

First

Implementing cooperation on Future Internet

and ICT Components between Europe and Latin America

Vision 2020:

Common EU-LatAm strategic Vision on Future Internet cooperation

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Author(s):	Silvia Bidart, Gabriel Baum, Luz Ledesma
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The document integrates contributions provided on a regular basis by the following partners:

- Rose Vision (Mr. Antonio Alfaro)
- ALETI (Mrs. Silvia Bidart and Mrs. Luz Ledesma)
- USP (Mr. Arthur Battaglia)
- CINTEL (Mrs. Ana María Trimmino)
- ITESM (Mrs. Carmen Luz Aguero)

Table of contents

1	Executive summary	5
2	Introduction.....	6
3	Future Internet: an essential tool for enhancing economy, society and culture in Latin America	8
4	The role of Latin America in the international context of Future Internet.....	10
5	LATPs addressing common EU-LatAm societal challenges through research cooperation in the field of Future Internet.....	13
6	Vision 2020: Common EU-LatAm strategic Vision on Future Internet cooperation.....	15
7	Sources of information	18
8	Annex I: The EU-LatAm experts group	19
9	Annex II: Acronyms list	22

1 Executive summary

The present document, “Vision 2020: Common EU-LatAm strategic Vision on Future Internet cooperation”, corresponds to deliverable D4.2 of the work package 4 of the FIRST Project, which main objective is the establishment of a common EU-LatAm strategy for Future Internet R&D activities.

The **EU-LatAm strategy is defined by three key documents** that will support the establishment of future cooperation between European and Latin American researchers in the field of Future Internet:

1. Common EU-LatAm Vision.
2. Common EU-LatAm Strategic Research Agenda (SRA).
3. Roadmap towards implementation of the SRA.

The **common EU-LatAm Vision** is the first document of the EU-LatAm strategy for cooperation in the field of Future Internet and its main objective is to **set up the basic concepts, challenges and priorities that will drive cooperation between Europe and Latin America** in this field during the coming years. In particular, this document pretends to offer a comprehensive and holistic view of the main drivers and challenges that justify the establishment of an active and fluent cooperation between Europe and Latin America in the field of Future Internet.

In the elaboration of this Vision document the following inputs have been considered:

- F-* National LATPs individual Vision documents.
- F-* European Technology Platforms’ Visions.
- F-* Results of the analysis of positions from key LatAm organizations.
- F-* Other European inputs coming from EC, FIA, FIRE, EU national initiatives, etc.

Based on these inputs the project produced an initial draft that was submitted to the expert advisory group that validated and approved it after several rounds of comments and suggestions for its improvement.

2 Introduction

Internet is already an essential part of our society, each day more present in our daily life, it has changed our life but it has the potential to transform it even more. We are foreseen a new internet where immersive and augmented reality applications will be protagonist, a new and pervasive internet that will be available everywhere, every-time on any device. Future Internet will facilitate the access to information, products, services and content maximising our competitiveness and quality of experience as users. Future Internet shall be something that we will even experiment in a different way, through different senses, and that will be able to seamlessly interact with us and among us.

On the other hand, these ambitions that we have put on future internet capabilities make that, from a technological point of view, internet demands are also continuously increasing. Therefore, a cooperative research effort is becoming essential to achieve the necessary improvements to satisfy these demands in terms of ubiquity, reliability, mobility, efficiency or security, as some examples. This hi-tech complex approach should not lead to neglect of social inequalities and their consequences in relation to the Internet access. Consequently, actions in Latin America and the Caribbean in the field of Future Internet must have a double and converging approach:

F- **Internet for all:** The Region must work towards an inclusive information society, bringing a more democratic and egalitarian Internet access in order to guarantee the benefit of the Internet into all segments of the population (e-inclusion). This includes disadvantage people due to education, age, gender, disabilities, ethnicity and those living in remote areas. In the case of Latin America and the Caribbean, special care is taken on the rural areas and social segments with low incomes and access to technology.

F- **Hi-tech research:** Being involved in current research activities around how Future Internet will contribute to reducing the digital divides and will help to facilitate the active involvement of Latin American stakeholders in its economy and society.

This double strategy is aimed at bridging current digital divide (Internet for all) and at helping the Region catch up with the Future Internet state-of-the-art (Hi-tech research). These two targets are necessary to be able to cooperate in equal conditions, increase competitiveness and achieve sustainable growth based on knowledge and innovation.

Nonetheless, future internet is not a prediction or a dream shared by a few. Future Internet is a general goal shared by many institutions at worldwide level, and to be attained in response to the current limits of internet to offer the kind of services and quality standards that we expect from it. Stakeholders to be involved in this cooperative research effort are responsible for developing the enabling technologies, the standards and the methodologies that will make possible the future internet that we envisage. As the Internet has become a global tool and also a global challenge, we sincerely understand that the cooperative efforts towards the definition of the future internet should involve stakeholders from different sectors (cross-sector approach) and with different needs and realities (Consider the multiple

user profiles). In this sense, the relation between the local and the global must be pointed out, as well as the asymmetries between LAC countries.

Therefore, despite the fact that the FIRST project is focused on Argentina, Brazil, Chile, Colombia and Mexico, this paper has attempted to consider the realities of the other countries from Latin America and the Caribbean. In this attempt of expanding the scope of the EU-LatAm strategy to other LatAm countries in addition to the 5 countries where the project is active, several ICT industrial associations and public entities from other countries have asked to be included in this group in order to provide their vision and explore the future creation of LATPs in their respective countries. These additional entities will be gradually included in the experts group as observers.

This is why we consider **international cooperation as a key feature to be enhanced in this research process** in order to guarantee that the Future Internet be developed by all in a coordinated way is also compatible and usable by all. We hope that the importance of this international cooperation component in the R&D process is appropriately considered in future R&D work programmes at European and Latin American levels in the coming years.

It is time of thinking in the Future Internet that we want to have in some years from now, and we must do it in an **open, transparent and cooperative** manner.

This document aims at contributing to give a coherent vision of the Latin American and the Caribbean point of view on internet in the upcoming future, the main challenges that the development of Future Internet will bring, and the identification of common EU-LatAm challenges in this process. The document has been produced following a cooperative bottom-up effort, gathering the views from local industry, academia and public authorities in Latin America, through their involvement in the discussion had within LATPs. In addition, the vision from key Latin American organisations and European experts from ETPs and other bodies have been considered in the process through the involvement of an expert advisory group.

The common EU-LatAm Vision-2020 on Future Internet provides a high level analysis of the technological panorama of the region, as well as main societal challenges that justify the need for an active involvement in the development of the future internet. As a consequence of this analysis, a set of recommendations and main priorities have been defined in order to guide the research cooperation between Europe and Latin America in the field of future internet in the long term.

Therefore, this document shall be considered as the central pillar and basis for the regional strategy in LatAm for research cooperation with Europe in the field of future internet.

3 Future Internet: an essential tool for enhancing economy, society and culture in Latin America

The first version of internet appeared in the mid 70s and during the last quarter of the past century it has evolved and spread around the world becoming a global revolution both in the societal and economic dimensions. Just as brief hint of how internet has impacted our world, we can refer to *Dr. Manuel Castells*¹, and state that the globalization of internet has provoked the appearance of a new social structure based on three independent processes:

- F-* The need of a flexible economy in capital, production and trade management and globalization.
- F-* The demands of a society where values as individual freedom and open communication became essential.
- F-* And the extraordinary progress experienced by informatics and telecommunications, possible by the microelectronics revolution.

In this way, the “initial internet”, that could be considered as an obscure technology that had few applications beyond the scientists, military and academic communities, became the trigger of the transition to a new society and economy: The networked society.

Internet, as a new way of communication crosses all the aspects of our life impacting in business processes and quality of life. Therefore, it is clear that internet can enhance economy, society and culture in very different ways. A new social structure is emerging and Latin America, as part of this structure, can actively participate in its shape. The creation of Latin American Technology Platform (LATP) is essential for the Region, since these platforms will serve as an open forum for discussion and collaboration among all the stakeholders involved in the development of the future internet.

In the Future Internet, the access to the network will be made available ubiquitously and connectivity will become a fundamental service that communities will use and will rely upon. Latin America still has a long way in this sense since a high portion of the region is not connected.

In this sense, ILCE, the Latin American Institute for Electronic Commerce has a fundamental cornerstone for the development of the future internet and the digital economy. It consists in:

Boost and improve the quality (and quantity) supply of companies that offer their products and services using the Internet. The progression of successful cases of this will increase the joy of the experience form the user side.

¹ Manuel Castells (Berkeley Univ) is a Spanish sociologist especially associated with information society and communications research.

Also, ILCE points out that the supply is important because it has a spillover effect. Focusing on the supply is a synonymous of working with all the key actors of the economy that use Internet for their work and business.

Quotation from interview to Marcos Pueyrredon (ILCE President):

One of the biggest benefits that Internet brought is the networking and community framework creation that it represents. We are using this flag of Internet that includes many topics. But the important fact is that we are a community that shares interests and this allows us to work together by finding interaction points in which we can go deeper after each interaction between the members of the community. The important fact today is to walk together and find this flag that allow all of us to keep on working together with the same objective. If we add all the individual efforts and share them as a group then the collective intelligence will emerge. That is the networking power of Internet.

4 The role of Latin America in the international context of Future Internet

4.1 Other International initiatives on Future Internet

Currently Future Internet is the central topic of many international initiatives, among which it is worth to mention the following:

F- **European Union:**

The design of the Future Internet has been identified as one of the main priorities of R&D policies, turning to be key in FP7-ICT Challenge 1.

EU pretends to combine governmental and research centres actions from a multilateral perspective that will enable Europe to lead the Future Internet definition. From the European point of view, social challenges are of major importance in this definition.

Besides Challenge 1 of FP7, there are other initiatives: Eiffel, Future Internet Assembly (FIA), Future Internet Research and Experimentation (FIRE), National initiatives at member state level (FIF).

F- **United States:**

USA present diverse initiatives to cover the Future Internet field in the context of:

- NSF ((National Science Foundation),
- NeTS (Networking Research Cluster) and
- Cyber Trust Program.

NSF promoted the creation of GENI (Global Environment for Networking Innovations) to redesign Internet from scratch.

Geni has two main components: a set of experimental facilities and a research program called FIND (Future Internet Design).

F- **Japan:**

The main Japanese initiative is called AKARI (Architecture Design Project). This project pretends to implement a new network generation for 2015, through the development of new network architecture and a new design network based on that architecture. AKARI's philosophy is the search of a ideal solution without being limited by current Internet conditions.

F- **Korea:**

Within Korean efforts, it can be found the following initiatives: KOREN2, Kreonet, TEIN2, BcN testbeds, PlanetLab y IPv6 (Koreav6). They are centralized in experimental tests of small and medium scale, through separate test networks, without shared networks.

Korea's activities together with other Asian countries are framed in the Asian Future Internet Forum (FIF).

Now, thanks to the support of the FIRST project (Funded by the European Commission under FP7), **Latin America and the Caribbean has its own initiative on Future Internet through the Latin American Technology Platforms**, and the Regional connection among these platforms.

4.2 Future Internet pillars for LATPs

The **four pillars of the Future Internet Vision** of the Latin American technology platforms are:

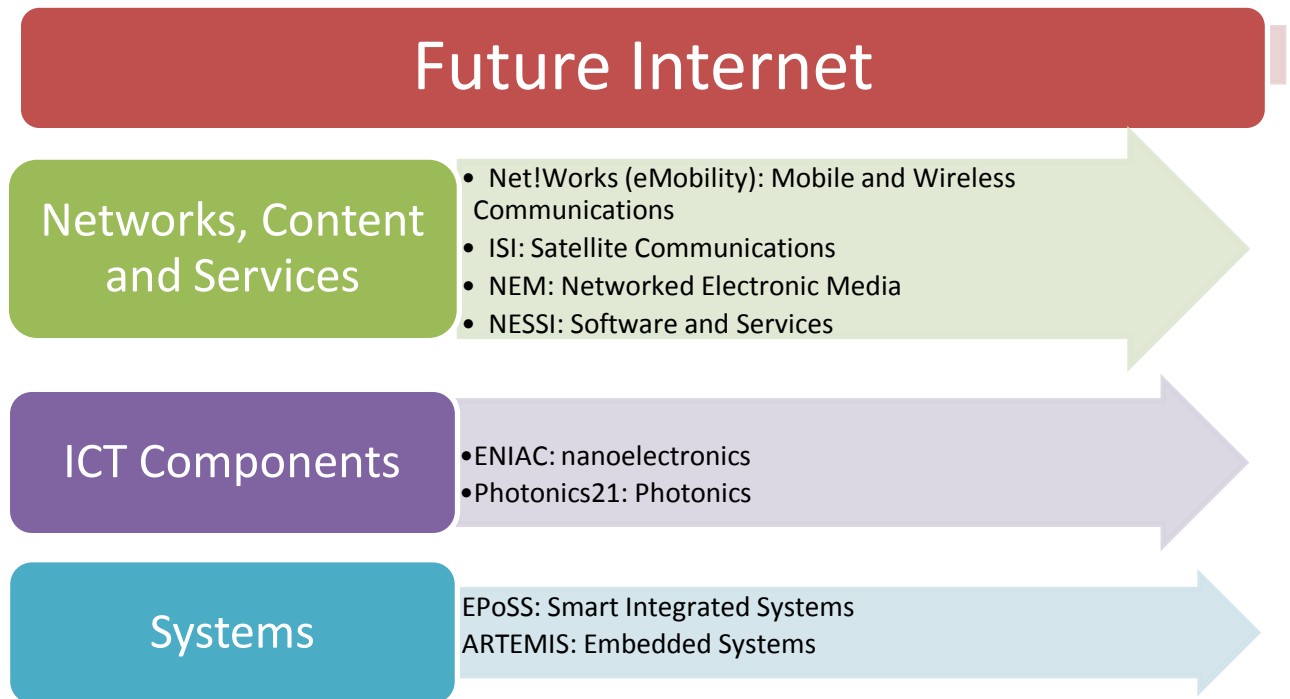
F- **Internet by and for people:** The users shall be the centre of any future development, and this is particularly important in this region where societal challenges are in the forefront of public policies. Consequently ‘users’ shall be one of the pillars that guide the definition of the Latin American strategy around Future Internet. Related to this, it is of main importance to stress that the connection with the strategy internet **for all people**, therefore digital divide is a barrier that must be considered and put actions in place in order to overcome it. But turning the digital divide into an information society is not sufficient: e-education seems to fulfill an essential role since it aims to equip the population with the skills needed to live and work in the information society.

F- **Internet of Contents and Knowledge:** One of the aspects that have become critical for the success of internet is the access to knowledge and content. This feature, together with the social dimension of internet, has triggered the current evolution that we are living. We believe that this trend will be even clearer in the future and therefore LATPs shall consider it as a key pillar for any future strategy.

F- **Internet of Things:** Internet everywhere and in everything. Undoubtedly this is one of the next revolutions that Internet is waiting for. The tremendous societal and economical potential that hides behind the fact that objects and sensors could be interconnected through internet makes it one of the pillars of the Latin American Technology Platforms.

F- **Internet of Services:** Services possibly were the first cornerstone that fostered internet as one essential tool for its users during the first stages of the deployment of internet. Nonetheless, we believe that services still have a very important role to play in the future internet as it reaches more users and involves new technologies and new ways of user-interaction. These new technical developments will make possible a second services revolution in future internet.

The four pillars above mentioned are orthogonal to the eight technology areas included in the Future Internet concept in accordance to the ETPs structure.



After a preliminary analysis, in the five National Latin American Technology Platforms, three technology areas have shown potential and interest in the region on general basis:

- F-* NEM: Associated to technologies related to content and knowledge.
- F-* NESSI: Associated to technologies related to software and services.
- F-* Net!Works: Associated to technologies related to telecommunication networks for the delivery of services and content.

A fourth technology area, ARTEMIS, has also shown potential in the major part of the countries, although it is still a step behind with respect to the three technology areas previously mentioned.

Finally, it is also necessary to highlight the importance that Satellite communications and the cooperation with the ISI technology Platform might have in order to contribute to bridge the Digital divide. Therefore the following aspect is also considered a strategic pillar:

- F-* Addressing coverage, not-spot issues and service/content delivery in rural or isolated areas through SatCom systems.

5 LATPs addressing common EU-LatAm societal challenges through research cooperation in the field of Future Internet

When identifying R&D priorities, ETPs have also identified which societal challenges they want to address in the future thanks to technological developments. In this line, LATPs shall consider what societal challenges do they think that Future Internet can address in the in the region.

Future Internet should bring equal opportunities for a major portion of the population. But first of all we must bear in mind that **only 4.8% of Latin America and the Caribbean has broadband² access**. Even though the focus of this common Vision is not performing an analysis of the region situation regarding connectivity, it is essential to be aware of it and define societal challenges in accordance to this situation and needs.

A preliminary benchmarking report of progress towards eLAC2010 goals points out some regional weaknesses in Latin America and the Caribbean:

- F*- The deficient progress in telecommunications infrastructure and ICT networks,
- F*- The need of fostering the shared access,
- F*- The fact that the broadband is far away from current needs and lastly,
- F*- The need of improvements towards the universal access to telecommunication basic services.

Telecommunication networks and ICT based services will bring more opportunities to the Latin American society. Nonetheless, in order to really impact the whole region universal access is a cornerstone for Future Internet in Latin America and the Caribbean.

According to Mr. José María Louzao³:

“After analyzing the common EU-LatAm Vision, I fully agree that Future Internet is an essential tool to improve the economy, the society and the culture in LatAm (...) a better Internet will result in increased competitiveness and better access to services to Latin American citizens, creating a more productive ecosystem that will allow the desired sustainable growth.”

As the connectivity is increasing and the access to knowledge is more democratic, the society demands more prepared individuals. In this aspect, Mrs. Idoia Muñoz⁴ highlighted that: “people skills and their improvement should be also taken into consideration in a Common EU-LatAm Future Internet Vision, paying attention to the development of qualification profiles for jobs in Future Internet...Upgrading,

² Preliminary benchmarking report of progress towards eLAC2010 goals.

<http://www.cepal.org/socinfo/agenda/8/37828/monitoreo.pdf> >

³ Latin American Expert from the Argentinean Technology Platform PLATA, Leader of PLATA NuevoNet Working Group, G&L Group President.

⁴ European expert from the Technology Platform Genesis Red,

adapting and widening the skills portfolio of individuals to create and fill the jobs of tomorrow is one of the greatest challenges facing EU and Latin America today.” In other words, **e-Education** must be seriously taken into account in order to achieve a real **Internet for all**.

All the considerations mentioned above are of the utmost importance in order to achieve a Future Internet for all, and to produce an EU-LatAm strategy that focuses on common priorities and societal challenges. Identifying these fields where technology will be able to improve quality of life or solve a societal challenge is one of the objectives of this document. By addressing a societal challenge or improve quality of life we understand "providing answers and solutions regarding to these challenges through developing and offering products and services which are innovative, market fulfilling, in a timely manner and cost effective."⁵

A number of opportunities appear in this scenario. LATPs on Future Internet consider main societal challenges according to the following list. Order of appearance does not mean order of importance or priority:

- F*- Energy demand - efficient and secure distribution and access.
- F*- Global healthcare.
- F*- Food quality and production.
- F*- New security strategies to reduce conflicts and terrorism.
- F*- Demographic changes such urbanization, rural inclusion.
- F*- Well being and ageing (AAL: Ambient Assisted Living).
- F*- Sustainable and efficient mobility.
- F*- Disaster management and rapid response to natural crisis.
- F*- Sustainable industries and climate change.
- F*- Environment monitoring. Contributing to a greener world.
- F*- Competitiveness and new employment with high added value.
- F*- Digital Divide towards social inclusion and equal access to opportunities.

⁵ EPoSS SRA 2009.

6 Vision 2020: Common EU-LatAm strategic Vision on Future Internet cooperation

The **strategy** embedded in the EU-LatAm Vision on Future Internet is focused on **two main aspects**:

F- **Setting the basis:** The beginning of the Future Internet discussions in Latin America. This level involves both a **new way of doing** and a **new way of networking** brought by the Technology Platforms to Latin America. It is very important for the successful implementation of the foreseen EU-LatAm R&D cooperation on Future Internet, to work on the basis of the LATPs foundations in order to facilitate the assumption of these new procedures among all the stakeholders involved.

F- **Practical Level:** Turning the EU-LatAm Future Internet strategy from a tool and methodology for promoting cooperation into real joint cooperation projects between EU and LatAm. Through this pragmatic level it is expected to foster the development of the ICT sector in the LatAm region, and benefiting the society through the contributions of ICT to different societal challenges. Finally, it is intended to increase competitiveness, and sustainability, through a significant participation and contributions coming from ICT sector in the mid and long terms.

Following the previous strategy, it can be said that the following **5 objectives** are the strategic pillars of the LATP Regional strategy on Future Internet:

- F-* Fostering EU-LatAm joint R&D projects in the field of Future Internet.
- F-* Increasing the competitiveness of the region.
- F-* Internationalization of LatAm industry and academia.
- F-* Fostering the relationship between Industry and Academia in order to perform R&D projects with an innovative perspective.
- F-* Social and economic impact

As part of the Regional strategy on Future Internet, it is also expected that in the mid-long term, Latin American governments and funding agencies will recognise the importance of the Future Internet theme, devoting efforts to fund this type of R&D and innovation projects (Either as national programmes-calls or coordinated EU-LatAm calls on Future Internet).

Following the expert Martha Giraldo⁶, the experience accomplished by Advanced Academic Networks⁷ should be an important cornerstone for the Region since they provide a high added value by connecting Universities, Research Centres and other institutions with research purposes. Advanced networks are

⁶ Director of Colombian Advanced Academic Network RENATA.

⁷ RedCLARA at Latin America, Geant at Europe, InnovaRed at Argentina, RNP at Brazil, REUNA at Chile, RENATA at Colombia, CUDI at Mexico.

conceived for collaboration, and in this context they have develop application technologies that permit the elimination of distance barriers and facilitate the access to these resources wherever they are.

From a **technology** point of view, the EU-LatAm Vision on Future Internet considers of major importance the development of the following areas:

<i>F- Internet by and for people</i>
– Human-Centric Interfaces (multi-modal, touch-computing, NFC, 2-D codes).
– Context- and Location-aware Frameworks and Sensing (context modeling, user-adaptability, automatic-generation of user interfaces, sentient computing, knowledge-based approaches, etc.).
– Virtual reality, augmented reality, smart objects-mediated and tangible interactions
– Ubiquitous and ambient displays environments, wall displays, urban displays, multi-screen environments.
– Detection and support for collaboration, user intentions and activity recognition,.
– Advance satellite and wireless communications technologies and architectures for universal access to broadband and Future Internet services.

<i>F- Internet of services</i>
– New computing paradigms (agents, autonomic computing, cloud computing).
– Cross cutting middleware: aspect-oriented programming for service discovery, security, data delivery, coordination.
– Addressing non-functional facets (real-time, quality of service, fault tolerance).
– Semantic middleware infrastructure (Semantic Web, OSGi, DLNA, DPWS, Triple Spaces, Digital TV, home automation standards, P2P).
– Design patterns, programming languages and environments for better programming and deployment.
– Model-driven architectures, software verification and testing frameworks and tools for ubiquitous computing

<i>F- Internet of knowledge & contents</i>
– Knowledge representation and management for user and environment modeling and understanding (Ontologies, Semantic Web, Logic, Expert Systems Multi-agents)
– Autonomic computing, responsive and proactive systems and dynamic reconfiguration.

- Ontologies for user and environment modeling and understanding.
- Learning, reasoning and adaptation techniques over context models.
- Collaborative Smart objects.

F- Internet of things & its applications

- Mobile Ad Hoc Networks and wireless sensor networks (WSNs).
- RFID and 2-D codes for real-world labeling
- Wearable Computing.
- **Examples of key application domains:**
 - o Social and learning robotics.
 - o Vehicular ad hoc networks (VANETs) and Intelligent Transport Systems (ITS)
 - o Home Automation standards
 - o Healthcare environments.

7 Sources of information

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F- Vision Document of Es.Internet, Spanish Technology Platform.

http://www.idi.aetic.es/eSINTERNET/CLI_AETIC/ftpportalweb/documentos/es_Internet_Vision_document_20090312.pdf

Vision documents ETPs:

F- NESSI

F- EPoSS

F- ARTEMIS

Available on www.latin-american-technology-platforms.eu

FIRST Deliverables:

F- D3.1 - Set of 5 Countries Strategic Vision documents and governance rules

F- D4.1 - Analysis of Key LatAm organizations

Available on www.latin-american-technology-platforms.eu

8 Annex I: The EU-LatAm experts group

LIST OF EU-LATAM EXPERTS

Country	Technology Platform	Representative Name	Organization
Argentina	PLATA	Gabriel Baum	LIFIA
Argentina	PLATA	Daniel Lupi	FAN
Argentina	PLATA	Jose Maria Louzao	G&L
Argentina	PLATA	Javier Orozco	Universidad Nacional del Sur
Brazil	BraFip	Antenor Ferreira Filho	EST
Brazil	BraFip	José Jairo Santos Martins	Sucesu
Brazil	BraFip	Eduardo Zied	Itaú-Tec
Brazil	BraFip	Franco M. Lazzuri	CIETEC
Brazil	BraFip	André Hirakawa	USP
Chile	MACHI	Pablo Caroca	GECHS
Chile	MACHI	Mario Andres Bruno	Universidad de Playa Ancha
Chile	MACHI	Hugo Durney	ProteinLab
Chile	MACHI	Gerardo Rivas	AIE / Addere
Chile	MACHI	Héctor Torres	ProteinLab
Colombia	RECIIF	José Jaime Gomez	Medios y Soluciones
Colombia	RECIIF	Alejandro Guzmán	INTERNEXA
EU expert	Net!Works ETP (Emobility)	Thomas Michael Bohnert	SAP
EU expert	NEM	Pierre Yves Danet	Orange France Telecom
EU expert	NEM	Julian Seseña	Rose Vision
EU expert	NESSI	Julie Marguerite	Thales
EU expert	NESSI	Tonny Velin	Answare
EU expert	Photonics	Santiago Simon and	AIDO

		Amparo Barreda	
EU expert	ISI	Nicolas Chuberre	Thales Alenia Space
EU expert	ISI	Antonio Alfaro	Rose Vision
EU expert	Génesis Red	Idoia Muñoz	GAIA Zamudio
EU expert	Génesis Red	Carles Cane	CNM
Mexico	MTP	Ing. Guillermo Safa	CSOFTMTY
Mexico	MTP	Dra. Cristina Loyo	LANIA
Mexico	MTP	Javier Allard	AMITI
Mexico	MTP	Jorge Buitron	Canieti

LIST OF EU-LATAM OBSERVERS

Country / Region	Organization	Representative Name
Argentina	FONSOFT – Fondo Fiduciario de Promoción de la Industria del Software	Mrs. Rosa Wachenchauzer
Argentina	MINCyT– Ministerio de Ciencia, Tecnología e Innovación Productiva	Mrs. Mónica Silenzi
Chile	CONICYT– Comisión Nacional de Investigación Científica y Tecnológica	Mrs. Astrid Waltermann
Chile	ACTI– Asociación Chilena de Empresas de Tecnologías de Información A.G.	Mr. Raúl Ciudad
Colombia	COLCIENCIAS– Departamento Administrativo de Ciencia, Tecnología e Innovación	Mr. Edison Pérez
Colombia	Ministry of ICT	Mrs. María Patricia Asmar
Colombia	Acción social	Mr. Henry Carrillo
Colombia	RENATA– Red Nacional Académica de Tecnología Avanzada	Mrs. Martha Inés Giraldo
Colombia	Fedesoft– Federación Colombiana de la Industria del Software	Mrs. Paola Restrepo
Colombia	OCyT– Observatorio Colombiano de Ciencia y Tecnología	Mrs. Mónica Salazar
MEXICO	Coop. Mexico-EU CONACYT	Mtro. Hector Samano
MEXICO	AMITI– Asociación Mexicana de la Industria de Tecnologías de Información	Mr. Javier Allard
MEXICO	Secretaria de Economía	Mr. Victor Hugo Estrada
Regional	AHCIET– Asociación Iberoamericana de Centros de Investigación y Empresas de Telecomunicaciones	Mr. Francisco Gomez Alamillo

Regional	ALETI– Federación de Asociaciones de Latinoamerica, El Caribe y España de Tecnologías de la Información	Mr. Roberto Mayer (ALETI Brazil)
Regional	ALETI– Federación de Asociaciones de Latinoamerica, El Caribe y España de Tecnologías de la Información	Mrs. Silvia Bidart ⁸
Regional	ECLAC– Economic Commission for Latin America and the Caribbean	Mr. Nestor Bercovich
Regional	European Commission	Mr. Klaus Pendl
Regional	ILCE - Instituto Latinoamericano de Comercio Electrónico	Mr. Marcos Pueyrredon
Regional	OAS– Organization of American States	Mr. Jorge Durán
Regional	RedCLARA- Cooperación Latino Americana de Redes Avanzadas	Mrs. Carmen Gloria Labbé
Regional	SELA– Sistema Económico Latinoamericano y del Caribe	Mrs. Saadia Sánchez Vegas

⁸ Mr. Mayer and Mrs. Bidart will participate on behalf of the ALETI Task Force for FIRST.

9 Annex II: Acronyms list

Acronyms	Spanish	English
ICT	Tecnologías de la Información y Comunicación	Information and Communication Technologies
R&D	Investigación y desarrollo	Research and development
LATPs	Plataformas tecnológicas latinoamericanas	Latin American Technology Platforms
ETPs	Plataformas tecnológicas europeas	European Technology Platforms
SRA	Agenda Estratégica de Investigación	Strategic Research Agenda
EC	Comisión Europea	European Commission
FIA	Asamblea de Internet del Futuro	Future Internet Assembly
FIRE	Investigación y Experimentación de Internet del Futuro	Future Internet Research & Experimentation
FP7	Séptimo Programa Marco	Seventh Framework Programme
ILCE	Instituto Latinoamericano de Comercio Electrónico	Latin American E-commerce Institute
NESSI	Iniciativa europea de Software y Servicios	Networked European software and services initiative
NEM	Tecnologías audiovisuales en red	Networked Electronic Media
Net!Works ⁹	Comunicaciones móviles e inalámbricas	Mobile and wireless communications
ISI	Iniciativa integral de comunicación satelital	Integral Satcom Initiative
Photonics21	Fotónica	Photonics
ENIAC	Concejo directivo para la iniciativa europea en nanoelectrónica	European Nanoelectronics Initiative Advisory Council
EPoSS	Sistemas inteligentes integrados	European Technology Platform on Smart Systems Integration
Artemis	Iniciativa para los sistemas informáticos embebidos o empotrados	Embedded Computing Systems Initiative

⁹ Until 2010, Net!Works was called eMobility, the ETP focused on mobile and wireless communications. See: <http://www.networks-etp.eu/about-networks/new-name.html>