as the Expo Milano 2015 Exhibition Site;
- the application of a security system designed to clearly protect, control, and customize the

access to data, applications and services from users, visitors, Participants, and collaborators of Expo Milano 2015;

- the security and consistency for users from any kind of device, application, and content;
- the use of collaborative solutions and communication systems for business such as TelePresence®, a ultra-high definition in-person communication solution.

Cisco will also show how network technologies can have a positive impact on citizen's quality of life: the Cisco HealthPresence® solution, which uses high definition video and audio, medical devices, and a ultra-wide network connection, will allow visitors and Participants that may need help, to connect to doctors located in several hospitals in Milan and receive medical assistance and monitoring.

## Enel Distribuzione and Enel Sole

Enel Distribuzione is the Official Global Partner of Expo Milano 2015 for the Smart Energy Solutions and Enel Sole is the Official Global Partner of Expo Milano 2015 for the Lighting Solutions.



Enel Distribuzione and Enel Sole decide to collaborate with Expo Milano 2015 project due to the deep alignment between companies core activities and the Event Theme.

Enel Distribuzione is the prime distributor of electricity in Italy and the second in Europe. It belongs to the Enel Group, one of the biggest utilities in the world, the largest electrical power supplier in Italy, Spain and Slovakia, and the main private operator in Latin America. It distributes electricity via a network that spans around 1,105,000 km of lines and serves 33 million customers in Italy (85% of the national total).

The core activities of Enel Distribuzione include distributing and transforming electricity, managing the electricity network, operating and running the plants, and providing maintenance and development services relative to the electricity distribution network.

### Enel for Expo Milano 2015

The company will collaborate in Expo Milano 2015 and with Participants developing innovative Smart Grids solutions exported worldwide, as following:

- solutions for the integration of Renewable Energy Sources (RES) in the network;
- advanced automation and network control;
- Smart Metering (the Enel "Electronic Meter" and "Smart Info" technologies) to increase the user's awareness of energy consumption levels and to make it easier for the end user to actively participate in managing his energy consumption;
- infrastructure for recharging electric vehicles, with Enel technology, for public and private contexts; (the "Smart Charging" System is already in use, featuring an EMMS - Electric Mobility Management System – that controls all the charging stations installed in Italy and Spain);
- energy storage systems.

Enel Sole, a company of the Enel Group, is one of the most experienced and skilled European companies in the field of public and design illumination for outdoor and indoor environments and illuminating artistic heritage.

The main customers of Enel Sole are the 4,000 Italian municipalities in which the company manages around 2,000,000 light sources.

In line with the main objectives of Expo Milano 2015, Enel Sole is proud to have completed many projects - both at the national and international

level - focusing on energy efficiency applied to illumination through the optimisation of the energy consumption levels in the lighting systems.

Thanks to the experience gained on the field and the use of innovative technologies, Enel Sole will supply Expo Milano 2015 and to Participants custom-designed light sources to suit specific requirements contributing to the global objectives of energy saving, economic sustainability, the reduction of CO2 emissions and of light pollution.

For more information visit: [www.enel.it](http://www.enel.it)

## Enel for Participants

The key elements of the integrated solutions for a "Borderless Network" that Enel Distribuzione and Enel Sole will deploy in Expo Milano 2015 and will make available to Participants are:

- an energy management system that combines the most advanced Smart Metering technology with Smart Info to monitor and control the charges to ensure an optimised, sustainable and safe consumption of energy (also incorporating production systems for renewable energy sources) and to raise the visitors' awareness of the environmental impact of the Event venues including Participants Exhibition Spaces. The management system will also integrate the lighting system of the Exhibition Site with all its sensors activated: the presence of people, temperature and exposure to natural light;
- high efficiency equipment to illuminate the complex and for the practical internal and external illumination of the Participants Exhibition Spaces, combined with a telemanagement system that will allow the entire system to be optimised and integrated with the lighting network of the entire Exhibition Site. Artistic and design light engineering solutions that will characterise and enhance the Exhibition Spaces.
- an electric mobility infrastructure for light electric vehicles. Real-time visibility of all the charging stations present in the Exhibition Site and constant monitoring of the vehicle recharging phases.

## Selex ES



Selex ES, a Finmeccanica company, is the Official Global Partner of Expo Milano 2015 for the Safe City and Main Operation Center.

Finmeccanica is one of Italy's leading industrial groups in the field of high technologies and among the top ten global players in aerospace, defence and security. With revenues exceeding 17 billion Euros, about 68,000 employees and a presence that covers over 50 countries, Finmeccanica is a multinational



and multicultural group with a clear and recognized vocation for technological excellence necessary to conquer the international leadership in the high tech sectors in which it operates: helicopters, aeronautics, defence and security electronics/systems, space, energy and transportation.

The solution designed by Selex ES for Expo Milano 2015 benefits from the experience gained over the years, both in command and control systems for defence and air traffic control systems and managing large events. These competences are now merged within Selex ES, global leader in the field of electronics and computer technologies applied to defense systems, aerospace, security and protection of information, infrastructures and territory, as well as in the creation of smart sustainable solutions aimed at improving the quality of life.

Among the principal objectives of Selex ES is to become the reference technological partner for cities wishing to evolve towards Smart City models, satisfying a wide spectrum of needs not only in the field of security, but more generally about in activities that take place daily in our urban centers.

The partnership with Expo Milano 2015 includes the provision of equipment and services required for the implementation of an innovative solution of smart, safe and secure Exhibition Site to guarantee surveillance and protection of all the areas (commons and Participants ones) looking at the security and safety of all operators and visitors.

The heart of the partnership is providing a turnkey Main Operation Center able to monitor and supervise the Event in terms of security, collecting, integrating and presenting the flow of information coming from heterogeneous systems to make them accessible to the operators of Expo Milano 2015, as well as interoperable with other Public Safety organizations active in the area (see Chapter 2). The Main Operation Center will consist of an open/service oriented platform for managing and locating of vehicles and persons on the ground and for monitoring visitor flow.

For more information visit: [www.selex-es.com](http://www.selex-es.com) / [www.finmeccanica.it](http://www.finmeccanica.it)

## Selex ES for Expo Milano 2015

Expo Milano 2015 and Participants staff will use an innovative satellite 3D cartographic representation, created by e-geos, Group's Company specializing in products and applications for Earth observation of the Exhibition Site for a virtual immersion into the environment to be monitored, understanding the scenario and improving operations.

It is also envisaged the provision of a professional

communications system based on the TETRA secure standard, including radio equipment and related network infrastructure, integrated with a proprietary advanced platform (PERSEUS), that will ensure communication and exchange of data and information between the TETRA network, other existing heterogeneous commercial networks and fourth generation mobile networks (LTE).

In the video surveillance area, Finmeccanica will supply uncooled thermal micro-cameras, developed by the Group's US Company DRS Technologies. As explained in the paragraph 2 - Layer Security and E-Health of the Smart City Expo - these technologies

will be made available to Participants through "Security and Secure Communications" kits, designed to meet the characteristics of Exhibition Site and to fully benefit from the support and safety organization deployed by Expo Milano 2015.

## Telecom Italia



Telecom Italia is the Official Global Partner of Expo Milano 2015 for the Integrated Connectivity and Services Solutions.

With 46.5 million customers in Italy and 94 million in Brazil, Argentina and Paraguay, Telecom Italia is Italy's main ICT group and an important player on the Latin American market, which represents 38% of the company's turnover to date.

The company's range of offers - focusing on advanced solutions for consumers, businesses and institutions - includes: landline and mobile telecommunications, digital content, cloud computing, media, office and system solutions.

Attention towards the needs of its customers and technological innovation are at the base of the company's strategy. Telecom Italia has a dynamic organization which strives to provide quality service and is constantly involved in research in the TILab laboratories.

Digital ubiquity - the possibility to be connected to the Internet at all times and to access information, services and multimedia content with ease and speed -, relies on Telecom Italia's integrated and technologically advanced mobile and landline networks. These can be accessed whilst on the move or from a fixed location thanks to a wide range of applications and devices such as: smartphones, mobiles, PCs, tablets, e-readers, "over the top TV" decoders, apps and cloud.

The step from digital ubiquity for consumers to cloud services for businesses is a quick and easy one. Advanced and customizable solutions are dedicated to a diversified business environment: phone plans converging mobile and landline prices, high speed connectivity, an advanced platform for cloud computing for the virtualization of applications and infrastructures and finally a vast selection of applications for storing and managing data or controlling energy consumption.

Abroad Group's focus is on Latin America. It operates in Argentina and Paraguay, providing fixed and mobile telephony services and Internet through Telecom Argentina group. In Brasil, TIM Brasil, with a 26,9% market share on lines, is the second player in the country.

Telecom Italia will supply the latest technological infrastructures and solutions, making its experience as an international operator available to welcome visitors and Participants from various countries.

For more information visit: [www.telecomitalia.com](http://www.telecomitalia.com)

## Telecom Italia for Expo Milano 2015

The partnership involves support by Telecom Italia of the development of a sustainable and smart city: the first Smart City of the future, which the Exhibition Site will exemplify. Telecom Italia will equip Expo Milano 2015 and Participants with fixed mobile and IT infrastructure networks, providing the latest generation technological solutions

including mobile-payment and mobile-ticketing services.

There will be smart solutions for Visitors and public administrations, the development and management of the website, operational management, maintenance and providing of voice and data connectivity and traffic.

## APPENDIX 2

### INFORMATION FORM



The following page contains an example of the Form for Information on Technological Services, that Participants can download from the Participants Digital Management System (PDMS).

While compiling the form, Participants are kindly requested to provide as many as details as possible. For more information on the PDMS, please refer to the Participants Guide.

## Information Request Form on Technological Services

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Name of Official Participant				
Date of Participation Notification				
Date of Form Submitting				

	Lot N°	Estimated Covered Exhibition Space (sqm)	Number of Floors	Number of Staff
<b>Basic Package</b>	Further information on following Services:			
<b>Advanced Package</b> Information request	Further information on following Services:			
<b>Top Package</b> Information request	Further information on following Services:			

<b>Applicant's contact</b>				
Name				
Role				
Address				
Telephone				
e-mail address				
Fax				
<b>Commissioner General of Section (signature)</b>				

