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Executive summary

The Government has decided to develop a Digital Agenda for Spain as a framework of reference to define a roadmap as regards information and communications technologies (ICTs) and e-Administration; to build Spain's strategy to achieve the goals of the Digital Agenda for Europe; to maximize the impact of public policies on ICT to enhance productivity and competitiveness; and to transform and modernize the Spanish economy and society through efficient and intensive use of ICTs by citizens, businesses and public Administration bodies.

The objectives, lines of action and plans established in this Digital Agenda are intended to encourage the creation of employment opportunities and economic growth through the smart adoption of digital technologies, thus contributing to the collective effort of promoting the economic recovery of the country.

The Ministry of Industry, Energy and Tourism and the Ministry of Finance and Public Administration have led the development of this Digital Agenda proposal for Spain and have invited all the agents involved to participate and contribute.

This proposal has been based on the results of various analyses of the status of the information society in Spain, as well as on the recommendations prepared by the highly-rated group of experts, the proposals made by a large number of companies and players in the digital world and the suggestions made by public policymakers of the Central State Administration and other Administration bodies.

With all these contributions an initial proposal of Agenda was prepared and submitted for public consultation through a platform for citizen participation. The consultation has allowed to specify the meaning and scope of the proposed lines of action and to set up this final version of Digital Agenda for Spain.

The Digital Agenda for Spain is structured around six major goals:

- 1. Foster the deployment of networks and services to guarantee digital connectivity.
- 2. Develop digital economy for the growth, competitiveness and internationalisation of Spanish companies.
- 3. Improve e-Administration and adopt digital solutions for efficient provision of public services.
- 4. Reinforce confidence in the digital environment.
- 5. Boost R+D+i system in Information and Communications Technologies.
- 6. Promote digital inclusion and literacy and the training of new ICT professionals.

Goal 1: Foster the deployment of networks and services to guarantee digital connectivity.

The existence of ultra-fast broadband networks is necessary to develop new services and to transfer the benefits generated by digital technologies to the Spanish society as a whole. Therefore, the





Digital Agenda for Spain endorses the goals related to coverage and adoption of broadband services outlined by the European Union in the Digital Agenda por Europe: signing up for speeds of over 30 Mbps for 100% of the citizens, and over 100Mbps in at least 50% of households in 2020.

To encourage the deployment of these networks the Digital Agenda for Spain proposes measures for removing barriers to deployment, promoting the deployment of ultra-fast broadband networks, optimizing the use of the radio spectrum and improving the experience of broadband users.

When deploying infrastructures and telecommunications networks, operators in Spain are occasionally faced with inconsistent regulations adopted by multiple public Administration bodies, with unjustified barriers and unnecessary complexities which slow down the extension of these networks. Passing a new General Telecommunications Act and simplifying rules and procedure management will be the key to boost the deployment of new networks.

These measures are accompanied by the development of a national strategy of ultra-fast networks to boost its implementation in Spain.

It is also essential to get an efficient use of the radio spectrum in order to encourage the deployment of new networks and technologies and to increase the value of the services provided. To this end, the main measures proposed focus on promoting a more dynamic and flexible use of the spectrum and on reviewing its current use as well as on assessing future needs for optimal allocation.

Finally, in order to facilitate the adoption of broadband services an improvement in user experience will be fostered and suitable conditions of service will be promoted.

Goal 2: Develop digital economy for the growth, competitiveness and internationalisation of the Spanish company.

The second goal set by the Digital Agenda for Spain seeks to improve competitiveness of the Spanish production sector and to boost its growth, international expansion and quality employment creation by means of a better use of ICTs and the development of digital economy.

The Agenda proposes measures to bolster the transforming use of ICTs in companies; boost e-commerce; promote an innovative industry of digital content; enhance opportunities for the electronic industry; encourage the internationalisation of technology companies; support the development of future industries and strengthen ICT industry through the development of technological projects in public services.

The efficient and intensive use of ICTs in companies, specially in SMEs and micro-companies, is a key contribution to improve the productivity of our economy. The Digital Agenda proposes to promote access to ultra-fast broadband in SMEs; deal with the stimulation of ICT use in companies through an integrated approach; support the development of ICT solutions to poorly served areas; and further the use of electronic invoicing for its driving force.

Electronic commerce is another indicator which shows the technological development level of a society. The Digital Agenda for Spain takes on the objectives of the European Union to get at least 50% of the population to shop online and 33% of SMEs to shop or sell online by 2015. Aware of the





situation that Spain is behind the European average in this field, measures are suggested to be taken to help the adoption of electronic commerce by SMEs.

The digital content industry has an enormous growth potential which places it as one of the most relevant sectors for the digital economy, which can be transversely applied to the remaining sectors of the economy. To encourage the development of this industry the follwing actions are proposed: a comprehensive plan shall be designed considering training, R+D+i, and public-private collaborative elements; legislation on intellectual property rights for the use of content in the digital realm shall be simplified; and development and internationalisation shall be facilitated for companies that create, produce or distribute digital contents.

The electronic industry in Spain is facing a complex process of adaptation. To improve its competitiveness, the Agenda proposes to increase public-private cooperation and identify and promote the opportunities arising in this new scenario.

The development of digital economy -the engine fuelling growth, employment and future opportunities- requires actively focusing on venture, on the creation of companies and on the internationalisation of the already existing ones. In this regard, the Agenda suggests using programmes of public bidding for facilitating an innovative technological offer; and promoting the internationalisation of companies through the support of offices abroad and through the establishment of aid funds.

Promoting the participation of companies and Administrations in the development of future sectors is a critical element to continue with the modernization and the sustainable growth of the Spanish economy. This Agenda sets forth, among other issues, measures to contribute to the development of future industries; develop and use cloud computing; spread the use of ICTs to favour energy saving and the development of smart cities and infrastructures; and foster the design and use of big data techniques.

Finally, the Agenda provides for the development of technological projects to deploy digital public services in the sectors of healthcare and social welfare, justice administration and introduction of ICT in educational contexts, as a basic lever to strengthen the ICT industry which supports the digital economy.

Goal 3: Improve e-Administration and adopt digital solutions for efficiently rendering public services.

The third goal of the Digital Agenda for Spain aims at increasing the effectiveness and efficiency of our public Administration bodies and optimising public expenditure, whilst maintaining universal and quality public services.





Citizens' participation and use of electronic channels for communication among citizens, companies and public Administration bodies are key factors the European Union has firmly bet on. In this sense, Spain shares the objectives of the Digital Agenda for Europe for 2015: more than 50% of the population using electronic administration and more than 25% filling in forms online.

To do this, the lines of action included in the Agenda are: to get the Administration closer to citizens and businesses; to increase the levels of use of e-Administration; to streamline and optimise the use of ICT by public Administration bodies; to increase collaboration among the different public Administration bodies; and to introduce the intensive and intelligent use of ICTs in key sectors. It is also very important to bridge the digital divide that geographically separates central and peripheral areas and share the technological advances carried out by the AGE since the adoption of Act 11/2007 with territorial Administration bodies.

For our country to run properly, it is essential that the Administration would provide comprehensive, quality and easy-to-use electronic services and enable new ways of collaboration and relation using the technologies. For this purpose the main measures proposed are the elimination of unnecessary administrative burdens; the adaptation of public services to the needs of citizens; the development of an open government strategy that encourages transparency, participation, and collaboration with other agents; and the re-utilization of the information from the public sector to facilitate the generation of value and knowledge.

In recent years, the Spanish Government has made significant efforts to develop a full range of public services that can be accessed by electronic means. However, there is room for improvement in the use level of currently available services. To achieve this, we understand the following measures can be of use: to raise the level of knowledge in the Spanish society on existing electronic services; to simplify the use of these services; to encourage the non-discriminatory use of the digital channel over other channels whenever it is possible; and to engage public officials in order to increase its use.

With larger cooperation between Administrations to solve common problems through appropriate use of ICTs, it will be possible to create new more efficient and more effective models of operation that generate savings for the public sector. Therefore, the main measures proposed focus on sharing and reusing infrastructure and services developed by the Administrations; optimizing existing resources through process automation or global purchasing policies; and encouraging public-private collaboration.

Goal 4: Reinforce confidence in the digital sector.

Establishing a climate of trust in the digital sector is an indispensable factor to accomplish an effective implementation of ICTs in companies and Administration bodies, and a more intensive use of said technologies by citizens. With this purpose in mind, the Agenda considers adopting a comprehensive strategy which takes into account different action areas and the different agents, of





the public and private sector, involved in digital sector confidence and security. Also the Agenda serves to reinforce and supplement other strategies and plans of the Government in this area.

The Agenda proposes three main lines of action in terms of confidence: boost the confidence services market; strengthen existing capacities to promote digital confidence; and promote the excellence of organizations in the field of digital confidence.

A reliable digital environment requires a market of confidence services which would enable the certification of identities and of the contents of the operations carried out. To boost this market, the Agenda advises stimulation measures based on the development of regulations and mechanisms to fuel supply and demand, on the promotion of the use of services of electronic signature and identity, and on the strengthening of the supervisory capability of the Administration.

It is also relevant to strengthen the public and private capabilities that are needed to increase digital confidence and to generate a centre of talent attraction in Spain. In addition to actions concerning study, awareness and training in this area, it is necessary to have a national reference centre for citizens and companies. The main measures proposed by the Agenda are the consolidation of the Instituto Nacional de Tecnologías de Información (INTECO, Spanish National Institute of Information Technologies) as the centre of excellence in digital confidence; the development of awareness-raising and education activities; and the establishment of capabilities for the follow-up and permanent diagnosis of digital confidence.

It is important to make it easy for companies to adopt the best practices in terms of confidence and for users to demand them. As a result, the Agenda suggests promoting good practices for managing digital confidence; spreading among users and consumers the idea that they should demand them; strengthening accreditation mechanisms; improving consumers and sellers' reliability in electronic transactions; and advancing towards a system of data protection that would strengthen the rights of users and enable innovation in digital products and services.

Goal 5: Boost R+D+i in Information and Communications Technologies

Investment in research, development and innovation in ICT and application of accomplished results through said investment are key factors to improve competitiveness of our companies and Public Administration bodies. And this is how the European Union understands it; in its Digital Agenda, it has decided that the total annual spending on ICT research and development shall be doubled by 2020, so that such an increase will bring about an equivalent increase of private spending.

In the case of the Digital Agenda for Spain the main lines of action are to increase the efficiency of public investment in R+D+i in ICT; encourage private investment in this area; encourage these practices in small and medium-sized companies; and expand the Spanish participation in R+D+i in ICT in the international arena. The initiatives in this regard are aligned with the Spanish Strategy of Science, Technology and Innovation that highlights, among other things, the challenge of moving towards digital society and economy.

The improvement in the efficiency of public investment in R+D+i in ICT is an essential requirement given the current economic context. Thus, the proposed measures seek to focus the resources on





the areas with the greatest potential for generating wealth; simplify and facilitate access to the public resources made available by R+D+i in ICT; and improve the assessment systems to ensure they are used efficiently.

It is a basic principle that public investment in R+D+i in ICT would lead to a greater amount of investment by the private sector. This is why the proposal here is to use public procurement and public-private collaboration strategically; boost joint investment funds and stimulate venture capital mechanisms.

It is also intended to facilitate access to R+D+i initiatives for SMEs. Measures in this regard include, among others, simplifying access to public aid and facilitating collaborative projects with large companies.

Finally, it is of utmost importance for Spain to increase its participation in international projects of R+D+i in ICT through European programmes and resources. With this aim in mind, there will be more institutional support for Spanish companies.

Goal 6: Promote digital inclusion and literacy and the education of new ICT professionals.

The sixth goal is to achieve an inclusive Information Society where citizens and professionals enjoy a high level of training to benefit from the intensive use of ICTs. With this in mind, the Agenda considers two main areas of work: promote digital inclusion and literacy, and adjust training systems for digital training and for the training of new ICT professionals.

An advanced digital society requires that most citizens can regularly access the Internet and benefit from the opportunities if offers. For this reason, the European Union has set up the ambitious objective, by 2015, of having at least 75% of the citizens and 60% of people in disadvantaged groups using the Internet on a regular basis, and of reducing the percentage of population that has never used it to below 15%. The Digital Agenda shares and advocates such objectives; and, to move towards its fulfilment, it suggests developing a strategy for digital inclusion through public-private collaboration which envisages enhanced accessibility to digital public services; promoting digital literacy programmes; making further progress in equality between women and men in the information society; and engaging the civil society in activities of digital inclusion.

Digital training also brings about tangible benefits in the business and work sphere. Adjusting our education system to cater for the needs of new ICT professions is an essential requirement. Therefore, different measures are proposed for different training levels.

In areas of training for employment and on-going training, the main actions are aimed at improving efficiency in funds allocation and management, so that it is possible to allocate part of them to training and acquisition of ICT skills.

For vocational training, the main measures focus on updating the training offer to suit the new demands of the market and on promoting the development of joint activities with companies.





As far as university education is concerned, the aim is to improve the education options for ICT professionals by adjusting them to the needs of the market, considering the new ICT professional profiles and the increase in system efficiency.





Introduction

Over the years Spanish Governments have made a firm commitment to develop Information Society and to modernize our economy through the use of ICT.

The current complex economic situation makes it necessary to adapt public policies to move forward along the road of transformation and modernization of the Spanish society and economy, and to contribute to the increase in productivity, competitiveness and generation of employment and welfare.

In this state of affairs, the European Union has designed the Digital Agenda for Europe to take advantage of these opportunities. And this view has also been adopted by countries around us, which have developed their own Digital Agendas; such is the case of the Spanish Government and this Agenda.

The effort made by the private and public sectors, and the civil society in the last decade has laid the foundation for broadband coverage, ICT equipment and electronic public service offer. Now these offer-fostering public policies must give way to policies focused on encouraging intensive, efficient and intelligent use of digital technologies.

This is the time to maximize the return on the investments made, prioritise future investment and optimise the use of digital technologies in companies, homes and public Administration bodies. It is also the time to set up stricter policies, which change the focus from *adopting* technology to *transforming* our economy and society through using it. It is, ultimately, the time to innovate to improve productivity and competitiveness of the Spanish production sector - with special attention to SMEs-, to encourage the creation of employment and to contribute to the economic recovery process of the country.

ICTs are strategic for this process and the priority of the Digital Agenda is to contribute to the generation of more job opportunities within and outside the ICT sector and to the growth of the economy as a whole.

To achieve these goals, the Digital Agenda for Spain puts forth a set of actions aimed at promoting the transformative use of digital technologies and encouraging the efficient deployment of telecommunications infrastructure.

Some of these objectives have been set in the Digital Agenda for Europe. They are shared and adopted as their own by Spain in the belief that only by aligning with the European strategy and by achieving them, the country will be ready to compete in the international arena and her citizens will fully enjoy the opportunities generated by an economy that is increasingly digitized and Internet-centric.

To build an inclusive digital society, the entire society shall have the opportunity to use ICT. This is why the following aim has been set: to get more than 75% of the population and more than 60% of





economically challenged people to access the Internet on a regular basis, and to reduce the percentage of population that has never used it to below 15%, by 2015.

Also, the use of the digital channel as the ordinary means of communication with the Administration should be encouraged, in order to have more than 50% of the population using electronic administration and more than half of it filling out forms online by 2015.

Electronic commerce is another indicator which shows the technological development level of a society. That is why, the aim is that at least 50% of the population shops online and 33% of SMEs sell and buy online by 2015.

Broadband networks (in particular, ultra-fast broadband networks) are the infrastructure that will support the digital world in the next few years and also a prerequisite to compete in a globalized world. Signing up for speeds of 30 Mbps for all citizens, and over 100Mbps in at least 50% of households by 2020 thus becomes a very relevant target.

Responding to these challenges requires an advanced R+D+i in ICT whichs offer innovative and sustainable solutions and where Spanish companies participate.

Complying with the goals mentioned above is a collective task requiring the participation and collaboration of all agents involved. The adoption of ICT, the extension of broadband and ultra-fast broadband, the advanced use of the Internet by the majority of the population, the widespread use of e-Administration or e-commerce will only be possible - and above all sustainable - if the players involved are aware of their advantages and get benefits from them. Therefore, this Agenda is conceived as a collective project, which is transparent in design, adaptation and execution, and calls for the participation and collaboration of all society members in all its phases.

This Agenda has been designed following the priorities in the Digital Agenda for Europe, the recommendations of the highly-rated experts, the answers provided by a large number of companies and players in the digital world, and the suggestions made by public policymakers within the scope of the Central State Administration. All of the ideas were used to develop a proposal for a Digital Agenda for Spain that underwent public consultation between 25 July and 30 September, 2012. The results of the public consultation and previous activities paved the way for the Digital Agenda for Spain. It is divided into six areas of action which respond to the key challenges identified:

- Encourage the deployment of networks and services to ensure digital connectivity and transfer to society the economic, social and competitiveness-related benefits arising from the use of ultra-fast broadband networks and the development of innovative digital services.
- 2. Develop digital economy for the growth, competitiveness and internationalisation of the Spanish company through a more intensive and efficient use of ICT, the development of electronic commerce, the build-up of a digital content industry, the internationalisation of technological enterprise and the investment in future industries.





- 3. Improve e-Administration and adopt digital solutions for an efficient rendering of public services by transforming the Administration to boost the use of electronic channels and increase the efficiency in the use of ICT.
- 4. **Reinforce confidence in the digital sector** to encourage the development of business and social activities as well as of relations between citizens, businesses and public Administration bodies via Internet and electronic channels.
- 5. **Boost R+D+i system in Information and Communications Technologies** to enable sustainable growth by enhancing public investment efficiency and promoting private investment in an environment of greater cooperation among players.
- 6. Promote digital inclusion and literacy and the training of new ICT professionals by attracting talents towards innovation and entrepreneurship, as well as making it easy for everybody to access the services and benefits of the digital ecosystem.

Preparing this Agenda requires the commitment and participation of the whole society: public Administration bodies as promoters of public policies therein and agents responsible for the execution of many of them; companies as targets and users of a good deal of the resources deployed; all citizens, main players in the use and leverage of ICT in our society; and especially younger generations and Internet users, who are undoubtedly the most knowledgeable to make the most of ICT and to adapt to an ever-changing world where innovation is the best, if not the only, guarantee to success.

This Agenda must include all of them, and it is accountable to all of them, providing the necessary information at all times so that people and organizations can see the progress; enabling ways for participation in its adaptation; and showing the mechanisms so that they can collaborate in its implementation.

The Agenda aims to become a countrywide project, committed to create an adequate ecosystem so that all the actions in this field develop the best synergies, with the necessary flexibility to make people and organizations comfortable, and the suitable governance structure so that all can perceive it as their own.





1. Foster the deployment of networks and services to guarantee digital connectivity.

The European Union, as well as the majority of OECD countries, has placed the deployment of ultrafast broadband access infrastructures as one of the major political and strategic goals of this decade. The reasons for this are solid and well-founded.

It is crucial to have networks with the necessary coverage, quality and speed to support current and future demand, to increase our ability to innovate, to access new services with greater added value, or to transfer the benefits derived from digital economy to the whole of society. Advanced networking enables new, more effective, and efficient business models; new ways of producing and trading products and services; new forms of communication and relationship among citizens, businesses and public Administration bodies; and new ways to be more productive and build the future together.

Therefore, the Digital Agenda for Spain considers it essential to promote the deployment of ultrafast broadband networks and the provision of digital services, in line with the goals of the Digital Agenda for Europe. This requires eliminating barriers, which will facilitate the investment of private companies in these networks and the transfer of its benefits to the whole of society.

Spain should make its telecommunications networks efficient and competitive, offering the best services at the best price, thus contributing to improve the country's competitiveness and economic recovery, and to generate employment.

Major investments shall be made to provide networks with the required bandwidth, which is a difficult task in today's adverse economic context. For this reason, the Administration should play an important role in facilitating that deployments be carried out in the most efficient way, by eliminating existing barriers, promoting market unification, encouraging sharing and allowing a more flexible use of the spectrum. Likewise, it will promote a more intensive and efficient use of broadband services among citizens, businesses and public Administration bodies, as well as improved experience of users of broadband services.

1.1 Removing barriers for the deployment of networks promoting Market Unification

Efficient deployment of telecommunications networks requires a clear, agile, flexible regulatory framework that guarantees certainty and prevents the introduction of unnecessary barriers for those who perform it. It is also essential that territorial Administration bodies work together to provide operators with consistent rules and agile, simplified procedures for the benefit of the society they serve.

The Government recognizes the leading role of private initiatives in the deployment of networks and the provision of telecommunications services and will promote measures to facilitate this activity,





recover market unification and eliminate the existing administrative, tax and regulatory barriers. With this purpose in mind, two main areas of action are set out.

The first one is the reform of the legal system around telecommunications by means of the development of a new General Telecommunications Act. The reform will aim to progress towards Market Unification, fostering, at the same time, legal security, swiftness and efficiency principles, which requires diminishing administrative burdens.

The new Act must include these main elements: easy deployment of telecommunications networks; removal of administrative barriers; promotion of market unification; easy access to available civil works infrastructure that may host telecommunications networks; obligations for the development of infrastructure in new urban areas; guaranteed access to or use of telecommunications networks belonging to State-run transport infrastructure management bodies; clearer operation of networks and provision of electronic communications services by public Administration bodies to foster their dynamic role and guarantee the non-distortion of free competition.

Secondly, it will unify criteria and standards applicable to the deployment of telecommunications networks. The aim is to achieve clear, more consistent regulation that unifies criteria and points of interaction, which is a basic factor to reduce costs and unnecessary barriers at network deployment.

Thus it will drive a more free, competitive and efficient telecommunications market in which operators deploy their network and render their services more easily, which will result in better quality, coverage and service offering.

Lines of action:

- 1. **To have a new General Telecommunications Act in 2013**. The Act and the subsequent regulations will include the following essential aspects:
 - Ensure the implementation of a law that is consistent throughout the Spanish territory in those technical aspects needed for the deployment of telecommunications networks, so that it is sector-based regulations what determines aspects such as the electromagnetic emission limits.
 - o Simplify the deployment of infrastructures in the private domain, replacing the need for regional or local licences (previous licence or authorization for facilities, operation, activity or environmental) for more agile mechanisms, such as responsible statements.
 - o Facilitate the deployment of telecommunications networks in buildings by promoting shared use or through mechanisms such as deployments on façades.
 - Clarify the participation of public Administration bodies in the exploitation of networks and provision of telecommunications services guaranteeing that free competition will not be distorted.
 - Recognize expressly and legally that public electronic communications networks are basic equipment and are considered structural determinations. Installation and deployment constitute works of general interest.





- Given this condition, and in order to facilitate the deployment of telecommunications networks, it has been stated that electronic communications infrastructure must be set up in recently built-up areas, encouraging investment and shared use of infrastructure.
- Ensure access to or use of telecommunications networks belonging to State-run transport infrastructure management bodies.
- Ensure telecommunications operators will access civil work infrastructures belonging to public Administration bodies and those of operators of linear infrastructures (electricity, gas, water, sanitation, transport) that may host electronic communications networks.
- Establish flexible models for coordinating the deployments with local entities, based on deployment plans previously sent by operators.
- Create an Inter-ministry Commission on radio frequencies and health matters, to increase confidence in environmental safety and in the fact that public health will not be affected by the future network deployments based on the use of the radio spectrum.
- o Improve the tax management of some of the fees imposed on telecommunications
- 2. **Simplify legislation and management procedures** that affect infrastructure deployments, looking for the maximum consensus and involvement with the FEMP and regional communities.
 - Define a set of parameters and essential technical requirements needed to ensure network operation and electronic communications networks and services, so that all public Administration bodies can simplify paperwork in the installation of these networks, to ease and streamline deployments.
 - o Improve, with the creation of a Bilateral Commission, the alignment of the enforcement of telecommunications sector-based regulation with the already-existing regulations of territorial Administration bodies in the deployment of telecommunications networks.
 - o Facilitate the adoption of common legislation in environmental and urban planning issues concerning the deployment of telecommunications infrastructure, while preserving the interests of territorial Administration bodies, guaranteeing market unification and preventing Administration bodies from enforcing technical standards that limit the optimal deployment of networks.
 - There will be new recommendations so that the territorial Administration bodies will adopt planning instruments or rules that promote the deployment of electronic communications networks
 - Modelling of municipal ordinances that facilitate the deployment of networks will be negotiated with the FEMP

1.2 Promote the deployment of ultra-fast networks

The development of ultra-fast access networks is a cornerstone of the Digital Agenda for Europe, which proposes that everyone has access to Internet speeds above 30 Mbps and that 50% or more





of households sign up for Internet connections above 100 Mbps by 2020. In order to achieve these objectives, mobile communications, including satellite solutions for special cases, will play an especially important role.

These networks will be mostly deployed by the private sector, with their pace conditioned by the feasibility of investment, business models and the market response. Spain shares the goals of the Digital Agenda for Europe and, to achieve them, it will design a national ultra-fast network strategy that encourages investment by combining the efforts of the private sector with the help available in the different public Administration bodies.

The strategy will promote sustainable competition, technological neutrality, reduced deployment costs, competitiveness and shared use of infrastructure and investments through voluntary agreements among operators.

Particularly in those areas in which deployments by private companies are limited because they are not profitable, the strategy will address the use of support and public-private cooperation mechanisms allowing the extension of coverage of new networks as established by European legislation.

In addition, agents of information will be encouraged to share the existing infrastructures without establishing additional obligations. Local Administration bodies can play an important role in reducing deployment costs by facilitating the use of passive infrastructure under public ownership such as masts, sites or ducts, and increasing coordination of deployments.

The impetus for the deployment of infrastructure must be accompanied by policies to promote the demand of broadband services among citizens, businesses and Administrations. In this sense the actions foreseen in other goals of the Digital Agenda for Spain will serve as demand catalysts. The national strategy of ultra-fast networks will consider how these measures will impact on its design and shall include, subject to budgetary availability, additional actions to boost demand.

Lines of action:

- 1. To prepare the national strategy of ultra-fast networks as agreed with the sector in the first half of 2013, which includes:
 - Develop a map of broadband coverage that accurately shows the current status of the provision of these services, and that allows identification of the areas where there are market gaps.
 - Make it easier to share solutions of radio access and civil work infrastructures among telecommunications operators.
 - Facilitate public-private cooperation in the deployment of ultra-fast broadband networks, especially in areas with lower profitability; this will consider including mechanisms that make these deployments easier to perform.
 - Evaluate the possibility of sharing investment commitments, thus allowing for outsourcing infrastructures, in particular, in new spectrum bids.





- Develop, in collaboration with regional communities, specific incentives or helplines that contribute to the goals of broadband coverage and adoption depending on the availability of national and European funds.
- o Foster coordination procedures as agreed with public Administration bodies to facilitate the deployment of networks by private operators.
- Develop demand-promoting measures which should be aligned with the rest of measures on the Agenda; this aims to catalyze the adoption of broadband services.

1.3 Manage radio spectrum utilization more efficiently

The radio spectrum is a finite resource that is widely used for the provision of services of telecommunications, radio and television broadcasting, security, transportation and scientific, medical and outer space research; it also has a large number of industrial and domestic applications, such as remote control and many wireless systems. For this reason, the law established that the State is the one to manage, plan, administer and control this scarce resource that is increasingly more strategic and crucial for the economy and society.

In the case of Spain, the use of the spectrum is critical for achieving the goals imposed by the Digital Agenda for Europe, both for making broadband available to the entire population in 2013, and for getting 100% coverage of households at 30 Mbit/s speeds in 2020. Bringing forward the date for making the spectrum blocks of the digital divide available will speed up the fulfilment of coverage goals by urging a speedy deployment of the new 4G mobile phone networks in Spain, which will have a favourable impact on Spanish economy and avoid the delay in network deployment as compared to other countries in the European Union.

Having a more efficient use of the spectrum in the medium and long term is one of the main goals set forth both in Spanish legislation and in the first multiannual Radio Spectrum Policy Programme of the European Union. For this purpose it is necessary to promote, on the one hand, measures to get a more dynamic and flexible use of spectrum, and, on the other, to review the current status of the frequency bands, identifying which ones are underused and which ones can meet the growing demand of mobile network data traffic.

In the field of digital television, it is necessary to approach the citizens with the best services of high-definition television, promoting high quality content offer, for which there is a park of receivers ready that can receive high-definition broadcasts. Also, it is intended to facilitate the adoption of new technological solutions in this area, which will be set up in the coming years; focus will be put on those solutions which represent quality improvements and entail better services for the users, and encourage a more efficient use of the radio spectrum. All this will also benefit both the industry and providers of infrastructures and services in the audio-visual industry.

These measures should be applied assuring protection against interference, in order to achieve the required quality in the provision of each service, as well as in compliance with the requirements imposed by the public service obligations and goals of general interest.

Lines of action:





- 1. To bring forward the date for making the spectrum blocks of the digital divide available to telecommunications operators for electronic communications services.
- 2. To promote a more efficient use of the spectrum while simplifying access to it through:
 - A more flexible use of the radio spectrum favouring the development of the secondary market.
 - The use of general authorisations, only associated with prior notification and payment of rates, in bands to be determined.
 - The extension of the frequency bands as defined for common use without authorization requirements
 - o The analysis of alternatives to promote the shared use of the radio spectrum
 - The assessment of the possibilities of use arising from the utilization of innovative technologies, such as smart radio systems.
- 3. To review of the use of the spectrum in the main frequency bands to identify which ones are underused and can have added value with new services if they are made available for the market players under the principles of technological neutrality and service.
- 4. To assess the spectrum requirements for the development of ultra-fast broadband networks and identify the frequency bands that can be used to fulfill this demand.
- 5. To create a Forum of Audio-visual Technology involving all relevant stakeholders in the audio-visual field, in order to fuel the development and implementation of innovations in the field of digital television as high definition, 3D TV, hybrid television as well as different solutions in mobility.
- 6. **To support the development of hybrid television in Spain** by adapting regulatory frameworks and using mechanisms to stimulate supply and demand.

1.4 Improve the experience of broadband services user

To facilitate the adoption of broadband services, it is important to foster competition, increase the usefulness of available applications and services, improve the experience perceived by users, promote appropriate conditions of service as well as reduce the barriers that limit their adoption.

In this regard, greater transparency in agreements and rates, as well as information on service quality, will improve the perception of users and will facilitate the adoption and hiring of services. Changes to the regulations should focus on the most relevant parameters for the market and users, taking into account the end-to-end Internet services, counting on the participation of the agents involved and aiming at a positive impact on the adoption of broadband services and user experience.

Lines of action:

- 1. To update the procedures for monitoring and controlling service quality on the operators' side for the provision of electronic communications, simplifying it and giving priority to the contribution of relevant information to the user.
- 2. To guarantee that measurement parameters are compared and promote initiatives to spread information on service quality.





- 3. **To develop a Plan for the Improvement of Customer Service** which includes the following actions, among others:
 - o Perform regular assessments to verify that operators comply with the current regulations regarding the rights of users of electronic communications.
 - o Increase transparency of agreements and invoices the user must receive for the provision of services, content and applications.
 - O Check the regulations about the services with additional charges and high charges to introduce more guarantees when the users sign up for the services.
 - Boost regulatory consistency for the protection of users, based on the rights stated in the European legislation and the sector-specific regulations for electronic communications.





2. Develop digital economy for the growth, competitiveness and internationalisation of the Spanish company.

Improving the competitiveness of the Spanish production sector and fostering its growth, international expansion and creation of quality employment is one of the main challenges that we are dealing with today as a country. For this reason, our companies are urged to have more dynamic daily operations, to save costs through more efficient tools and processes, to increase their capacity to leverage business opportunities arising on the Web and to be more innovative and productive.

The intensive and efficient use of ICTs is a key factor to transform companies, their processes and structures, and to achieve the desired objectives of productivity and competitiveness. Therefore, it is necessary to promote the connection of SMEs to ultra-fast broadband, to encourage the transforming use of ICTs focusing public action on those business segments where economic and social return is greater.

The Spanish production sector will not be modernized without the existence of a technological sector that is competitive and capable of generating and using the applications, tools, services, products and digital content needed to drive the transformation of other sectors. The development of digital economy -the engine fuelling growth, employment and future opportunities- requires actively focusing on venture, on the creation of companies and on the internationalisation of the already existing ones. Likewise, the participation of companies and public Administration bodies in the development of future sectors is a critical element to continue the modernization and the sustainable growth of the Spanish economy.

If measuring the impact of the actions to be undertaken is essential in any public policy, it is more so, in this case, because the proposed measures must be continuously adjusted to fit in the rapid technological evolution and an ever-changing society.

2.1 Encourage the transformational use of ICTs in our companies

Spain can be said to have succeeded in the first phase, in which the challenge was to provide companies with ICT equipment and to guarantee their connectivity to the Internet. Now the challenge is to get companies to use digital technologies more efficiently and intensively to increase their productivity and improve their competitiveness.

With this purpose in mind, it is mandatory to collaborate with businesses and increase the awareness of the advantages of using ICT in SMEs, to raise the level of education and training in the use of ICT, to coordinate support initiatives from the different public Administration bodies and to promote the use at all times of the most innovative and beneficial technologies, such as ultra-fast broadband or cloud computing. Also, measures must be adapted to the peculiarities of each business, such as size, the sector in which they operate and their geographical location.





On the other hand, some productive sectors do not have ICT offers suited to their needs, which limits the benefits that could be obtained if there was an adequate offer. Therefore, public intervention must act as a driving force so that the private sector is able to develop a range of business applications, services and systems suitable for the specific needs of under-served areas.

Finally, the electronic invoice is one of the main engines of such change and savings in companies. Widespread use will enable profits of approximately 240 billion euros in Europe in six years. As outstanding benefits, the following can be mentioned: faster processes, fewer errors in billing, elimination of costs, better customer service, assistance to fight off fraud and integration of the administrative processes of the billing process. To achieve these benefits the Administration must take up a leading role in the implementation of the electronic invoice in their own recruitment processes as well as encourage its adoption in enterprises.

Lines of action:

- 1. To promote ultra-fast broadband access to SMEs and to centres of economic activity such as industrial parks or tourist centres.
- 2. To prepare a comprehensive Plan of Promotion of the Use of ICTs for SMEs and microbusinesses in the first half of 2013, with the following characteristics:
 - o It shall be developed through public-private cooperation.
 - o Business associations, all social agents and the different levels of the Administration shall work jointly in the process.
 - o It shall integrate all actions aimed at SMEs and micro-businesses.
 - o It shall include the following lines of action:
 - Design of actions for communication and dissemination of the potential ICT can have in the different productive sectors.
 - Creation of a support network for SMEs that integrate existing resources and services and provide access to them through broadband.
 - Training of IT-specific staff in companies as well as extending training in the use of ICTs to other SME staff.
 - Cohesion and enhancement of the ICT offer to get it to the Spanish industrial sector.
- 3. **To foster the development of ICT-specific solutions** that adjust to the needs of productive sectors that cannot access the ICT offer today.
- 4. **To implement electronic invoicing** through actions favouring its adoption by public Administration bodies, businesses and citizens. The public bodies collaborating with all agents involved will take the following elements, among others, into account:
 - o Establishment of measures that promote the widespread use of electronic invoicing.
 - Adoption of technical standards that facilitate interoperability and automated management through structured formats.
 - Launch of a centralized service of reception of e-invoices in the Central State Administration, which will come to unify the entry points of the invoices submitted to the Administration and allow for streamlining its internal processing.





 To favour installation in Spain and, where appropriate, the return of basic services for trading products and providing customer service such as 'call centres' services or business services.

2.2 Boost e-commerce

A large part of trade will take place via Internet in the future. Those economies that can get its companies to sell their products and services through the web and its citizens to buy and make financial transactions online will be better positioned in a global market.

The Digital Agenda for Europe has considered e-commerce as one of the most relevant strategic areas for the future economy of Europe. Therefore, it has aimed at having 50% of citizens using e-commerce, 20% making cross-border purchases, and 33% of SMEs selling and buying through e-commerce operations by 2015. Spain shares the European vision and advocates its goals.

However, the Government is aware of the challenge posed by the ambitious European goals and Spain's delay as compared to the European average in this area. In 2011, 27% of the citizens used ecommerce in comparison with 43% of the European average, and in the case of SMEs, only 11% sells on-line, as compared to 13% in the EU.

As a result, actions shall be taken to increase the companies' offering of services and products on the Internet, to facilitate the opening of this type of business, to make it easier for sales representatives and consumers to know the advantages of e-commerce by eliminating uncertainties and mistrust, and promoting the opportunities generated in the new mobile environments. This aims at complementing the lines of action referred to in Goal 4 regarding the improvement of the trust of sales representatives and consumers in online transactions.

Lines of action:

- 1. **To prepare a Plan of Promotion of e-commerce in the first half of 2013** in which business associations, all social agents and the different levels of the Administration will work jointly. The plan will be based on the following lines:
 - o Simplify the necessary formalities and the relevant aspects to consider when opening a business on the Internet.
 - Establish sector-specific forums to improve the training of sales people in relation to regulations, obligations, benefits and opportunities of e-commerce.
 - o Promote the use of multilingual platforms for the creation of quality online stores among SMEs and micro-businesses.
 - o Promote standards and certifications for e-commerce.
 - o Support awareness-raising campaigns on e-commerce among citizens and sales reps.
 - Develop specific actions to boost female entrepreneurship, trading of local products and territorial structuring in the rural environment.
 - Link measures of the Plan of Promotion of e-commerce with the actions to reinforce the trust of sales reps and consumers in the digital realm.





2.3 Promote the production and distribution of digital content over the Internet.

The digital content industry has an enormous potential for growth which places it as one of the most relevant sectors for the digital economy. This industry encompasses both a more traditional conception of digital content (such as cultural content and entertainment) and new developments, which include mobile applications or online advertising among others, as well as tools and platforms for the production and distribution of content in all sectors.

The development of the digital content industry requires a comprehensive policy which, based on the collaboration among the Administration and the main representatives of the digital content sector and the main representatives of the technological sector, would include training and R+D+I elements, as well as the establishment of indicators for the follow-up of the evolution of the industry, and would reinforce content generating industries by removing the main barriers to their development. Such a policy must be evaluated and updated periodically to adapt to the rapid evolution of this new economic sector.

The reform of the regulatory framework will address, among other things, the streamlined and simplified use and distribution of digital content. The consolidated text of the Act of intellectual property will be reviewed with all the sectors involved, in order to adapt the legislation to the characteristics of digital content, to simplify the steps to be able to make use of content, to allow for the innovative use of emerging technologies, all this protecting intellectual property rights. This reform will take into account the global nature of the Internet and the need to move towards a single digital market that facilitates the trading of products and services outside our borders, in line with the provisions of the Digital Agenda for Europe.

To promote the creation and development of the digital content industry will also require opening dissemination forums, promoting the internationalisation of enterprises and fostering the adoption of good practice standards and codes.

Lines of action:

- 1. To prepare a comprehensive Plan for the Digital Content Industry in Spain in the first half of 2013. The Plan will be transversal, and will consider cultural and entertainment content as well as tools and platforms for the production and distribution of content across all sectors. A joint working group (with representatives of all relevant ministries, of the digital content industry and of the technological sector) will be created for the definition of the detailed content of the Plan. The Plan will include at least the following elements:
 - o **Boosting the education and training of professionals** in the creation of digital content, including technological, design, and management elements.
 - Establishing an R+D+i-specific policy for the promotion of innovative technologies to be applied to the digital content industry.
 - O Developing, in collaboration with the sector, a set of indicators that permit adequate follow-up of the evolution of the digital content industry.
 - Designing the NACE codes for companies in the digital content sector.
 - o Increasing public-private cooperation.





- Facilitating the development of companies working in the creation, production or distribution of digital content.
 - Creation of sector-specific forums to facilitate the progress of the Spanish industry toward higher levels of business maturity.
 - Actions, through public-private cooperation, for informing of the growing legal offer and raising social awareness of respect for intellectual property rights.
 - Use of the potential of the audio-visual sector and the live show business to promote the digital content industry.
 - Study, together with the public body responsible for data protection, the proceedings needed to use social networks as a means of distributing digital content keeping the balance between guaranteed privacy and access to information.
 - Development of a publishing industry for digital educational content.
- Developing, within the framework of the Inter-ministry Working Group for the Internationalisation of the Spanish Enterprise, a strategy of export and internationalisation of Spanish digital content that considers both the potential offered by the widespread use of the Spanish language in certain geographical areas and the export of technological developments that support the digital sector.
- 2. To cooperate with the relevant ministry departments in the **adaptation of copyright standards** for the use and protection of content in the digital realm through the following joint actions:
 - Proposal for revision and adaptation of existing legislation.
 - Simplification of the procedures and the conditions to use digital content to make access easier for SMEs and micro-businesses operating in the digital field.
 - o Promoting, together with the rest of the agents involved, the creation and evolution of codes of conduct and good practices in the field of digital content, so that progress is made in the field of self-regulation and content labelling and good practices are promoted in this sector.
 - Cooperation of all parties concerned in the adoption of measures for the defence of intellectual property rights from acts of infringement or in the scope of services of information society.
- 3. To simplify the conditions for re-using the information of the public sector through the following actions, among others:
 - Promotion of good practices across all Spanish public Administration bodies through user guides and homogeneous licences for the re-use of information of the Public Sector.
 - o Availability for third-parties of touristic content and other content of interest.
 - Establishment of a forum of public-private collaboration to boost cooperation in this field.





2.4 Enhance opportunities for the electronics industry

This industry in Spain has a high exporting potential, capable of generating high added-value employment and contributing to the improvement of competitiveness in different sectors and fields.

However, this industry is facing a manufacturing capacity loss process, which makes it necessary to adapt it to new opportunities that would enable strengthening its competitiveness and ability to grow in the coming years.

To help its progress, actions to develop productive supply should combine with actions to boost demand in different industrial sectors. In this sense, public-private cooperation is a mechanism to identify opportunities for the electronics industry and to bring it closer to the needs of other industrial segments.

Lines of action:

- 1. To set up a forum for public-private cooperation to **identify and enhance opportunities for the Spanish electronics industry**.
- 2. To promote initiatives to **offer products and services from the electronics industry to other sectors**, giving impetus to the application of technology solutions in them.
- 3. To boost innovative public bidding and the early demand market for R+D+i projects related to the electronics industry, especially in emerging sectors.

2.5 Favour the internationalisation of technological companies

Spanish technological industry has a great potential for exporting goods and services, which must be boosted by public policies. So, actions shall be taken to easily develop a competitive range of products and services, which allow improving the promotion at the international level and which support the internationalisation of Spanish technology-based companies.

The Administration's innovative purchase and early demand capabilities will be used to facilitate the development of a technological offer that can compete internationally. Other key factors are the attraction and retention of talents, the availability of capital to be invested in innovative technological developments, and the leverage of synergies among the policies of promotion of innovation and of foreign trade.

On the other hand, international promotion, increased visibility and promotion of Spain as a brand are essential elements. Such measures require the collaboration and active involvement of the Central State Administration network abroad to help companies operate in the international arena.

Lines of action:

- 1. To elaborate, in the first half of 2013 and in the framework of the Inter-ministry Working Group for the Internationalisation of the Spanish Enterprise, a Plan of promotion of the internationalisation of technological companies that will include, among others, the following measures:
 - o Facilitate the development of an innovative technological offer by:





- Implementing programmes of innovative public bidding to the ICT sector and fostering the early demand market.
- Developing programmes to attract and retain talents in Spain.
- Boosting the attraction of international capital, to be invested in Spanish technological companies.
- o Promote company-oriented campaigns to raise awareness on internationalisation, in collaboration with private companies and other interested agents.
- Coordinate, in collaboration with agents in charge, the promotion of innovation and development by boosting ICT companies' export and internationalisation activities.
- o Promote, in collaboration with ICEX and the network of economic and commercial offices of embassies, the internationalisation of the ICT sector through efficient and optimised support for the network abroad in order to:
 - Facilitate visibility of Spanish companies.
 - Promote major success stories and "Spain" as a brand.
 - Supplement the aid for marketing campaigns and presence at trade fairs and international sector events.
- Establish a credit line for supporting the internationalisation of the companies belonging to the telecommunications field and the information society, whose management will be assisted by the Secretary of State for Trade or its related bodies.

2.6 Enhance the future industries

Spain must remain at the forefront of innovation and participate in initiatives that allow for quickly detecting - and choosing- future trends, generating companies in those sectors and promoting talent and entrepreneurship. Early detection of and involvement in industrial opportunities, such as cloud computing, the Internet of Things, green ICTs, smart cities, Big Data or the development of applications for the mobile ecosystem, contribute both to the enrichment of the digital industry and to the growth and modernization of the economy in general, improving business productivity and competitiveness and allowing for the development of new business models.

In this state of affairs, it is essential to establish a comprehensive approach that involves, among other elements, the participation of the Administration and Spanish companies in the actions proposed by the European Union, the spreading of these industries' potential and of major success stories, the facilitation of access to sources of funding and the adoption of measures to support internationalisation. Some of the necessary elements result from measures set out for the development and internationalisation of the technological sector, while others are specific to this goal.

In addition, specific measures should be developed to enhance the implementation in Spain of the detected future industries.

Lines of action:





- 1. To adopt general measures that will contribute to the development of future industries, as a key sector for the competitiveness of our economy:
 - o Increase the involvement of the Administration and Spanish companies in technological initiatives at community level.
 - o Support the initiatives from business clusters specializing in future industries.
 - Carry out activities across companies to spread out and communicate the benefits of participation in European initiatives.
 - Promote the development of an investment infrastructure for future ICT-related sectors (venture capital companies, technological investment funds, business angels).
 - Define and establish a system for measuring the contribution of future industries to the GDP
- 2. **To help the development and use of the cloud** as a key mechanism to ensure the competitiveness of our businesses:
 - o Participate in the development of cloud computing initiatives of the EU.
 - o Establish channels of information and advice for the population and organizations.
 - Create a joint working group that facilitates the implementation of cloud solutions in public Administration bodies and companies, especially SMEs, and spreads out the benefits over other more traditional models.
 - Facilitate the use of cloud services by the Administration as a measure that would act as a driving force and also to improve efficiency by developing, in collaboration with the industry, a guide of good practices in public procurement for all public Administration bodies.
- 3. To promote the use of ICT for saving energy and developing smart cities and infrastructure, which will ensure sustainability over time and contribute to the development of our economy:
 - Participate in the development of the EU initiatives in the field of green ICT, smart grids and smart cities.
 - Establish channels of information and advice for companies and citizens who wish to incorporate ICT measures to save energy and reduce pollutant emissions.
 - Define and establish a system for measuring energy savings and environmental impact linked to ICTs.
 - Promote the use of ICTs in infrastructure for the provision of basic services, such as water, electricity and energy supply.
 - Design a Plan that unifies criteria, principles and deployment of smart grids and smart cities
 - Define standards that would make it easy to re-use the information generated in the context of smart cities for the development of new services.
- 4. To promote the development and use of techniques for dealing with massive volumes of data or Big Data in organizations, as a means to optimise decisions and improve productivity, efficiency and competitiveness:
 - o Participate in the development of Big Data initiatives on the world stage.
 - Promote activities to inform about the benefits of smart data processing.





Enhance the development of Big Data solutions.

2.7 Strengthen ICT industry through technological projects in public services

The use of digital technologies in the delivery of public services allows for improvement of quality and efficiency, and constitutes an essential help to providing key services, such as education, health and justice.

The development of technological projects in the field of services of central administration and territorial Administration bodies bolstered the Spanish ICT fabric in the past.

Projects such as the development of healthcare and social welfare services, the promotion of the use of ICTs in Justice-related issues or the introduction of ICTs in the education system have been launched in previous Administration plans. The Digital Agenda for Spain will continue pushing technological projects in these areas, which will act as a driving force to strengthen the ICT industry and the digital economy as a whole.

Administration of Justice

In the field of the administration of Justice, actions will encompass several objectives. The first one will be the adoption of a 2012-2014 Action Plan that will guide the effective implementation, at the lowest cost, of the electronic court records system, contributing to the fact that every judicial operator and other agents interact with the administration of justice through telematic means. The second one will involve the creation and launch of the electronic office of assistance to victims of terrorism.

Also service quality and efficiency will be improved at the Civil Registry and telematic services of the Registry will be optimised for both citizens and other entities and public Administration bodies.

Lines of action:

- 1. To create a new procedural management system, which will incorporate the electronic court records system implemented in the Employment Division and the Administrative Courts of the National High Court and that will be gradually extended to the rest of judicial bodies. This system pursues the following objectives:
 - To reduce the volume of paper-based information coming to the National High Court.
 - o To improve the associated processing and documentation schemes.
 - To promote the implementation of online services for citizens and judicial operators (attorneys, lawyers, social work graduates, etc.)
 - To make the new procedural management system available for the other interested public Administration bodies.





- To create and launch the electronic office for information and assistance to victims of terrorism in the National High Court, enabling access to information of interest to those affected.
- 3. To create and implement a guidance service to those affected by the abduction of newborn infants.
- 4. To develop technological and organisational improvements in the new Civil Registry to:
 - o Facilitate the electronic submission of documents.
 - o Allow electronic access to stakeholders accredited to acts recorded in the Registry.
 - Enable electronic access to public Adminitration bodies so that citizens do not have to provide information that is already in the Registry

Healthcare

In the area of healthcare, the proposed measures delve into the use of ICT both at management and care. e-prescriptions and digital medical records will be fully deployed in all regional communities, enabling the offer of services utilising these instruments for citizens and professionals. In healthcare and social terms, the use of ICTs will be encouraged as a tool for the efficient provision of domiciliary care services. Finally, electronic ID card will be leveraged as an identification element for accessing healthcare services, avoiding unnecessary duplication in user identification mechanisms.

Lines of action:

- 5. To boost the deployment of e-prescriptions.
- 6. To develop services for professionals and citizens, based on the availability of the digital medical record in the National Health System.
- 7. **To use the electronic ID card, or other certification systems**, which allow for suitable identification and authentication, as user-identifying alternatives to the health insurance card
- 8. To grant citizens online access to their digital medical record from anywhere, with their electronic ID card or other certification systems that allow for suitable identification and authentication.
- 9. To promote programmes for the improvement of the quality and efficiency of the care of chronically sick people through the intensive use of ICTs in line with EU "Ambient-assissted Living Joint Programme".
- 10. **To promote standards** to favour interoperability of healthcare-related ICTs, telecare and telemedicine, through mechanisms for cooperating with the industry.
- 11. To adopt standards that facilitate R+D+i activities related to the secondary use of particularly sensitive data, with full respect for the privacy and data protection requirements and considering the needs for improved efficiency in research, analysis and evaluation of services.
- 12. To boost the development of information systems that support the management of clinical research on drugs and healthcare products in Spain and Europe.
- 13. To design information systems that are applicable to the sustainability and cohesion of the National Heath Service, both in the field of primary and specialized health care.





Education

The widespread incorporation of Information and Communication Technologies (ICT) into the education system will help customize education and adapt it to the needs and pace of each student. On the one hand, it will serve for reinforcement and support in cases of poor performance and, on the other, it will enable the expansion of the knowledge transmitted in the classroom without limitations. Motivated students can thus access, according to their capabilities, to quality educational resources. ICTs will be critical for the methodological change that will lead to achieving the objective of improving the quality of education. In addition, the students' responsible and orderly use of these new technologies must be present throughout the educational system. ICTs will also be a key tool in the training of teachers and in the learning of citizens throughout their life, allowing them to combine training with work or personal obligations, and also in the management of the processes.

It is imperative that the model of school digitisation to be chosen is economically sustainable, and that it focuses on the creation of a digital ecosystem of national scope that allows the normal development of the options of each education Administration body.

Lines of action:

- 14. **To set up standards** which ensure the interoperability across the different systems of information used in the Spanish educational system
- 15. **To use virtual learning environments** for implementing specific educational plans and for expanding the classroom concept in time and space
- 16. **To decide on the formats** that must be compatible with the tools and systems supporting learning in the field of public digital educational content
- 17. To use teaching, and digital and technological quality platforms shared by the entire educational community
- 18. To promote the use of information and communications technologies in teaching and learning
- 19. To prepare a common reference frame for digital teaching competence
- 20. To provide access to ultra-fast broadband networks in education facilities.





3. Improve e-Administration and adopt digital solutions for efficiently rendering public services.

One of the great challenges that public Administration bodies face is to be able to increase the productivity and the service to citizens, reducing public expenditure, without diminishing the universality and the quality of its services. To such an aim, it is essential to get a public sector that can provide high value-added services, which can fulfil the needs of citizens and businesses, providing a clear-cut advantage to those who use them and allowing for the smart use of the available resources. In addition, all this is to be reached in an environment of budgetary austerity and demand for excellence.

Electronic administration or e-Administration is one of the main pillars to deal with these challenges, since it saves unnecessary costs for citizens, businesses and public Administration bodies, helps streamline administrative processes, gets citizens and Administration closer and provides a public service 24 hours a day, 7 days a week.

In Spain, in 2007, the Act regulating the electronic access of citizens to public services recognised electronic access to public services as a citizen's right and forced public Administration bodies to provide the suitable means to enforce this right accordingly. As a result, five years later, there is a range of public services that can be accessed electronically and which, in the Central State Administration, reach virtually 100% of them. However, the success in the deployment of electronic services has not been equally reflected in the use citizens and companies make of them. Thus, increasing the use of currently available services, streamlining and optimizing the use of ICTs, cooperating and sharing among public Administration bodies and bridging the digital divide existing today are some of the main goals pursued by the Digital Agenda for Spain.

It is important to also bridge the digital access divide citizens experience today regardless of where they live, supporting collaboration among public Administration bodies.

It is essential for the proper running of our country to get a new Administration model, focused on citizens and enterprises, which eliminates unnecessary administrative burdens, adjusts public services to the needs of citizens, encourages participation and collaboration with more agents using ICTs in the provision of key public services, and shares their data with the society to facilitate the generation of knowledge and value. In this sense, e-Administration and the rational and orderly use of ICTs in the hands of public Administration bodies constitute the core elements to achieve this.

3.1 Moving towards an Administration integrated into society with quality public services focused on citizens and businesses

The needs and requirements of citizens and businesses in their relations with the public Administration bodies differ markedly from one group to another. While most of the citizens make simple and sporadic use of Administration services, the self-employed and companies have more





complex relationship models and different needs. Administrations must adapt themselves to properly address this diversity.

Having services focused on citizens and, in this case, designed jointly with them is one of the major goals of the Digital Agenda. Public services offered to the citizens must be complete, high-quality and user-friendly; this is the only way they will be encouraged to use them. They must always reach expectations of the citizens.

Moreover, cross-border public services provided over the Internet will contribute to the development of the single market and will facilitate mobility to study, work, reside, receive health care services and retire in any EU country as well as to provide services and to do business.

The emergence of new forms of collaboration and relationship through the use of technology cannot be taken in isolation and separate from the running of our public Administration bodies. Public Administration bodies should be open and citizens should participate in their decisions, actively collaborate in the design and delivery of public services and in the evaluation of the results achieved through transparent mechanisms to ensure efficiency in the use of public resources.

The development of these public services must be accompanied with the reinforcement of security and protection of the public networks belonging to the Central State Administration, in line with the issues raised in the Spanish Strategy of Cybersecurity.

Lines of action:

- 1. **To simplify and eliminate unnecessary administrative burdens** making precise policy changes, reducing paperwork and enforcing the right of citizens and businesses to not provide data that is already held by the Administration.
- 2. **To transform current public services into citizen-oriented services**, so that they are customizable, proactive, accessible from different platforms, adapted to the needs of users and easy to use, oriented to critical events and with guaranteed quality and safety.
- 3. To progress in the creation of cross-border services within the European Union to facilitate the mobility of citizens and businesses as well as European digital identification.
- 4. **To promote transparency in the actions of the Central State Administration** through the following elements:
 - a. Access to the information and results of administrative activity.
 - b. Citizen participation in the decisions of the Administration, allowing for the collection of suggestions, comments and criticisms.
 - c. Collaboration with citizens, businesses and public Administration bodies in the design, implementation and delivery of digital services.
- 5. **To encourage the re-use of information from the public sector** to enable the development of high value services that contribute to boosting economic activity and generating value services for citizens and businesses.
- 6. **To guarantee the implementation of the national security scheme**, stregthening detection capabilities and improving the defence of classified systems in accordance with the actions included in the Spanish Strategy of Cybersecurity.





3.2 Increase the use of electronic public services by citizens and businesses

Electronic administration facilitates interaction among citizens, businesses and public Administration bodies; avoids misplacement and queues when performing administrative formalities; is available 24 hours a day, every day of the year; allows the Administration to be proactive; and decreases the time of response to citizens and businesses by automating part of the administrative process. In this way it allows citizens, businesses and public Administration bodies to get significant savings in their day-to-day operations. But these savings only materialize if electronic services are used massively. Only then users benefit from its advantages and only then public Administration bodies can release resources previously devoted to routine tasks to other tasks that generate greater added value.

For this reason, the new e-Administration-related objectives set by the European Union in the Digital Agenda for Europe are related to use rather than to service offering: get 50% of citizens to use e-Administration facilities and get half of them to make advanced use of them by 2015. The Government of Spain endorses these objectives and this Agenda includes measures to achieve them within the term established, in the knowledge that the portfolio of services offered electronically in Spain is broad but its use is limited.

To achieve this, we understand the following measures can be of use: to raise the level of knowledge the Spanish society has on existing electronic services; to simplify the use of these services; to encourage the use of the digital channel over other channels whenever it is possible, and to try to reduce the digital divide which affects different groups of citizens, engaging public officials in order to increase the use of the above-mentioned services.

Lines of action:

- 1. **To develop a global communication strategy** that spreads out the benefits of electronic administration.
- 2. **To encourage the use of digital public services by citizens and businesses** by improving quality, safety, accessibility, usability and adjustment to the real needs.
- 3. To provide mechanisms for the identification and authentication before the Administration through:
 - a. More robust systems of identification and electronic signature in public e-services, enforcing the principle of proportionality.
 - b. Mobility solutions that facilitate the identification through the use of mobile devices.
- 4. To encourage the use of electronic services by citizens and businesses, introducing mandatory uses of electronic media for certain professional and business groups based on cost savings and reduction of time for processing of records.
- 5. **To measure the use of the electronic services** through indicators and consistent tools, allowing for making comparisons and knowing the use and value generated by the different public services, both for the Administration and users.

3.3 Rationalise and optimise the use of ICTs in public Administration bodies

The need to reduce public deficit takes our public Administration bodies to seek, almost continuously, areas of action which identify potential sources of savings. The efficient management





of ICT is a clear opportunity for improvement in which we can optimise the available resources; but, at the same time, the smart use of ICTs is in itself a facilitator to generate significant savings; for this reason, ICT-related costs have to be reduced in our public Administration bodies and kept under control in the light of a strategy that addresses every aspect to be rationalized from all perspectives, i.e. a global and structured rationalization.

It is necessary to move towards a new more profitable, consistent and cohesive model of ICT service delivery. A model based on the development of shared services that optimises resources by sharing costs and investments, the generation of economies of scale and the optimisation of purchase processes to increase efficiency in the procurement of ICT goods and services.

In addition, the provision of ICT is revealed as an important factor to achieve a green public Administration. Using it should result in economic gain, a more efficient use of human capital and a reduction in its environmental footprint.

Lines of action:

- To advance in "Management without papers", to automate administrative processes and procedures, and increase the knowledge and skills of civil servants through technologies of collaborative work, identification systems and electronic signatures, and electronic Administration services.
- To collaborate in the achievement of "Management without papers" throughout the national territory and in all public Administration bodies, developing solutions that will allow for the immediate implementation of basic services of electronic Administration in all government agencies.
- 3. To streamline expenditures of the Central State Administration in the field of Information and Communications Technologies, through:
 - a. The establishment of an e-Administration model which allows to share services and infrastructure, oriented to the development and encouragement of:
 - Shared cloud services that reduce maintenance costs and needs for investment, and provide solutions in continuous evolution, with particular emphasis on the consolidation of cloud mode services of the Administration.
 - ii. The implementation of standards, interoperability and security, contributing to the automation and optimisation of processes.
 - iii. The streamlining of ICT infrastructure by sharing resources among public Administration bodies that will allow to reduce operating costs and optimise investments, from a perspective of integration and homogenization of resources.
 - iv. The approval of portfolios of shared services enabling equal and compatible solutions in the entire country.
 - b. The establishment of a global purchase policy that will lead ICT providers to recognise public Administration bodies as a single client and enable the benefits of an economy of scale.
- 4. **To promote a green Public Administration through the use of ICTs**, in such a way that the use of technological solutions is optimised and e-Administration services are streamlined,





- which will undoubtedly bring about implicit economic savings and reduced environmental footprint, in areas such as consumption of paper, energy use, infrastructure resizing, mobile work, treatment of waste, etc.
- 5. To extend e-billing and e-procurement to all the relations between public Administration bodies and their suppliers.

3.4 Promote cooperation and collaboration with organizations, companies and social agents in the field of e-Administration

The Central State Administration is obliged to lead the cooperation among public Administration bodies. ICTs can help significantly in this sense so that the distribution of competences among public Administration bodies does not translate into, in the eyes of the citizens, additional obstacles or difficulties for them to relate to. In order to get productive and sustained cooperation among public Administration bodies, it is necessary to regulate the structural framework of the relationship as well as to establish new ICT-based models to foster collaboration and inter-administrative reuse.

Two of the main saving mechanisms, which are essential in this economic climate, are streamlining, through reuse, the high number of technological resources and similar electronic services in all public Administration bodies, and reactivating ways of sharing experiences, as the communities of collaborative development, to create synergies among public Administration bodies.

Companies should also participate in electronic public services provided by public Administration bodies to society. The current model of acquisition and management of ICT is not viable in the budgetary constraining situation that we are facing; therefore, public Administration bodies and the business sector shall discuss and search for new ways of collaboration, such as development communities, which can contribute to recover investment in ICT and to establish a sustainable model that will enable progress towards budgetary stability.

Synergies among public Administration bodies cannot be reduced nationwide, because Spain is part of the European Union and the international community, and, as a member of great relevance, has to defend its stance by participating actively in all forums of interest. The new model of Administration involves full integration into European policies and participation in working groups and decision-making bodies on issues related to the development and implementation of e-Administration in international forums.

Lines of action:

- 1. To encourage sharing experiences, projects, services and e-Administration applications developed by all public Administration bodies, companies and organizations and to set up forums where they can interact.
- 2. To establish a new framework of relations with organizations, companies and social partners contributing to boost the ICT market, particularly through the study of mechanisms that would facilitate public-private cooperation.
- 3. To intensify the coordinated presence of the Central State Administration in European and international forums.





3.5 Use technology to bridge the digital divide

ICTs are an indisputable instrument for improving the quality of life and the integration of citizens at all levels.

At this time there are digital divides that discriminate against certain groups, citizens and businesses for various reasons.

Thus, the difference between the inhabitants of the central area and the peripheral ones of Spain is remarkable. While for some, completing procedures and processes is accessible by electronic means in a large part of their activity, for others the lack of options complicates each step, thus causing an impact on their quality of life and the provision of services.

Not only does the territorial expansion that identifies municipalities and provinces determine the possible existence of divides, but also many other factors do: access to communications, distance to the administrative centres as well as cultural and educational level, availability of access equipment, etc.

It is well known that the cost of a digital formality drops from €80 to €6 on average; also e-Administration is not meant to be city-centric, but to reach small municipalities and disadvantaged areas on the basis of effective equality of citizen rights.

People also have different problems when interacting with the Administration and we should pay attention to removing obstacles.

Electronic administration twenty four hours a day and 365 days a year cannot discriminate against people and territories and should be able to get wherever the service is needed.

Lines of action:

- 1. To reduce the distance between the central area and the peripheral area in terms of e-Administration through:
 - a. The promotion of the use of basic "eAdmon" services in the municipalities and provinces of small size.
 - b. The promotion of communication among the different territorial public Administration bodies through portals and systems based on cloud computing.
- 2. To ensure the specific mechanisms for increasing the access of groups with special needs, such as the elderly, the handicapped, etc.
- 3. To increase the usability and accessibility of all services in the Administration, regardless of the characteristics of the users under conditions of real equality.





4. Reinforce confidence in the digital sector.

The establishment of a climate of confidence in the digital environment is essential for ICT to contribute to the economic and social development of the country. This is a complex task that requires the commitment of citizens, businesses and public Administration bodies.

Building a climate of confidence is the result of an on-going process that acts on different areas, including cybersecurity, respect and protection of privacy, responsible and safe use of services and contents; protection of particularly vulnerable groups; endurance and strength of the technological infrastructures on which we are particularly dependent; governance; legal security of personal and economic relations in such an environment as well as protection of consumers on the Internet.

This Agenda adopts a comprehensive approach in which different areas are treated from the common and fundamental objective of confidence, thus reinforcing and complementing other strategies, policies and plans of the Government. This is the case of the Spanish Strategy of Cybersecurity that shares much of its mission and lines of action with the Digital Agenda for Spain, and especially with this aim of confidence.

Among the essential elements to achieve this confidence is the creation of a "confidence services market" prompting the emergence of agents that provide basic services granting security to transactions.

It is also relevant to strengthen public and private capabilities needed to increase digital confidence. In addition to awareness-raising and training in this area, it is necessary to have a national reference centre for strategic sectors, companies and citizens, which develops incident response functions, especially for cybersecurity.

Finally, making it easier for companies to adopt best practices in the area of confidence and for users to require them is core for the on-going improvement in this area and for the extended use of services and transactions online, such as e-commerce.

4.1 Promote the confidence services market

A reliable digital environment requires agents that, on certain occasions, ensure safe interaction between users and providers of Information Society services. Known as confidence services, they include, among others, the provision of means for electronic identity and signature, simplified electronic document custody, easier safe payments and e-procurement, obtaining and retaining electronic evidence or privacy management.

In order to increase users' security and confidence in the digital environment, it is necessary to revitalise and boost the confidence services market. With this aim in mind, it will be necessary to combine the development of a regulatory framework that eliminates barriers, is stable and provides





legal certainty to the agents, with measures that further stimulate and encourage supply and demand.

While these measures are generally applied to the set of confidence services, extending the use of electronic signature and identity will deserve special attention as they are fundamental elements for the development of other more advanced services.

Finally, reinforcing the capacity of the State to oversee the confidence services market is a necessary element for its development, insofar as it guarantees users that services fulfil their requirements.

Lines of action:

- 1. **To stimulate the market of confidence services for citizens**, businesses and public Administration bodies through:
 - o The development of regulatory frameworks for the removal of barriers.
 - o The utilization of mechanisms of stimulation of supply and demand.
- 2. To promote the development and use of electronic identification and signature services suitable for the different user needs.
- 3. **To strengthen the supervising capacity** of the Administration, by promoting audit and accredited certification processes, ensuring consistency and mutual recognition with European initiatives.

4.2 Strengthen capabilities for digital confidence

In order to achieve a suitable level of digital confidence, it is necessary to have different entities, platforms, protocols, and other elements that, as a whole, are capable of performing tasks of awareness, prevention, analysis, detection, reaction, investigation and follow-up.

Spain has different entities, public and private, specialized in the different fields making up digital confidence. Backing them up and coordinating them suitably will allow users to enjoy better safety, security and confidence tools when using digital media for their everyday activity.

If reference centres are set up to coordinate and address the various tasks involved in developing confidence, citizens, companies and public Administration bodies will feel safer in the digital realm. In addition, increasingly complex threats will require the development of greater capacity and intelligence for the early identification of new risks in the digital environment.

However, a very important part of confidence depends on users being aware of the existing risks and that the best practices for responsible use of services are being complied with. In this regard, any initiative which seeks to increase the digital confidence of users should include measures to raise awareness of and spread out good practices, such as the importance of maintaining up-to-date software and antivirus protection, requiring privacy policies and enforcement, or using services of secure access to make payments online.

In addition, to design strategies in the medium and long term it will be essential to have accurate indicators of the level of digital confidence of citizens, businesses and public Administration bodies





by identifying facilitators, barriers, needs and opportunities both for the development and use of services.

Lines of action:

1. To consolidate INTECO as centre of excellence in digital confidence

- Extend participation to all areas of the confidence, including the protection of minors and privacy, in coordination with other entities in the fields of digital confidence.
- o In the field of cybersecurity, set it as a reference for **strategic sectors**, **companies** and **citizens**.
- O Decide on which capabilities are needed to study emerging risks and be able to anticipate needs and adopt preventive measures.
- To develop programmes of awareness-raising, education and training, addressing comprehensively the various fields of confidence for all groups. These programs will seek the support of other sectors of society through public-private cooperation models and will enhance the creation of talents to create a true focus of excellence in Spain, especially in the field of cybersecurity.
- 3. To promote the incorporation of contents in the itineraries of the educational system in matters of security, protection of privacy and responsible use of ICT.
- 4. To monitor and make permanent diagnosis of digital confidence through integrated and comprehensive information and indicators. To do this, measures will be taken to strengthen and streamline the existing observation structures, and to synchronise the follow-up systems with the European and international benchmarks.

4.3 Promote the excellence of the organizations in the field of digital confidence

On-going investment in mechanisms of security and organizational confidence will only be possible if the efforts made imply high excellence in the digital realm and, in his case, a competitive advantage. To do this, users must have the necessary knowledge and adopt the suitable practices for strict and proportional demand.

Therefore, organizations will be encouraged to adopt voluntary codes of good practices and to back this up through schemes of certification, assessment or classification of international recognition; said organizations will also be encouraged to ensure market unification. The State will have to enable tools to carry out these certification processes, to promote adoption among suppliers through incentive policies and to encourage consumers to demand such certificates.

The areas of application of the measures of confidence include managing the security of information, guaranteeing service and business continuity, protecting customers' privacy, identifying services providers and conditions of use protecting consumers in their digital transactions, and respecting and defending the most vulnerable groups, such as minors.





One of the elements which will further impact on confidence in the digital environment in the coming years is the treatment of personal data and privacy in Internet-related issues. With this in mind, the European Commission is in the process of reviewing the legislation to adapt it to the new digital environment and to strengthen users' control of their personal data. In anticipation of the proposed reform and to facilitate the development of services and transactions online, Spain must adapt its regulatory framework and clarify their impact on the most affected by these online services.

However, the adoption of regulatory and self-regulated confidence-building measures cannot become a barrier to the development of the digital economy, which will demand paying special attention to the existence the right balance and proportionality in the requirements of the various areas of confidence, especially in security and privacy, to ensure the sustainability of investments and the appropriate levels of protection.

Lines of action:

- 1. **To promote good managerial practices** of digital confidence in the main strategic digital sectors and services, both public and private, which turn out more relevant to society and the economy.
- 2. To encourage **users and consumers** to know and demand service providers to implement codes of good practice preferably through accredited certification schemes.
- 3. To strengthen mechanisms of accreditation for excellence in the field of digital confidence by:
 - Strengthening of the national structure of standardization and accredited certification of confidence for products and services, especially to promote publicprivate cooperation.
 - Using self-regulatory schemes and codes of conduct.
 - Adopting complementary regulatory and supervisory measures.
- 4. To promote public-private cooperation in safety and confidence in cyberspace through the creation of a platform with sector-specific working groups.
- 5. Particularly in the field of e-commerce, improving the confidence of consumers and sales reps in electronic transactions by means of actions aimed at:
 - Increasing transparency over the purchasing conditions and the rights of consumers.
 - o Communicating and raising awareness about the rights of consumers in collaboration with consumer associations and other private organizations.
 - Developing codes of good practice for online sales.
 - Reinforcing measures that contribute to reducing after-sales events in e-commerce operations, such as insurance fraud or the use of fast systems of dispute resolution.
 - o Improving the sales reps' confidence in the use of electronic means of payment and protection against online fraud with the participation of banks, other payment entities, payment processors and stores.
- 6. To assess regulatory changes in the field of personal data protection and other issues related to Internet privacy, especially in the context of the forthcoming European reform, which could help improve confidence in the services and online transactions and stimulate





investments, promote e-commerce, cloud computing, social media, online advertising and mobile applications.





5. Boost R+D+i in Information and Communications Technologies

Investment in research, development and innovation and the corresponding results are certainly key factors in improving the competitiveness of Spanish companies and in the recovery of economic growth and employment generation.

This fact is even more important when we talk about R+D+i applied to ICT, since advances in this area are transversal and produce a catalytic effect of great impact on the rest of the industries that make up our economy.

And this is how the European Union understands it, as it has established in its Digital Agenda the goal of doubling the total annual public spending on research and development of ICT by 2020, and to record an equivalent increase in private spending.

To do this in Spain, it is necessary to increase the efficiency of public investment in R+D+i in ICT, focusing resources on those areas with the greatest potential for generating wealth, as well as increasing and simplifying the mechanisms that allow access to these resources.

The initiatives included in the Digital Agenda for Spain in this regard are aligned with the Spanish 2013-2020 Strategy of Science, Technology and Innovation that highlights business leadership in R+D+i as one of its objectives. For their completion it includes the stimulation of business R+D+i, the promotion of the essential enabling technologies and public-private cooperation geared to the demands of the production sector, all of which are elements in which ICTs play an essential role. In addition, the Spanish 2013-2020 Strategy of Science, Technology and Innovation includes the development of digital society and economy as one of the challenges for the future, thus making advances in this field one of the priorities of the country in terms of R+D+i.

Increasing private investment in R+D+i in ICT also requires that the Administration launches all instruments at its disposal to stimulate it, using their purchasing power to create innovative services that require R+D+i activities in ICT, and creating incentives for private enterprises that favour this type of investment against others. It is also important to have private capital, invested in R+D+i in the ICT sector, as well as to encourage the participation of SMEs in R+D+i activities.

Finally, it is of utmost importance for Spain to increase its participation in international projects of R+D+i in ICT through European programmes and resources.

5.1 Increase efficiency of public investment in R+D+i en ICT

The current economic environment requires improving the efficiency of public investment in R+D+i in ICT. It is therefore necessary to align the efforts of all public Administration bodies, homogenizing objectives and coordinating measures that prevent distractions and maximize results.

Consequently, R+D+i initiatives must be prioritized to face the challenges posed by the evolution towards a digital society and economy, focusing on essential enabling technologies, digital content,





electronic industry, future industries, the development of e-Administration, digital confidence and security, accessibility technologies or R+D+i in training areas.

Moreover, it is central to reinforce the existing collaboration in private companies, sector-specific associations and organizations researching R+D+i in ICT.

In this context, it is necessary to simplify and facilitate access to public resources made available for R+D+i in ICT as well as to improve evaluation systems to ensure its efficient use.

Lines of action:

- 1. To coordinate with all public agents involved in the promotion of R+D+i in ICT the strategies to support, in compliance with the guidelines defined by the EU and the differential advantages of the Spanish ICT industry. Special attention shall be paid to:
 - Encouraging R+D+i projects oriented to the improvement of business competitiveness and the effectiveness and efficiency of the services provided by public dministration bodies.
 - Prioritizing the initiatives related to the challenge faced by the digital society and economy.
- 2. To facilitate collaboration between companies and public research organizations through initiatives that strengthen the mutual knowledge of capabilities and needs; for example, knowledge maps, technological platforms or open innovation.
- 3. To develop a Plan of Adjustment of the Systems for Managing R+D+i in ICT to increase transparency, promote the participation and collaboration of the requesting entities and facilitate access to public resources.
- 4. To strengthen the mechanisms for monitoring and following up the results of R+D+i projects.

5.2 Encourage private investment in R+D+i in ICT

In accordance with the target set in the Digital Agenda for Europe actions should be taken to help private investment in R+D+i in ICT in Spain double by 2020.

The Government considers that it is necessary to promote this through the use of its own purchasing power, support for public-private cooperation, joint investment and investments of venture capital, among other measures.

Lines of action:

- 1. To stimulate private investment in R+D+i in electronics and ICT through the **strategic use of public bidding and public-private cooperation**.
- 2. To encourage co-investment funds with the private sector in R+D+i in ICT.
- 3. To design a Plan for the Promotion of venture capital investment in R+D+i in ICT.
- 4. To facilitate the development of *crowdsourcing* and *crowdfunding* activities





5.3 Encourage R+D+i in ICT in small and medium-sized enterprises.

SMEs and micro-businesses cannot easily get public funds for R+D+i in ICT: it is difficult and complex. An economy like Spain's, 95% of which is this type of companies, requires measures to facilitate the access to the existing funds.

For this purpose, it has been suggested to simplify the procedures to access public aid in this area, to facilitate collaborative projects with large companies and to inform companies of the existing aid programs.

Lines of action:

- 1. To adapt the current legislation, which is the basis for making public offers for aid for R+D+i in ICT, to simplify the requirements and lower the minimum investment amounts so that micro-businesses can submit projects for consideration.
- 2. To make it easier -at the public offers- for **SMEs and research institutions to participate in collaborative projects with large companies**, provided that such participation adds clear and tangible value to the final technological results.
- 3. To inform on support programs making them as widespread as possible to reach SMEs.
- 4. To reinforce the capacity of innovation oriented to processes, products and markets where SMEs operate and foster collaboration between SMEs and research centres.

5.4 Expand Spanish international participation in R+D+i in ICT

The current macroeconomic environment marked by increasing interdependence of markets and the removal of natural borders among countries highlights those R+D+i activities carried out as part of international projects.

The participation of Spanish companies in international projects together with greater support by the Administration must help increase Spanish exports, which have little international presence considering the potential of the sector, thus improving Spain's ICT balance of trade.

The participation of national institutions in these projects allows them to play an active role and may lead to future technological advances, as well as boost the presence of companies and national organizations in international markets. In this sense, the ICT and the electronics sectors will be encouraged to participate in international R+D+i activities.

Lines of action:

- 1. **To hold informative sessions on international initiatives and programmes** to make them known among the sector's entities.
- 2. To increase institutional support to Spanish companies so that, through the instruments for the promotion of foreign trade, it is possible to consolidate its exporting presence in existing markets and to reach new markets.
- 3. **To increase Spanish presence** in international initiatives and programmes.
- 4. **To develop co-funding schemes and urge Spanish participation** in European and international programmes of R+D+i in ICT.





6. Promote digital inclusion and literacy and the training of new ICT professionals.

The use of ICT in society should provide more capacity and autonomy to citizens, the employed population and enterprises. It should help to build a better society, a society in which all persons and organizations can participate.

However, both in Spain and in the European Union today there are still far too many people who have never used Internet or ICTs. It is 24% of the population in Europe and 30% in Spain, far from the goal that the European Union has set for 2015: to reduce the number of people that have never used the Internet to 15%.

To achieve this goal, it is essential to pay special attention to the population sectors who are not familiar with using the Internet and the more disadvantaged groups, in order to facilitate their access and to meet the goal set by the European Union: 60% of the population must use Internet regularly by 2015, an ambitious target especially in the case of Spain since the current percentage of people who use the Internet is 45%.

On the other hand, getting the largest benefits requires advanced and frequent use of the web, which is why the European Union has established that, by 2015, 75% of the population must use Internet regularly (far from the current 62% of Spain).

Digital training also brings about tangible benefits in the business and work sphere. Finding a job or accessing to training resources is easier with these qualifications than without them. And so is it when developing innovative services for the company or meeting the new demands of people and collaborators, customers and users. Adapting our training system to meet these demands of new ICT professions and linking the training measures with the generation of quality employment is indispensable.

6.1 Digital inclusion and literacy

Although a lot of progress has been made in Spain in the use of the Internet, there is still 30% of the population that has never used it. The perception that the Internet is not useful (66%) and the lack of knowledge about how to use it (29%) are the most frequent reasons given by non-users to explain their behaviour. This group is formed, mainly by people who are older than 65 years, unemployed, have low income and low level of studies.

It is difficult to think of an advanced society in which almost one-third of the population do not benefit from the possibilities offered by technological development. For this reason, the European Union's Agenda has set ambitious goals to reduce this problem.





In recent years all public Administration bodies have carried out actions aimed at reducing the digital divide and are aware of the effort needed to be made to comply with the objectives set out in the Digital Agenda for Europe.

It is necessary to adopt measures that multiply the effect of the actions taken so far and all possible resources — public and private — will have to be used to achieve maximum digital inclusion and literacy. The Digital Agenda proposes a global strategy that integrates the largest number of possible actions, takes advantage of existing synergies and facilitates the participation of all individuals and institutions wishing to do so, thus creating a collaborative environment that combines efforts and multiplies the effect of the measures to be adopted.

Lines of action:

- 1. To develop a 2013-2015 strategy for digital inclusion, in the first half of 2013, with the aim of incorporating the most disadvantaged population and collective sectors with the lowest level of Internet usage into the Information Society. The strategy includes at least the following elements:
 - Design collaboration with non-profit entities of the third sector of social welfare and business area.
 - The growing role that the new access and applications devices should play in fighting digital exclusion.
 - Plan to increase the Internet accessibility in Spain. This Plan will consider the following aspects, among others:
 - Access to all digital public services belonging to public Administration bodies shall be guaranteed; they will comply with international accessibility standards. Special attention will be paid to those education-related services, including the e-learning spaces.
 - Promotion of accessibility-related materials in the university curricula and the training of ICT professionals.
 - Research of ICT solutions shall be encouraged to facilitate Internet access for people with disabilities.
 - Standards and certification shall be demanded in the field of ICT accessibility.
 - o **Digital literacy Plan** This Plan will consider the following aspects, among others:
 - Definition of profiles and ICT skills to promote the Plan, and monitor the situation in Spain.
 - Further development of training programmes to promote digital literacy, especially of the most disadvantaged groups.
 - Stronger participation of private sector stakeholders and better coordination of activities.
 - Responsible use of cyberspace as a basic element of digital literacy
 - Plan of action for the equality of women and men in the Information Society, prepared by the Instituto de la Mujer. This Plan will consider the following aspects, among others:





- Measures for digital inclusion to reduce the digital divide of gender in terms of access and use of Internet.
- Promotion of female ICT entrepreneurship.
- Communication and training activities to ensure equal opportunities in the inclusion into the Information Society.
- Follow-up indicators; at least, these variables: sex, age and geographical area.

o To promote the participation of the civil society in the digital inclusion:

- Promote public-private cooperation for the development of programmes and projects for digital inclusion, enabling companies to develop corporate social responsibilities in this matter.
- Develope schemes of cooperation with the civil society to adapt and to maximize the profitability of networks of telecentres and other spaces available to innovate in digital inclusion.

6.2 Digital training and education of new ICT professionals

The measures developed in this Agenda seek, among others, to create employment opportunities of the highest quality, to modernize the production sector of our country, to promote a more intensive and efficient use of technologies in our companies and to develop future ICT industries. To do this, digital training shall be administered to the citizens and the employed population as an essential factor that Spain must pay special attention to.

Firstly, it is central for the modernisation of our economy to have an effective system of employment-oriented training that will provide employed people and job seekers with the capabilities needed for using ICTs efficiently in their professional environment. So, it is necessary to review the professional categories and adapt the current systems of continuous training and employment-oriented training, so that new training plans come up for employed and unemployed people in the areas with the largest demand, such as the training of technicians and installers of new ultra-fast network infrastructure.

Secondly, we need to adapt the training systems to respond to a growing demand for new ICT profiles and professions. The systems of professional education and university education must be adapted. In this sense, the new professions will be related to e-commerce, digital marketing, digital content, cloud computing, intensive computing, smart cities, the Internet of Things, or with the products and services industry for the confidence in the digital environment. Periodically aligning ICT training with the needs of the market, fostering collaboration between enterprises and schools and getting more versatile ICT profiles in business and managerial areas are necessary elements to ensure the education of the new ICT professionals.





Lines of action:

Training for employment and ongoing training

- 1. To update the national portfolio of professional qualifications in the field of ICT training and skills. This requires taking into account the evolution of European ICT skills frameworks and professional accreditation schemes.
- 2. To maximise efficiency in the management and allocation of training funds intended for the ongoing training in ICT, of both the private and public sector personnel. Special attention will be paid to the use of virtual platforms for online training.
- 3. To assign some of the resources available for ongoing training to training and acquisition of digital skills of ICT professionals.
 - Identifying highly demanding ICT profiles.
 - Creating training plans for workers and the unemployed in those fields.

Vocational training

4. To redirect ICT-related vocational training

- Periodically update the training offer taking into account new professional profiles derived from the use of ICT.
- Promote the development of joint activities between schools and businesses, by promoting internships.
- o Facilitate the development of vocational training studies and practice abroad.
- Make criteria flexible to let business professionals teach.

University education

- 5. **To help improve university offer for the education of ICT professionals** by adjusting to market needs, considering the new professional profiles in the field of ICT and the increase in system efficiency.
 - o Promote the creation of versatile professional profiles, including knowledge of management, entrepreneurship and languages.
 - Encourage universities and other organizations to develop joint plans of ICT-related education.
 - Promote collaboration between universities and businesses to favour technology transfer and creation of technology-based companies.





The Agenda's implementation and governance.

The success of the Digital Agenda for Spain requires the collaboration of all stakeholders involved in the measures referred to therein, for which it is necessary to join efforts and align commitments, develop a structure of effective coordination among the different levels of the Administration and have a structure of participation where all the beneficiaries of the measures will be represented, as well as provide the monitoring, evaluation and review mechanisms needed to facilitate the adaptation of the measures to the future evolution of our society and our economy. This requires, in short, a suitable mechanism of governance, based on transparency, participation and collaboration, and having the appropriate leadership.

To do so, a system of governance shall be established on the following points:

Implementation of the Agenda

- The launch of the Digital Agenda for Spain will mainly be implemented through a set of specific plans across the six goals of the Agenda, which are presented in Annex 1. For the development, implementation and adaptation of these plans there will be mechanisms to facilitate the participation of the regional communities, local authorities and economic and social stakeholders.
- All specific plans contained in Annex 1 will be available during the first half of 2013, with the
 exception of the Plan of Action of Electronic Administration of the Central State
 Administration and the Plan of Digital Public Services that will be available during the second
 half of 2013.
- 3. The Plan of Action of Electronic Administration of the Central State Administration will integrate and consolidate proposals arising from the Subcommittee of Management of Services and Common Means of the Commission for the Reform of Public Administration Bodies created by the Ministry for the Presidency.
- 4. The State Secretariat for Telecommunications and Information Society (SETSI) will develop an annual plan of action, based on: the Agenda itself, the specific plans and the budgetary availability allocated in the general State budget, the measures put in place by other State and regional organizations in this area, the results of the implementation of previous plans and continuous participation with the regional communities, local authorities and economic and social stakeholders. The annual plan will allow for the adaptation of the measures considered in the specific plans and the implementation of additional lines of action.
- 5. The Digital Agenda for Spain follows the key targets proposed by the Digital Agenda for Europe by the year 2015. It also establishes additional ones of special impact for the





improvement of the economy and the digital society in Spain. The objectives of the Digital Agenda for Spain are presented in Annex 2.

Execution and coordination of the Agenda

- 6. The State Secretariat for Telecommunications and Information Society (SETSI) will be following up the specific plans and the annual plans of action, as well as checking their implementation, evaluation of outcomes and communication thereof.
 - a) The coordination with other Ministries of the Central State Administration and public bodies, in relation to the implementation of the Digital Agenda for Spain, will take place through specific committees.
 - b) The coordination with other public Administration bodies, regional communities and local entities, in relation to the execution of the Digital Agenda for Spain, will take place through the Sector-based Conference on Telecommunications and Information Society, bilateral committees and individualised agreements.
- 7. In the field of e-Administration, as stated in Goal 3 of the Digital Agenda for Spain, coordination and execution will be assumed by the bodies regulated in Royal Decree 589/2005, of 20 May, which will restructure the collegiate bodies responsible for e-Administration, Royal Decree 1390 / 2012, of 5 October, which amends the one above, and by the General Agency of Administrative Modernisation, Procedures and Promotion of the Electronic Administration. The regional communities and local entities will contact these agencies through the Sector-based Committee of Electronic Administration created by Act 11/2007, of June 22, on electronic access of citizens to public services.
- 8. The effective development of the Digital Agenda for Spain will be economically supported by the budgets of the SETSI, the funds of Ministries for R+I in the Information Society and ICT and the funds used for the electronic administration of the Ministry of Finance and public Administration bodies.

Information on the Agenda

- 9. Establish a web site dedicated to the Digital Agenda for Spain that contains all the relevant information, the specific and annual plans, the follow-up of key indicators and actions developed.
- 10. The National Observatory for Telecommunication and Information Society (ONTSI) will track the key goals regularly through a set of goals established by the Digital Agenda for Europe, considering possible future revisions, and incorporating specific indicators for the specific objectives of Spain.
- 11. Draw up an annual report on the results of the activities developed for the Digital Agenda to be submitted to the House of Representatives.





Participation in the Agenda

- 12. Finally, the SETSI shall establish mechanisms for the affected economic and social agents to relate with one another, which will foster their participation in the definition of the measures, facilitate their cooperation in implementation underway and guarantee its transparency. Annex 3 presents the set of mechanisms to be established; it leaves room for adding more as per the evolution of the Digital Agenda for Spain. These mechanisms shall take the form of:
 - a) Mixed working groups for the participation of the agents involved in the definition and follow-up of the plans.
 - b) Forums for public-private cooperation that allow the participation of the stakeholders involved in the implementation of the measures and plans of the Digital Agenda for Spain.
 - c) Open spaces for participation and debate on the Agenda's web site
 - d) Regular sessions of communication and debate on the Digital Agenda and its adaptation to technological, social and economic developments.





7. Annex 1: Specific plans

Specific plan	Main lines of action					
Telecommunications and ultra-fast networks plan	Draft of a new General Telecommunications Act and its subsequent regulatory developments National Strategy of Ultra-fast Networks Plans of actions to reduce the digital divide					
Plan for deploying ICT SMEs and e-commerce	 Comprehensive programme for the promotion of ICT use Programme for the promotion of e-commerce Programme for the promotion of e-billing ICT-specific training and education actions 					
Comprehensive plan for the digital content industry	 Programme for export and internationalisation of Spanish digital content Programme for re-use of public sector information Digital content-specific R+D+i actions Digital content-specific education and training actions 					
Internationalisation plan for technological companies	 Programme for developing an innovative technological offer in line with R+D+i activities Promotion of internationalisation for technological companies Communication and awareness-raising actions 					
Central State Administration's electronic administration action plan	 To move towards an Administration integrated into society with quality public services focused on citizens and businesses To increase the use of electronic public services by citizens and businesses To streamline and optimise the use of ICT in public Administration bodies To establish a new model of e-Administration based on cooperation and collaboration 					
Plan of digital public services	 To use technology to bridge the digital divide Programme of healthcare and social welfare Programmme of digital education Programmme of digital administration of justice 					
Plan for setting confidence in the digital sector	 To develop the confidence services market To support INTECO as reference center Adoption of good practices by companies and public Administration bodies Culture among users and consumers: Awareness and education R+D+i for the confidence ICT sector: Services and products Excellence in talent generation and advanced research Training of professionals 					
Plan of development and innovation in the ICT sector	 Programme of business R+D+i Programme for the promotion of demand-oriented R+D+i activities Programme for the support to essential enabling technologies Programme for the promotion of investment in venture capital in R+D+i in ICT Adaptation of the R+D+i management systems Programmes for smart grids and smart cities Adjustment of the training offered to future industries 					
Plan for digital inclusion	 Accessibility program Literacy program Programme for equality between women and men 					





8. Annex 2: Goals of the Digital Agenda for Spain

Goals of the Digital Agenda for Spain	Value to achieve	Year	2011 Value (SP)	2011 Value (EU27)	Source	
Telecommunications and ultra-fast networks						
Population with over 100 Mbps	50%	2015	47% (2012)	34% (2012)	SETSI	
Population with FTTH coverage	50%	2015	9% (2012)	N/A	SETSI	
Population with HFC coverage	47%	2015	46% (2012)	N/A	SETSI	
Homes connected at over 100 Mbps	5%	2015	0.4% (2012)	2% (2012)	SETSI	
ICT in SMEs and e-commerce						
Companies that send or receive electronic invoices in a standard format	40%	2015	23.5%	21.2%	Eurostat	
Micro-businesses with their own web page		2015	28.6% (2012)	N/A	INE	
Companies that use software solutions, such as CRM, to analyse information about clients for marketing purposes		2015	20% (2010)	17% (2010)	Eurostat	
Population who shop online		2015	27.3%	42.7%	Eurostat	
Population who shop online cross-border		2015	8.8%	9.6%	Eurostat	
SMEs selling online		2015		12.4%	Eurostat	
SMEs buying online	33%	2015	19.7%	18.6%	Eurostat	
Digital content industry						
Growth of the digital content industry between 2011 and 2015	20%	2015	8553 M€	N/A	ONTSI	
Growth of the information media industry between 2011 and 2015	20%	2015	Between 330M€ and 550M€	N/A	ONTSI	
Internationalisation of technology com	panies					
Growth of ICT exports between 2011 and 2015	30%	2015	9,908 M€	N/A	ONTSI	
Increase in the representation of companies from ICT sector (own branch or commercial representation) in other countries between 2011 and 2015	15%	2015	N/A	N/A	ONTSI	
e-Administration						
People who use e-Administration services	50%	2015	39.1%	41,0%	Eurostat	
People who submit completed forms via e- Administration services	25%	2015	17.6%	20.6%	Eurostat	
Digital public services			ı			
JUSTICE. Implementation of the electronic cou						
Development of the new system of procedural mana bodies by the end of 2014	agement a	nd lau	nch of all pub	lic Administra	tion	





Implementation of the new electronic court records system in National High Court at end of 2014 and extension of use to 10 courts of MJU (Ministry of Justice) by 2015

HEALTHCARE. Development of digital medical records and electronic prescriptions

Extension of the interoperable electronic prescriptions to all regional communities by 2015 Online medical record available to all citizens in 2014

EDUCATION. Creation of a national environment of educational innovation

Providing access to ultra-fast broadband networks in 50 % of the education facilities by 2015

Confidence in the digital sector

People who have used security measures	70%	2015	56% (2010)	60% (2010)	ONTSI
Confidence in Internet (number of users who rely	70%	2015	52%	s.d.	ONTSI
on the Internet)					
Invoicing claims over total claims	35%	2015	43%	s.d.	SETSI
Companies that use digital signature in some	85%	2015	70.7%	s.d.	INE
communications sent from their business (Over the			(2012)		
total number of companies with Internet					
connection)					
Companies that feature privacy terms on their web	75%	2015	61.2%	s.d.	INE
sites or a security certification related to the web			(2012)		
site (Over the total number of companies with					
Internet access and website)					
	•				•

Digital inclusion

People using Internet on a regular basis	75%	2015	61.8%	67.5%	Eurostat
Groups of disadvantaged people using Internet on		2015	44.9%	50.9%	Eurostat
a regular basis					
People who have never accessed the Internet	15%	2015	29.2%	24.3%	Eurostat
Individuals who use the 3G mobile phones to	35%	2015	12.1%	11.8%	Eurostat
access the Internet					
Penetration of mobile broadband among mobile	75%	2015	41.2%	34.6%	European
phone users					Commissi
					on





9. Annex 3: Mechanisms to interact with economic and social agents

Mechanisms to interact with economic and social agents

Mixed working group within the digital content industry

Mixed working group for the implementation of cloud computing

Forum for public-private cooperation to promote the re-use of public sector information

Platform for public-private cooperation in cyberspace safety and confidence matters through sector-specific working groups

Sector-based forums for the improvement of the digital content industry

Committee for the standardization of smart cities

Forum for audio-visual technology

Forum for public-private cooperation for the electronic industry