

EXTREMADURA
**DIGITAL
TRANSFORMATION**
STRATEGY 2027



Cofinanciado por
la Unión Europea



GOBIERNO
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Fondos
Europeos

JUNTA DE EXTREMADURA



LETTER FROM THE PRESIDENT

The Extremadura Digital Transformation Strategy, looking towards 2027, will be a big step for the future of Extremadura. It has been designed and will be implemented with a renewed vision and mission for our region, consolidating our main values, namely our firmly-rooted identity, our commitment to those who make Extremadura a better place to live, our attractiveness as a region of opportunities, our eagerness to keep doing better, our position as a leading region in Europe, striving for excellence, and our humanism, because people are what really matter.

This strategy is the result of a collaboration between all of the key players and stakeholders involved in this change, and it is orientated towards a regional government that is flexible, simple, transparent, and citizen-centred; it is orientated towards territorial cohesion and equal opportunities, digital transformation and modernisation of business in Extremadura to improve its competitiveness, and towards creating quality employment and attracting people and businesses to our region.

It is born for change, it is born for improvement, it is born for growth. It is a necessary step, albeit not the only one, in order to change the socioeconomic model of a region that needs quality services by and for everyone, development of industry and business, and a cutting-edge production structure.

Extremadura is a region of opportunities, recognised for its potential innovative and sustainable ecosystem, which drives economic growth and general wellbeing, and where digital wealth and talent can prosper in an environment that is proud of its regional identity and contributes to the progress of the whole community.

The digital transformation is our main lever for this change which, along with our effort and know-how, will make Extremadura the winning option for people and companies who want to settle in our region.

We are firmly convinced that it will put Extremadura where it deserves to be, and where many of us dream of being.

María Guardiola Martín

María Guardiola Martín
President of the Regional Government
of Extremadura



Guillermo Santamaría Galdón
Regional Minister for the Economy,
Employment and Digital
Transformation

LETTER FROM THE REGIONAL MINISTER FOR THE ECONOMY, EMPLOYMENT AND DIGITAL TRANSFORMATION

The Extremadura Digital Transformation Strategy 2027 has been designed to drive growth in a modern and confident region, as a control lever that will guide us on the path to growth in the digital economy, promote innovation, and improve the competitiveness and agility of our region on the threshold of the digital age.

Our aim is to turn Extremadura into an important player on the national and European stage, reaching greater levels of digitalisation in all areas of society, which will allow us to generate sustained wealth and employment, and drive economic growth and general wellbeing.

Making the most of our potential as a region, digitalisation is a necessary requirement in order to attract investment and transform our industry. What's more, it is crucial to preserve and generate the necessary digital talent, as well as to deepen, invest in and expand our technological capacities, setting up a real digital ecosystem in the region for the benefit of everyone.

With a focus on the needs of our citizens, and also from the perspective of the regional government, as well as in the creation of an innovative, competitive cutting-edge business environment, we have identified the strategic pillars that will allow us to achieve the digitalisation that Extremadura needs.

- A citizen-centred regional government, digitalising public services to make them more accessible, convenient and secure.
- Robust technological infrastructure that ensures a stable and secure internet connection across the whole region.
- Raising awareness, upskilling and talent creation, to ensure citizens who participate more and prosper in the digital society.
- Digitalisation of industry and adoption of advanced technologies in the strategic regional sectors (agricultural sector, industry and services), building a model for the industry of the future, and increasing productivity, competitiveness and employment in all areas of economic activity.

The healthy ambition and scale of this strategy will require close collaboration between citizens, the regional government, companies, universities and organisations, which will make it possible to develop and adopt the solutions to meet the challenges and commitments of María Guardiola's government.

As Regional Minister for the Economy, Employment and Digital Transformation, I feel proud to be able to be part of this process and help Extremadura society along this path. Together, we will build the Extremadura of the 21st century.

Guillermo Santamaría Galdón

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I DIGITAL EXTREMADURA



A VISION OF EXTREMADURA

Imagine Extremadura as a land of opportunities, in which its strategic industries are beacons in Spain and Europe due to their innovative and transformational nature. A region that seeks to ensure the wellbeing of its citizens whilst leading transformations that drive sustainable economic growth.

Imagine technology that not only improves our lives, but also drives our economy and strengthens the bonds of our community, where all citizens of Extremadura feel driven to contribute to its progress.

Imagine a region that is more attractive for making life plans, and more favourable for setting up a business. A region in which young people can more easily prosper, and an environment in which to start a business where innovative initiatives and talent are consolidated. Extremadura has the raw materials and the ingredients to be a modern and innovative economy where the strengthening of our productive sectors is encouraged, with a direct impact on quality of life and job creation. A place in which the economy, the regional government and society are proud of what the people of Extremadura have been, are and will be, and where we all act to build the Extremadura that we deserve.

AN EXTREMADURA-STYLE DIGITALISATION

A **digital Extremadura** represents a journey that transcends the simple modernisation of technologies. As an aspiration, it incorporates a change in the way we relate to each other, connect to people and prosper as a society. Its crystallisation opens up a new path through which to support citizens and companies in the transition towards the digital age. It incorporates new responsibilities into the development of a Regional Government that is agile, citizen-focused and efficient, which provides digital infrastructure and connectivity to a vast rural territory, the demand for the promotion of digital talent and citizen inclusion, and the stimulation of a competitive, innovative and advanced business community.

In terms of opportunity, the current moment that Extremadura, Spain and Europe are living through represents a turning point that must be used to reflect on the new horizons of economic growth, the promotion of innovation and the pride the people of Extremadura feel in their regional identity. The accelerated technological transformations, new ways of living, learning, working, playing and communicating, in turn bring possibilities, risks and inequalities to tackle.

As well as promoting the creation of a productive and competitive business ecosystem, and as well as generating economic and social growth, improving investment in talent and generating opportunities, a digital Extremadura must strive to make efforts to

include everyone, maintaining a proactive attitude, even towards those residents of Extremadura who initially do not feel that this transformation relates to them.

The **Extremadura Digital Transformation Strategy 2027** (hereafter **EDTS27**) has been produced to provide this comprehensive drive, and consolidate the foundations of the digitalisation process for the region's citizens, businesses and government. Furthermore, it seeks to drive the digital transformation as a key piece of the policies aimed at changing Extremadura's economic model and modernising its production structure.

In this context, we present this Strategy as an opportunity for development and growth, constituting an essential element for economic resurgence and competitiveness.

The success of this process requires **commitment and collaboration from Extremadura society**, which is why, from the beginning, it has relied on participation from public and private institutions, companies, experts and citizens, through an ambitious listening project that has allowed us to bring together the vision, needs and concerns of those who live in Extremadura and consider it their home. This approach, which is centred on analysing and listening to the needs of citizens, has allowed us to anticipate that the people of Extremadura are demanding a digitalisation based on respect for the region's culture and identity, which brings a solution that is specific to the challenges such as territorial isolation, an ageing population, and the generation gap. The desire to reflect all of these elements in the strategic lines and in the final design of the actions in a cross-cutting way has resulted in a specialised strategy that is adapted to the region.

In order to ensure compliance, a governance and monitoring model has been designed, establishing a **new framework for dialogue for digitalisation policies of the Regional Government of Extremadura**. This model also enables the **"specification and measurement"** of the results of its implementation. These impact and performance indicators will make it possible to know the extent to which the Strategy has been implemented, and conduct transparent governance that transmits confidence to society as a whole.

As a result of this strategic transformation strategy, we hope to see more accessible, secure and convenient public services, more stable internet connections throughout the whole region, a more robust and secure technological infrastructure, more opportunities, growth, greater transparency and greater participation of citizens in their relationship with the Regional Government. Actions around digital training, and attracting, retaining and detecting talent are planned, and the region will benefit from the improvement in productivity and competitiveness through the digitalisation of the business community and the adoption of advanced technologies in strategic regional sectors.

This strategy clearly identifies the lines that will allow us to achieve the best transformation for Extremadura, increasing expectations on the region's future in the digital age and becoming one of Europe's digitally-advanced regions.

2 EXECUTIVE SUMMARY

WHAT DOES THE EXTREMADURA DIGITAL TRANSFORMATION STRATEGY 2027: EDTS27 CONTAIN?

This document reflects the process of drawing up the EDTS27. It describes the conclusions of the baseline analysis on the region's current situation and its challenges, through to laying out concrete measures and impact indicators that will allow us to measure the extent of the digital transformation in Extremadura.

First of all, the strategy presents the reader with a description of the context and start-up diagnostics, which analyses the current situation in Extremadura with regard to those aspects that will impact the region's digital transformation. From there, it moves to identify the challenges and opportunities, as pillars on which to plant a solid regional digitalisation.

Secondly, it lays out the strategic foundations, which are the backbone supporting the digital transformation in Extremadura: vision, mission and aspirational values.

Next, the **strategic pillars** are set out, which are made up of four general objectives which the EDTS27 aims to achieve:

1. **A Regional Government at the service of citizens;**
2. **Connectivity for a smarter and safer territory;**
3. **Towards a digital society** and
4. **Building a competitive and innovative region.**

In turn, each pillar is broken down into strategic lines, which describe more specific areas of action. These strategic lines follow concrete targets and establish measures whose implementation and execution will contribute to reaching the general objectives.

Furthermore, it describes the governance and monitoring model of the EDTS27, which details the mechanisms for monitoring and evaluating fulfilment of the Strategy, marking the impact objectives for each of the strategic pillars set.

At the end of the document is a road map providing a guide to the steps that will be followed to implement and achieve the digital transformation in the region.

SUMMARY OF THE EDTS27

CONTEXT AND DIAGNOSTIC

Extremadura faces various regional challenges, which include territorial isolation, an ageing population, gradual population decline and limited digitalisation in industry, among others. The diagnostic that has been carried out has highlighted relevant data from which some technological opportunities have been identified in the different strategic pillars. As representative examples, we present the following: the Regional Government of Extremadura is among the lowest in the country in terms of the number of processes that can be carried out digitally by citizens¹, which shows the need to develop new services to improve the relationship with the Regional Government, making it more efficient, easier and more citizen-focused. In terms of infrastructure and connectivity, 24% of homes do not have any type of computer (including netbooks, tablets, handheld computers, etc.), which, along with the fact that only 58% of the population have basic or advanced digital skills, reflects the need for digital inclusion measures and to boost full participation in the digital society for all Extremadura residents^{2,3}. In the field of business, it is of note that, of the total of SMEs who have access to the internet, 31% do not have a website, which shows a clear need to push for the digitalisation of the business community⁴. In this context, and in line with the regional, national and European strategic frameworks, Extremadura has drawn up the EDTS27 with the aim of becoming a digitally advanced region that makes the most of technology to boost its economic and social development in a way that is sustainable and inclusive.



VISION

Extremadura as a region of opportunities, thanks to its innovative and sustainable ecosystem, which drives economic growth and general wellbeing, where digital wealth and talent prosper in an environment that is proud of its regional identity, contributing to the progress of the whole community.



MISSION

The EDTS27 drives Extremadura towards becoming a digitally advanced region, where collaboration between businesses, citizens and the Regional Government forms the foundation of equitable, efficient, and people-centred development.



VALUES

Identity, commitment, attraction, betterment, Europe, excellence, humanism.

STRATEGIC PILLARS, STRATEGIC LINES AND MEASURES

Strategic pillar 1. Regional Government at the service of citizens

The Regional Government will serve citizens through digital services that are usable, close and proactive, based on modern and efficient systems and infrastructure, and providing skilled and motivated civil servants with the adequate tools to perform their roles.

- **Strategic line 1.1. A Citizen-centred Regional Government.** Work will be done on the **digitalisation of public services** to transform administrative procedures into simple and convenient services orientated towards the needs of citizens. Progress will be made on **Citizen Digital Identity**, offering a simpler and more intuitive mechanism for electronic identification in processes with the Regional Government. Furthermore, **Sectoral Digitalisation Plans** will be implemented, to carry out digitalisation measures by sector of the Regional Government, such as for example Social Services, the Employment Service, Industry, or the development of a new Tourism Portal, among others.
- **Strategic line 1.2. An agile and homogeneous Regional Government.** A **Regional Government Simplification and Rationalisation Plan** will be developed to reduce or eliminate phases, documents, processing times and requirements to reduce processing times and administrative burdens. The **Data Governance Plan** will be implemented: a unified approach to data gathering, processing and management, which will guarantee the efficiency, interoperability and security of the information and allow for the optimisation of services and the development of more effective public policies. There will be a focus on homogenising and consolidating the **digital presence of the Extremadura Regional Government and improving the design of the experience of digital services**, ensuring the information and public services are easy to use, intuitive and accessible.

- **Strategic line 1.3. Efficient and innovative Regional Government.** The operational efficiency of the Regional Government will be increased via **hyper-automation of processes**. Progress will be made in the **technological renovation of infrastructure and systems**, guaranteeing optimum performance and greater capacity to respond to technological demands. **Artificial intelligence (AI)** solutions and techniques will be promoted, and **innovation laboratories** will be set up, to promote the implementation of new technologies, methodologies and innovative processes in the Regional Government. Furthermore, work will be done on the **development of the operational model of information technologies at the Regional Government of Extremadura**, updating and improving the IT processes, tools and operational practices.
- **Strategic line 1.4. A Regional Government orientated towards the professional development of civil servants.** The skills of civil servants will be improved, boosting professional development through a **competency model and digital employee training actions**. **Change management** actions will be carried out, to involve employees in the digital transformation process. Finally, work will be carried out on **modernising jobs, and on digital identity for civil servants** to optimise collaboration and productivity, providing modern and flexible workplaces.

Strategic pillar 2. Connectivity for a smarter and safer territory

Work will be done to build an interconnected, cohesive and secure region for the social and economic progress of Extremadura, establishing a technological infrastructure that promotes smart cities and territories, digital rural environments, and guarantees security and resilience against emerging threats in the digital world.

- **Strategic line 2.1. Cohesive and connected territory.** Measures will be implemented to **improve the digital infrastructure and increase connectivity** connectivity in the region, guaranteeing stable, secure and high-speed internet access. The Regional Government's network will be expanded

¹CAE (Electronic Civil Service Questionnaire) 2023. CAE Report 2023: Electronic Civil Service in Spain's Autonomous Regions. [Pae \[Electronic Civil Service Portal\] – published the CAE Report 2023: Electronic Civil Service in Spain's Autonomous Regions. \(administracionelectronica.gob.es\)](https://administracionelectronica.gob.es)

²Extremadura ICT Observatory (Observatorio Extremeño de las TIC), 2022. <https://extremaduradigital.org/indicadores/viviendas-que-disponen-de-ordenadores-de-cualquier-tipo-incluidos-netbooks-tablets-de-mano-etc/> post_id=449

³INE (Spanish National Statistics Institute). <https://www.ine.es/up/w7Uu7Z7wil>

⁴INE (Spanish National Statistics Institute) 2022. https://www.ine.es/prensa/tic_e_2021_2022.pdf

and improved in all municipalities in the region, enabling access to a more secure and reliable network infrastructure, and work will be done to expand the fibre optic network in areas of economic interest or areas with connectivity limitations.

- **Strategic line 2.2. Smart Region.** The **development of a smart region** will be promoted by applying innovative solutions and technologies to public and private services that benefit citizens directly, improving the efficiency of managing municipal resources, and raising citizens' quality of life.
- **Strategic line 2.3. Cyber-safe Region.** A **Regional Cybersecurity Operations Centre (SOC)** will be created to improve protection of systems and data across the whole region, implementing measures to prevent and minimise possible cyber threats. The effort will be carried out at a regional level and will be coordinated, extending the services to the public and private sectors as a whole. Actions will also be undertaken to **raise awareness and educate citizens on these threats** and promote secure online practices to improve knowledge and understanding of the risks.

Strategic pillar 3. Towards a digital society

Progress will be made towards becoming a digital society that is involved in this transformation process, awakening an early vocation in the world of technology among children and young people, developing digital skills and abilities and generating talent.

- **Strategic line 3.1. Inclusive society.** Literacy and training programmes will be run to eliminate situations of exclusion and promote **digital inclusion** among all citizens, facilitating equitable access to resources and the necessary skills to participate fully in the digital society. Furthermore, the **acquisition of intermediate and advanced digital skills** will be promoted, **promoting continuous learning throughout life** and preparing people for current and future job markets. On top of that, special focus will be placed on implementing programmes designed to introduce and foster an interest in the world of science, technology, engineering and maths among children and young people, to **awaken an early digital vocation, especially among girls**. Finally, work will be done on a **Digital Health Plan** which will drive the modernisation and transformation of the Extremadura Health Service (SES), the main objective of which will be to strengthen the regional health system through the implementation and effective use of digital technologies.

- **Strategic line 3.2. Digital talent and employability** Technological specialisation will be promoted among the active population through initiatives to **generate digital talent**, adapting higher education and training (in universities, training centres, etc..) to current and future needs. Furthermore, support will be provided for **digital employability and retraining**, focusing on re-skilling programmes and improving digital skills for the labour market (up-skilling). We will also seek to **attract, consolidate and retain talent**, in order to boost the arrival of digital nomads and encourage regional talent to stay in Extremadura, through programmes and solutions that promote opportunities for business and put highly qualified professionals in contact with businesses who require those profiles.

Strategic pillar 4. Building a competitive and innovative region

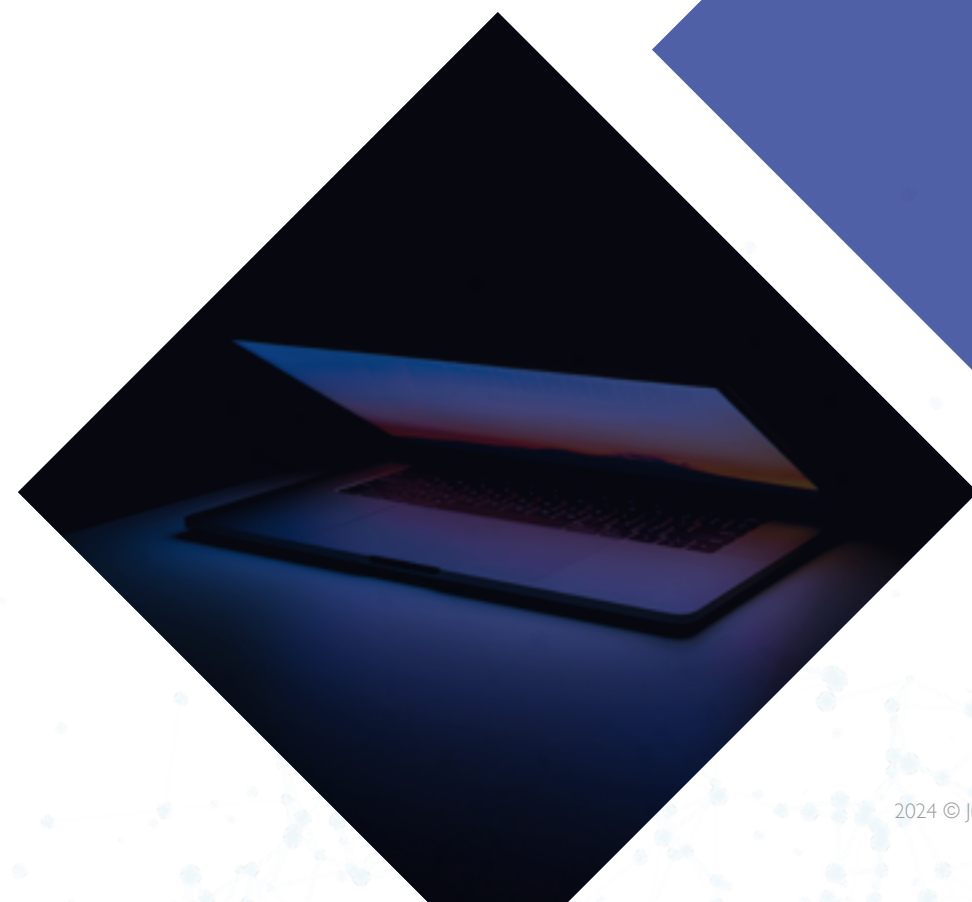
We will promote digitalisation of the production model, in order to make businesses more competitive, focusing on technological specialisation and innovation and encouraging strategic regional sectors to multiply the value and wealth of the Extremadura economy.

- **Strategic line 4.1. Competitive and digital business community.** The digital transformation of businesses will be promoted in order to achieve higher levels of **business scaling**⁵. Furthermore, there will be initiatives to boost the **digitalisation of SMEs and micro-enterprises**, thereby increasing the level of digital maturity of the region's business network. **Personalised consultation programmes** will be run, to help Extremadura businesses design and implement digital transformation strategies in their businesses, with ongoing support.
- **Strategic line 4.2. Technological specialisation and digital innovation ecosystems.** Knowledge networks will be created, and products and services based on digital technologies will be made available to businesses via the **Digital Innovation Hub (DIH)**. **Innovation and technological entrepreneurship will be promoted** connecting regional driving-force companies with the R&D&i ecosystem and boosting technological incubators who provide resources, consultancy and connections, which could be crucial to the success of a business project. The **technology sector will also be reinforced and promoted, boosting the development of emerging advanced technologies (AI, Blockchain, IoT, etc.)** by providing resources and support for their adoption.

- **Strategic line 4.3. Boosting the strategic regional sectors.** The digital transformation will be promoted in the agriculture, industry, tourism and audiovisual sectors, among others. For the **digital transformation in the agricultural sector**, actions will be taken to facilitate the optimisation of processes, effectively manage resources, improve the quality of products and strengthen the supply chain. **Digital industry 4.0** will be promoted, developing traditional industry and its industrial and business processes towards the integration of advanced digital technologies. In **tourism and services**, technologies will be used to offer more personalised, efficient and sustainable tourist experiences. In the **audiovisual sector**, the creation, production and distribution of immersive and audiovisual content will be promoted, as well as the application of associated new technologies, improving its visibility at a national and international level.

GOVERNANCE AND MONITORING MODEL

With the aim of ensuring the success of the EDTS27, a dialogue framework has been established between the players involved in the execution of the Strategy, to effectively manage, coordinate and oversee this process, facilitating inter-administrative cooperation, cooperation from socioeconomic stakeholders, and citizen participation. Finally, a series of impact and performance indicators will be established to monitor the status and degree of execution of the strategic objectives during the Strategy's implementation period.



⁵ Process through which a business grows significantly and rapidly in terms of income, size of the organisation, geographical scope or market impact

THE EDTS 2027 AT A GLANCE



VISION

Extremadura as a region of opportunities, thanks to its innovative and sustainable ecosystem, which drives economic growth and general wellbeing, where digital wealth and talent prosper in an environment that is proud of its regional identity, contributing to the progress of the whole community.



MISSION

The EDTS27 drives Extremadura towards becoming a digitally advanced region, where collaboration between businesses, citizens and the Regional Government forms the foundation of equitable, efficient, and people-centred development.



VALUES

IDENTITY

COMMITMENT

ATTRACTION

BETTERMENT

EUROPE

EXCELLENCE

HUMANISM



STRATEGIC PILLARS

A REGIONAL
GOVERNMENT AT THE
SERVICE OF CITIZENS

CONNECTIVITY FOR A
SMARTER AND SAFER
TERRITORY

TOWARDS A DIGITAL
SOCIETY

BUILDING A
COMPETITIVE AND
INNOVATIVE REGION

HOW WE WILL ACHIEVE IT

- Usable and accessible digital public services
- Optimization of infrastructures, systems, and innovative solutions
- Digital skills and tools for public employees

- Expansion of access to digital infrastructure
- Promotion of smart environments
- Cybersecurity and resilience

- Digital inclusion of citizens
- Talent generation, attraction, and retention

- Business digital transformation
- Technological specialization and innovation ecosystems
- Strengthening of the regional strategic sectors



DRIVING FACTORS

DATA AND
TECHNOLOGY

DIGITAL
CAPABILITIES
AND TALENT

THE REGIONAL
GOVERNMENT AS A
DRIVING INSTITUTION

PUBLIC-PRIVATE
COLLABORATION

CITIZEN
AWARENESS AND
PARTICIPATION

3 CONTEXT AND DIAGNOSTIC

CONVERGENCE WITH EUROPE

“Mutatis mutandis” – the moment for change

Extremadura, a region that is rich in tradition, heritage, culture and nature, identified by the tireless and determined character of its people and with an extraordinary quality of life, must aspire to become a **land of opportunities, where young people can embark upon attractive life plans, and where older people can enjoy the care they deserve**. Achieving this legitimate aspiration requires a regional paradigm shift which, for the success of the transformation, relies on the region's distinguishing features.

Despite its wealth and potential, over the last few years, **various limiting factors in the region have prevented Extremadura from developing its full potential**, and thus from catching up with the most developed regions in Europe. According to the European Commission's regional comparison index among member states for July 2023, Extremadura is in 196th place in the ranking of the 240 European regions in terms of GDP, employment and competitiveness⁶.

The European Union, through its cohesion policies, has implemented various mechanisms over the last few decades with the primary aim of reducing disparities between the levels of development in its different regions. It is currently paying **special attention and focusing on rural areas and areas with serious and permanent demographic disadvantages, as is the case in Extremadura**.

The pace of regional transformation proposed in previous periods has not culminated in the levels of success that the region requires in terms of opportunities, growth and development. In the current period, delaying reforms is not an option, and ambitious leadership is needed in terms of vision, confidence, progress and composure to allow Extremadura's residents to get involved in the process and be part of the conversation. **It is a decisive moment in Extremadura's history, which must be used to achieve reform of the social, economic and territorial model to which it aspires.**

⁶European Commission, 2023. EU Regional Competitiveness Index.
https://ec.europa.eu/regional_policy/information-sources/maps/regional-competitiveness_en

CHALLENGES IN EXTREMADURA

Technology as a tool to overcome regional challenges

The challenges faced by Extremadura start with its clear lack of connectivity, which has slowed its economic development. Demographic change and the dispersion of the population mean it is essential to digitalise and reinforce the technology sector to combat depopulation, and consolidate and attract talent. Likewise, the slow rate of industrial development can be reversed with policies that reduce administrative burdens, promote digitalisation, and drive and attract investment. In this vein, the digitalisation of the primary sector can strengthen the rural economy, and improve the value chain and quality of life. Furthermore, unequal access to services and opportunities can be mitigated with universal technology, and digital training and literacy, improving the living conditions of vulnerable groups.

The EDTS27 is presented as a development-boosting tool that will provide support for overcoming the region's challenges, taking into account the global context and the trends and influences of the environment, whilst preserving Extremadura's cultural identity.

CHALLENGE 1. INFRASTRUCTURE AND CONNECTIVITY

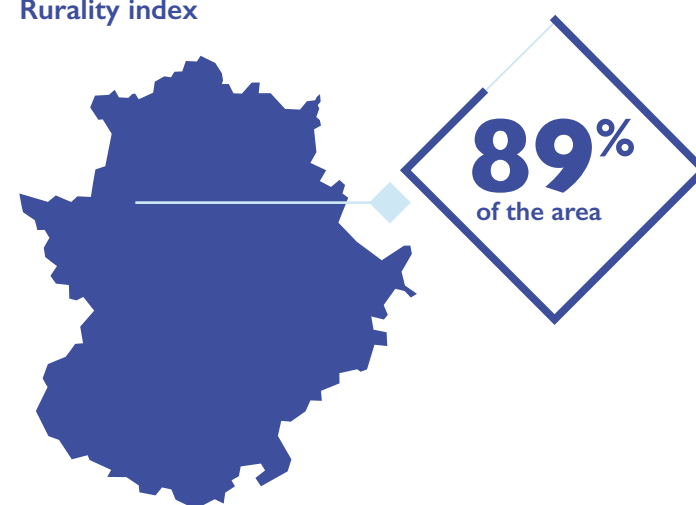
Historically, Extremadura has been hindered by its terrestrial and communications infrastructure. The region's isolation has affected its economic development, causing it to be left behind by the global commercial and industrial networks, and with the arrival of external investment impacting negatively on the wellbeing and economic expectations of the population. At a regional level, the isolation is even more pronounced in rural areas.

Extremadura needs to be perfectly connected to the rest of Spain, as a matter of territorial rebalancing and redistribution of investments; this legitimate demand is fair and cannot be abandoned. Meanwhile, improving the coverage of telecommunications networks is seen as essential in order to, alternatively, minimise the effect of geographical isolation, allowing access to digital services quickly and without the need to travel, which will be complemented by the digitalisation of public services, business, and the reduction of the digital divide among citizens.

CHALLENGE 2. RETAINING, CONSOLIDATING, ATTRACTING AND BRINGING BACK TALENT

The demographic change that Europe is experiencing generally, caused by the ageing population and low birth rates, is even more pronounced in Extremadura due to its sociodemographic characteristics, its geographical size, the spread of the population, and the region's largely rural character (89% of the territory⁷). The ageing of the population has reached its historical peak at 158%, which translates to 158 people over the age of 64 for every 100 people under 16, which is above the national average of 137%⁸. This region could lose 50,000 inhabitants in the next 15 years if the current trend continues. We are in a situation of demographic emergency.

Rurality index



The model for generating, consolidating, attracting and bringing back talent must be redesigned according to the needs of the production sector. The digitalisation and strengthening of the technology sector in the region are key factors to improving per capita income, increasing wealth, fostering business growth and, in a significant way, combating depopulation, especially in rural areas. Furthermore, they open new channels of economic development, such as attracting digital talent and the creation of an industry focused on boosting strategic sectors, among others.

CHALLENGE 3. TECHNOLOGICAL AND INDUSTRIAL DEVELOPMENT

The more limited industrial development in Extremadura in comparison to other regions, and the limited digitalisation of its economy are reversible problems if an urgent intervention is carried out. This intervention must focus on the availability of digital talent, actions which promote innovation and business scaling through advanced technologies, and the creation of policies that reduce administrative burdens, improve the processing speed of business projects with high added value, and optimise the use of industrial land.

CHALLENGE 4. LEADING ROLE AND PARTICIPATION OF THE PRIMARY SECTOR IN DIGITALISATION

The primary sector in Extremadura is one of the main sources of wealth and job creation, and it determines to a large extent the socioeconomic and environmental structure of the region. For this reason, it is essential to increase the value chain of the agrarian, livestock and forestry sectors so that they cease being producers of raw materials and move towards generating comprehensive value chains by focusing on emerging sectors.

Digitalisation is presented as one of the main instruments for contributing to the reinforcement of these sectors and the rural environment. Promoting the use of enabling technologies such as navigation, drones, sensors and robots, among others, will allow us to achieve a connected, smart primary sector with a comprehensive vision of the value chain. This, in turn, will mean an improvement in the living conditions of residents of rural areas, boosting job creation and making those areas more attractive for young people, women and families.

CHALLENGE 5. GAPS, IMBALANCES AND INEQUALITIES

The challenges presented create imbalances and inequalities in the access to services and socioeconomic opportunities. Certain segments of the population show greater vulnerability (young people, the elderly, people with a disability, etc.), which creates gaps that must be bridged, and which are even more acute in rural areas compared with urban areas. In this regard, one of the most significant imbalances identified is the gap in digital talent creation, to which special attention will be paid within the strategic lines of the EDTS27.

The universality of technology, along with digital training and literacy, will allow us to bring public and private services to rural areas and more vulnerable groups, improving their employability, increasing their economic capacity and having a positive impact on their wellbeing, health and living conditions. In turn, this universality and omnipresence of technology means encouraging reflection by citizens, especially young people and students, on the sensible and responsible use of computers, tablets and other mobile devices, as well as websites, social networks, applications and videogames that they use, to increase their knowledge of the impact of emerging technologies and their social, emotional and educational implications.

FOUNDATIONS OF A SOLID DIGITALISATION

Building the transformation of Extremadura

As part of the process of drawing up the **EDTS27**, an **analysis of the current socioeconomic environment and the degree of digital maturity in the region** has been carried out. This preliminary step has served to identify structural weaknesses which require corrective actions, threats that could pose an obstacle to the success of the implementation of the Strategy and, at the same time, exploit the region's strengths and new opportunities in the environment.

This analysis has been enhanced with the considerations identified from a successful **citizen participation process**, **interviews carried out by experts** in various fields of interest, and **qualitative comparison meetings** held with different stakeholders who will help to establish the foundations of the **EDTS27**.

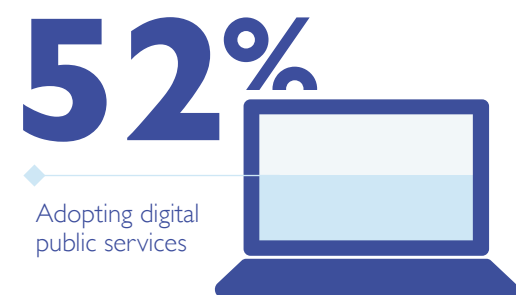
REGIONAL GOVERNMENT AND SERVICES

The **simplification and digitalisation of administrative services are key aspects to achieving a Regional Government that is agile, efficient and citizen-centred**. The modernisation of the Regional Government acts as a driver of demand for digital solutions at a regional level, and promotes the development of the local technology sector, especially in regions such as Extremadura, where it plays a role as a driving force of the region.

⁷Extremadura Rural Development Network (Red Extremeña de Desarrollo Rural), 2020. Report on the Rural Territory of Extremadura 2020. https://redex.org/ficheros/archivos/2021_07/informe-territorio-rural-2020.pdf

⁸INE (Spanish National Statistics Institute) 2021. https://www.ine.es/prodyser/demografia_UF/index.html?lang=es

According to the results of the citizen participation questionnaire, **Extremadura has a high rate of adoption of digital public services, given that 52% of people use them frequently⁹** and the percentage of users who have used electronic identification to access online services in the last 12 months exceeds the national average¹⁰. Despite this high level of citizen demand, the CAE 2023 report, which analysed the Digital Regional Government in comparison with other Regional Governments, revealed that **Extremadura is the Autonomous Region in Spain with the second lowest number of procedures available online (45.5%) after Ceuta (40.9%)¹¹**.



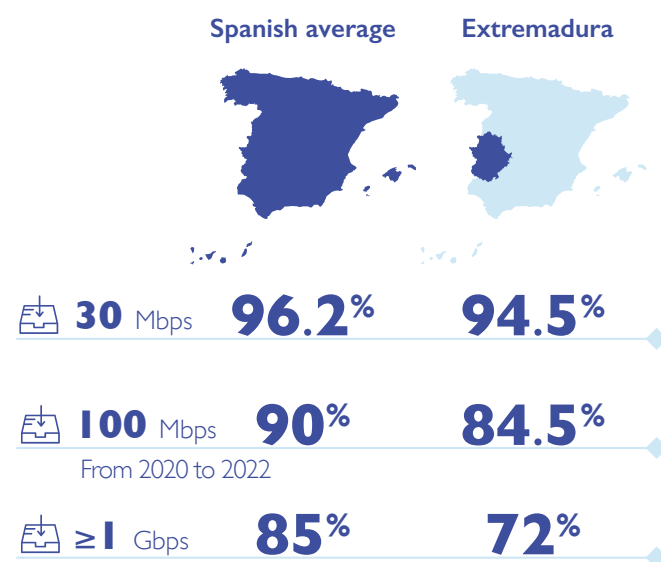
The increase in citizen demand combined with a certain delay in the adoption of administrative digitalisation presents a new, more ambitious horizon, which focuses on making the most of emerging technologies such as Robotic Process Automation (RPA), robotics or Artificial Intelligence (AI), forming the main accelerator in the digital transformation process, allowing us to optimise existing infrastructures and develop new solutions to improve the lives of citizens.

The priority is to accelerate the digitalisation of administrative processes and the development of other digital services in a simple and secure way, **addressing organisational complexity and encouraging the adoption of the latest digital technologies.**

INFRASTRUCTURE AND CONNECTIVITY

A robust digital infrastructure and extensive connectivity are necessary conditions for the success of the digital transformation of the regions. It is crucial to be able to rely on stable and secure connections, as well as adequate download speeds in order to be able to carry out online activities efficiently.

Extremadura is close to the national average for download speeds of at least 30 Mbps, standing at 94.5% compared with the national average of 96.2¹². The needs resulting from the COVID-19 health crisis led to an effort to increase coverage to 100 Mbps in many areas of the territory in the last few years. Thus, from 2020 to 2022, coverage increased by 8 percentage points to 84.5% (approaching the Spanish average of 90%)¹³. However, **limitations in high-speed coverage persist, especially in rural areas**, where the lack of availability of fibre optic and quality mobile coverage negatively affects equal access to digital opportunities. This disparity is especially serious when we talk about ≥ 1 Gbps coverage, where Extremadura is way behind the Spanish average (72% compared to 85% nationally)¹⁴.



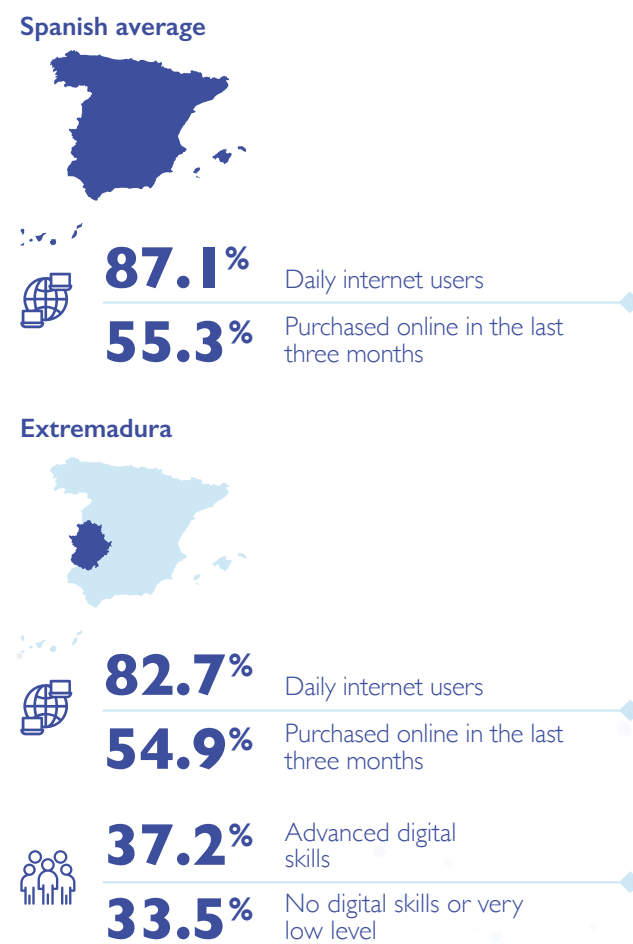
Pushing for high-speed connectivity is essential in order to promote remote and hybrid working, as well as to retain, attract and win back talent in Extremadura. Expanding the coverage, stability and security of the connections is crucial in order to drive technological innovation in specialised businesses, meet the demands of digital applications and services, and support high-performance activities.

An important community resource, which is consolidated, reliable and of high strategic value for the region, is the **capillary action of its Corporate Network and Science and Technology Network**, which are present in many areas of the territory, and which must be strengthened in order to alleviate the lack of high-speed networks.

CITIZENS, NEEDS AND OPPORTUNITIES

In Extremadura there are large generational, demographic, geographical and gender divides, reinforced by the abrupt demographic decline and the overall ageing of the population. These challenges require specific focuses in terms of inclusion, listening and policy design.

When it comes to acquisition of digital skills, in Extremadura **82.7% of the population are daily internet users, and 54.9% of people have made an online purchase in the last three months**, which is broadly in line with the national average of 87.1% and 55.3% respectively¹⁵. While a majority of Extremadura's population incorporate digitalisation in their day-to-day lives, **37.2% of the population have advanced digital skills, and 33.5% do not have digital skills, or have a very low skill level**¹⁶. This reflects a digital divide in the population, which will limit full participation of all citizens in the digital society.



This digital gap was reflected in the **citizen participation questionnaire** launched by the Extremadura Regional Government as part of drawing up the EDTS27. Citizens felt that **the lack of technological knowledge, low levels of digital literacy and the generational gap in the adoption of technologies were the biggest barriers to the region's digital transformation.**

When designing a digitalisation that serves all residents of Extremadura, paying attention to that skills gap is a cross-cutting imperative. In order to tackle these challenges, it is necessary to implement plans that **boost the benefits of the silver economy, foster digital inclusion, the development of technological skills and dialogue with the needs of the technology sector.**

BUSINESS NETWORK, FRACTURES AND OPPORTUNITIES

Business activity in a region generates employment, wealth and economic development. Populations who live in more dynamic regions have a more optimistic outlook on the future, and are more favourable towards adopting changes. Governments that value their traditional economic sectors and support business activity generate better policies and more favourable environments for entrepreneurship.

Among the strategic sectors of the Extremadura economy, agriculture and livestock play a fundamental role in the economic sustainability of local communities and the rural environment. In this respect, the primary sector in Extremadura plays a key role in its economy, with the majority of its land dedicated to it, and making up 9.7% of employment (much higher than the Spanish average of 3.7%) and 7.13% of the region's GDP¹⁷.



More specifically, the **agri-food sector contributes almost 12% of the region's GDP** compared with the national average of 9.7%, and the European average of 6.5%¹⁸.

⁹Figure obtained from responses to the citizen participation questionnaire (EDTS27 participatory process). February 2024.

¹⁰INE (Spanish National Statistics Institute). <https://www.ine.es/jaxi/Datos.htm?px=60838>

¹¹CAE (Electronic Civil Service Questionnaire) 2023. CAE Report 2023: Electronic Administration in Spain's Autonomous Regions. [Pae \[Electronic Civil Service Portal\]](https://administracionelectronica.gob.es) – published the CAE Report 2023: Electronic Civil Service in Spain's Autonomous Regions (administracionelectronica.gob.es)

¹²Extremadura ICT Observatory (Observatorio Extremeño de las TIC), 2022. Coverage of fixed broadband networks at speeds ≥ 30 Mbps – Digital Agenda Indicators (extremaduradigital.org). https://extremaduradigital.org/indicadores/cobertura-de-redes-fijas-de-banda-ancha-a-velocidades-%e2%89%a5-30-mbps/?_post_id=436

¹³Extremadura ICT Observatory (Observatorio Extremeño de las TIC), 2022. Coverage of fixed broadband networks at speeds ≥ 100 Mbps – Digital Agenda Indicators (extremaduradigital.org). https://extremaduradigital.org/indicadores/cobertura-de-redes-fijas-de-banda-ancha-a-velocidades-%e2%89%a5-100-mbps/?_post_id=439

¹⁴Secretary of State for Digitalisation and Artificial Intelligence and Secretary of State for Digital Infrastructure and Telecommunications, 2022. <https://avancedigital.mineco.gob.es/banda-ancha/cobertura/Paginas/informacion-cobertura.aspx>

¹⁵INE (Spanish National Statistics Institute) 2022. https://www.ine.es/prensa/tich_2022.pdf

¹⁶INE (Spanish National Statistics Institute). <https://www.ine.es/jaxi/Tabla.htm?px=3952481&0>

¹⁷Regional Government of Extremadura, 2023. <https://www.juntaex.es/documents/77055/621127/Resumen+Ejecutivo.pdf/8237cc0b-2ace-413f-b40-1fee98290a76?t=1680171931825>

Agri-food sector



12% Regional GDP

9.7% Spanish average

6.5% European average

The production structure of Extremadura also has characteristics that mark it out significantly. For example, **manufacturing companies in Extremadura represent 6.7%** of the production of goods and services in the region, compared with the national average of 11.5%¹⁹.

Manufacturing companies



Production of goods and services

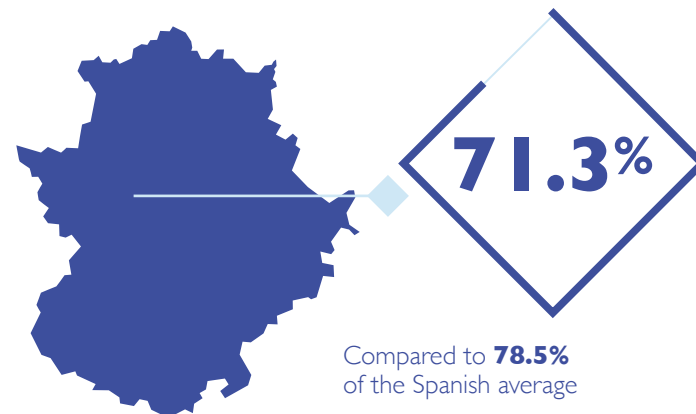
6.7% Extremadura

11.5% Spanish average

According to figures from the Spanish National Statistics Institute (INE) and the National Observatory of Technology and Society (ONTSI), **technological adaptation increases the survival rate of businesses in their first 5 years by almost 23 percentage points**, going from 45.1% to 68%²⁰. Therefore, it is important to push for digital intensity in businesses. In Spain, 61.5% of businesses have at least a basic level of digital intensity (measured by the use of ICT and online commerce)²¹. In Extremadura, the low level of digitalisation and the **limited adoption of electronic commerce by Extremadura businesses, particularly micro-enterprises and small and medium-sized enterprises (SMEs)**, represent a significant challenge for the Extremadura business network. Only 71.3% of Extremadura businesses have an internet connection and website, compared with the national average of 78.5%²². The **intensity of innovation of businesses in Extremadura is 0.49%**, almost half the national average of 1.06%, which means that **Extremadura businesses invest very little in**

innovative technologies to grow their business²³. As a result, **Extremadura's digital intensity, i.e. the weight digital Gross Value Added (GVA) has in the GVA of each production sector, is only 9.5%**, making it the Autonomous Region with the third lowest contribution to the Digital GVA. While its progress in the last decade has been slow, the pandemic propelled the digitalisation process, reaching an increase of 1.3% in the period 2019-2021²⁵.

Companies using internet and owning a website



A third of global greenhouse gas emissions originate from the agricultural sector²⁶. Global concern about this phenomenon, and the strategic importance of Extremadura's countryside to its society, open a window of opportunity when it comes to leading this transformation in dialogue with the agri-food sector.

Continuity of investment in innovation for the sustainable management of natural resources, high-value transformational investments in climate change mitigation, and biodiversity preservation all need to be seen as opportunities by all stakeholders. Given the existing background, in this new movement the Regional Government needs to listen, set sensible commitments and fulfil expectations, especially when it comes to the agri-food, livestock and forestry sectors, and their value chain.

The administrative incentive for collaboration in the food sector's value chain, the implementation and investment in advanced technologies, the link between the primary and industrial sectors and the vocation for leadership in the digitalisation of the Extremadura countryside will all improve the sustainable economic development and competitiveness of the region as a whole.

REFERENCE FRAMEWORKS

EUROPEAN STRATEGIC FRAMEWORK

In this strategy for Extremadura, dedicated to **promoting business projects and the progress of Extremadura society**, special emphasis has been placed on aligning with the trends and guidelines set out by the Digital Agenda for Europe, the European Data Strategy, the European Industrial Strategy, European Digital Compass, the Green Pact and the NextGenerationEU Strategy. **These strategies represent fundamental guidelines to consistently guide public policies on the subject of digitalisation, at both a national and regional level.** The aim is to promote a positive impact on opportunities for access and funding for projects, thereby contributing to the region's overall development.

In 2016, the European Commission, **in its communication on European action for sustainability, laid out the stages for a sustainable European future and its commitment to economic growth, social inclusion and environmental protection**, described in the 2030 Agenda. The communication established the content and approach that would be reflected through the various strategic and declarative frameworks that would be drawn up to implement the European policies and initiatives. In the face of the risks, global challenges and uncertainties facing our societies, the European Commission, through a multi-level reflection process, prioritised the need for **Europe to lead the global transition towards a healthy planet and a new digital world**

Digital Agenda for Europe 2020-2030

“Configure the digital future of Europe”: This agenda establishes that the digital transition must result in benefits for all, prioritising people, and creating new opportunities for companies. **It points to digital solutions as essential to fight against climate change and complete the ecological transition in a way that is fair and supports people.** It addresses current issues such as the spreading of digital services, data processing, emerging technologies and new forms of communication and access to information for citizens. It focuses on the creation of secure digital services and spaces, achieving a level playing field in digital markets with large platforms, and strengthening Europe's digital sovereignty.

“Digital Compass 2030: the European way for the Digital Decade” is a fundamental point of reference for digitalisation in Extremadura, given that it specifies the European Union's **digital ambitions** and strives for the achievement of objectives which are classified into four strategic areas.

- **Digitalisation of public services:** The essential public services must be available online; citizens will have electronic access to their medical records, and 80% of citizens must use an electronic identity solution.

80% Of citizens must use an electronic identity solution

- **Secure and sustainable digital infrastructure:** All households must have a high-speed connection, and densely populated areas must have 5G coverage.

All households must have a high-speed connection

- **Digital skills of citizens:** At least 80% of adults must possess basic digital skills, and the number of ICT specialists must increase; furthermore, the number of women in those types of jobs must increase.

80% Of adults must possess basic digital skills

Increase the number of women

- **Digital transformation of business activity:** 75% of businesses must use cloud computing services, macrodata and AI; over 90% of small and medium-sized enterprises (SMEs) in the European Union must reach at least a basic level of digital intensity, and the creation of “unicorns” must be encouraged.

75% Of businesses must use cloud computing services, macrodata and AI

90% Of small and medium-sized enterprises (SMEs) in the European Union must reach at least a basic level of digital intensity

¹⁹Idem.

¹⁹INE (Spanish National Statistics Institute). <https://www.ine.es/jaxi/Tabla.htm?px=53438&L=0>

²⁰ONTSI (Spanish National Statistics Institute) 2023. Digital technologies in businesses. https://www.ontsi.es/sites/ontsi/files/2023-03/brujula_tecnologiasdigitalesenlaempresa_2023.pdf

²¹EUROSTAT, 2024. Statistics | Eurostat. ([europa.eu](https://ec.europa.eu/eurostat))

²²INE (Spanish National Statistics Institute) 2023. https://www.ine.es/prensa/tic_e_2022_2023.pdf

²³INE (Electronic Civil Service Questionnaire) 2023. Intensity of innovation. (Asset Expenditure on Innovation/Turnover) x 100 by autonomous regions and cities. ([ine.es](https://www.ine.es))

²⁴COTEC Foundation, 2023. The digital economy in Spain. [The digital economy in Spain – Cotec](https://www.cotec.es/publicaciones/la-economia-digital-en-espana)

²⁵Idem.

²⁶Intergovernmental Panel on Climate Change (IPCC), 2019. Special Report on Global Warming of 1.5°C. https://www.ipcc.ch/site/assets/uploads/sites/2/2019/09/SR15_Summary_Volume_spanish.pdf

NATIONAL AND REGIONAL STRATEGIC FRAMEWORK

Additionally, the benchmark regional and national strategies have been studied and analysed when developing the EDTS27:

- Research and Innovation Strategy for the Smart Specialisation of Extremadura (RIS3 Extremadura 2027)
- Digital Spain 2020-2030 and Recovery, Transformation and Resilience Plan
- Digital Galicia Strategy 2025
- Digital Strategy 2023-2026 Autonomous Region of Madrid
- Andalusia Artificial Intelligence Strategy 2030
- Andalusia Cybersecurity Strategy (2022-2025)
- Asturias: Digital Territory – Digital Agenda 2024-2027
- Region of Murcia Digital Agenda 2022-27

EXTREMADURA FINANCIAL FRAMEWORK

According to Regulation (EU) 2021/694 establishing the Digital Europe Programme, **member states must allocate at least 20% of their recovery funds to projects that digitalise their economies and societies**, which will bring national and regional policies into line with the European strategic framework.

Multiannual financial framework 2021-2027: finances the cohesion policy and subsequent NextGenerationEU recovery strategy, reaching a **total of 1,824.3 billion euros to finance public policies in the coming period**, an unprecedented budget to face the challenges of the next decade in Europe.

NextGenerationEU Funds: a temporary recovery instrument launched by the European Union following the COVID-19 health crisis, with the aim of repairing economic and social damage and directing reconstruction around digital matters, ecological sustainability, resilience and a healthier and more equal society.

The implementation of an ambitious digital transformation strategy in Extremadura requires significant financial and economic investments. In this exceptional European context in which investment is being promoted, the development of public policies for digital transformation is being encouraged, and **multiple economic recovery and financing mechanisms have been put in place that are mobilising significant resources in addition to the region's own funds.**

The possibilities for raising additional funding must be taken advantage of quickly by Extremadura, given its advantageous position compared with other more developed European regions.

During this temporary period, speed is critical when it comes to presenting projects, and the adequate planning and execution of those resources. **As a result, the strategy for Extremadura has been aligned with the objectives and provisions established in the Recovery and Resilience Facility (RRF) and with the rest of the European Union's programmes:** Recovery assistance for cohesion and the territories of Europe (REACT-EU), Horizon Europe, InvestEU, the European Agricultural Fund for Rural Development (EAFRD) and the Just Transition Fund (JTF).

4 HORIZON EXTREMADURA DIGITAL 2027

VISION, MISSION AND VALUES

*A dynamic region, where life plans are made and prosper.
Known for being the best place to live and work.*

EXTREMADURA ON THE HORIZON



VISION

"Extremadura as a region of opportunities, due to its innovative and sustainable ecosystem, which drives economic growth and general wellbeing, where digital wealth and talent prosper in an environment that is proud of its regional identity, contributing to the progress of the whole community."

WHAT IS THE MISSION OF THE EDTS27?



MISSION

The EDTS27 drives Extremadura towards becoming a digitally advanced region, where collaboration between businesses, citizens and the Regional Government forms the foundation of equitable, efficient, and people-centred development.

VALUES



VALUES

Identity. Extremadura's identity is the guide through which we will drive the digital transformation that will boost the region's essence and values.

Commitment. Society, business and public and private institutions are actively involved in the transformation process. We will promote alliances and foster cooperation, taking digitalisation as a joint project for the whole community.

Attraction. Extremadura is an attractive place to live and work; we will ensure the environment attracts investments, talent and businesses interested in taking advantage of the digital opportunities offered by our region.

Improvement. We will foster aspirations of progress and raise expectations, breaking prejudices and barriers that slow the mobilisation of Extremadura's potential. The digital world will inspire citizens, with new role models and opportunities for growth.

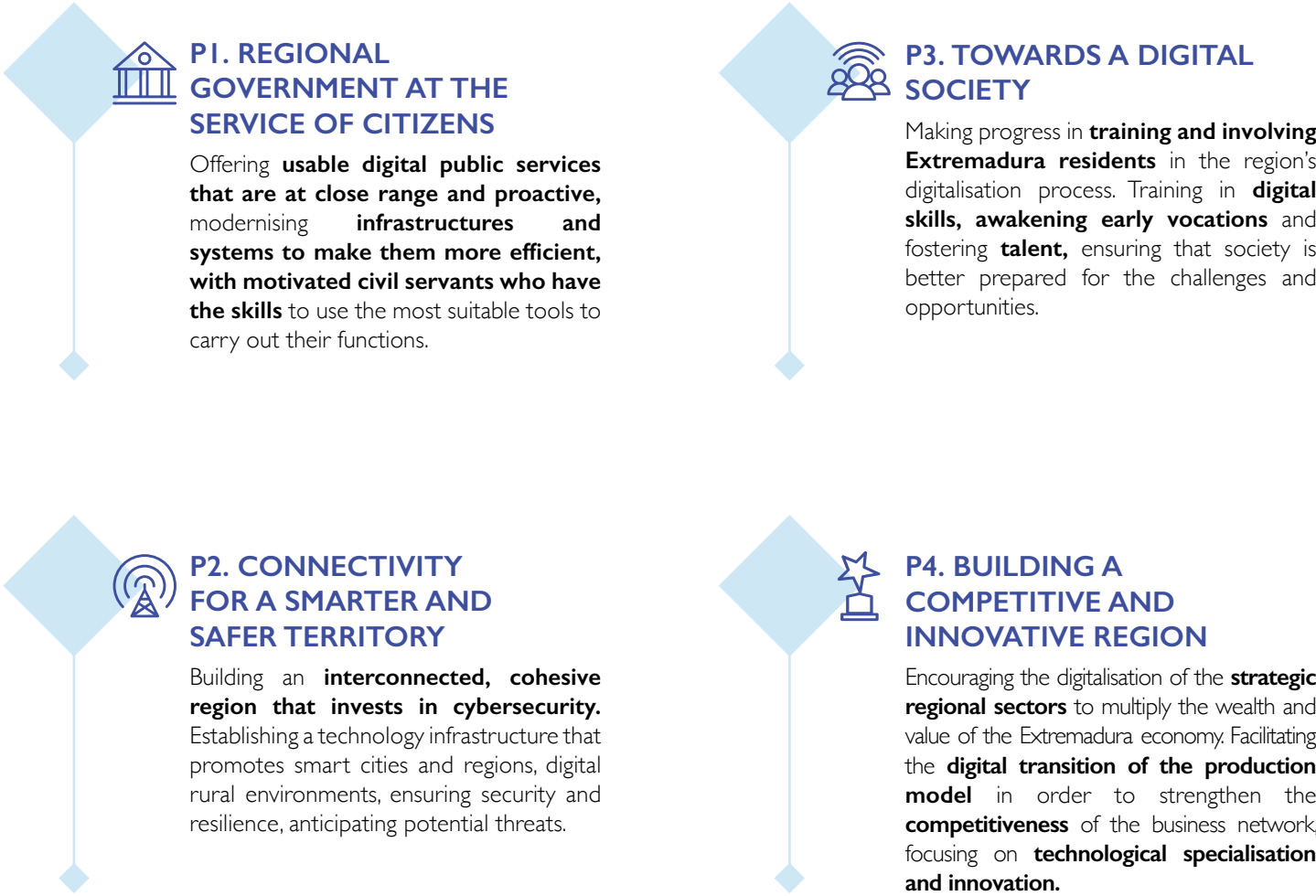
Europe. Supported by our strategic sectors, we will drive convergence with Europe, aspiring to become an example of digital transformation within the ecosystem of regions, creating knowledge networks that are connected with other regions, and leading as a driving force for change and high performance.

Excellence. We will strive for excellence through effort, quality and rigour in the implementation and evaluation of public policies around digital transformation, measuring the impact and results of measures, and implementing continuous improvement mechanisms to adapt the process to our region's situation.

Humanism. We will ensure that technological advances improve quality of life for people, promote equality, respect for our cultural values and universal human rights, promoting democratisation of technology, equality of opportunities and digital inclusion.

STRATEGIC STRUCTURE

The **Extremadura Digital Transformation Strategy, looking towards 2027**, arose with the aim of establishing a comprehensive framework that consolidates the objectives and foundations of digitalisation, and establishes the road map that will be needed to chart the way towards a fully digital society and region. The strategic structure is **supported by 4 broad pillars, 12 lines and 35 specific measures**, which will allow us to make the most of opportunities in the process of change we are immersed in.



PILLAR	STRATEGIC LINE
 P1.A Regional Government at the service of citizens	• A Citizen-centred Regional Government: Digitalised public services and closer and easier relationships with citizens • Agile and homogeneous Regional Government: Optimisation of public services, efficient data management and a unified digital presence • Efficient and innovative Regional Government: Optimisation of infrastructure and systems with innovative solutions • Regional Government orientated towards the professional development of civil servants: Improvement in the digital tools and skills of civil servants
 P2. Connectivity for a smarter and safer territory	• Cohesive and connected territory: Supporting the territory with the digital transformation • Smart region: Technology serving the needs of the natural, rural and urban environments • Cyber-safe region: A region that is protected against threats, through cybersecurity
 P3. Towards a digital society	• Inclusive society: Integration of citizens in the digitalisation process • Digital talent and employability: Creation of technological talent and specialisation of the active population
 P4. Building a competitive and innovative region	• Competitive business community: Increase in competitiveness through the digitalisation of business • Technological specialisation and digital innovation ecosystems: Boosting the technology sector through regional knowledge networks, digital entrepreneurship and the development of advanced technologies • Boosting the strategic regional sectors: Promote initiatives that affect sectors such as agriculture, industry, the digital tourist experience or the audiovisual sector, among others

PILLAR I. REGIONAL GOVERNMENT SERVING CITIZENS

LI.1. A CITIZEN-CENTRED REGIONAL GOVERNMENT

- Measure 1. Digitalisation of public services
- Measure 2. Citizen digital identity
- Measure 3. Sectoral digitalisation plans

LI.2. AGILE AND HOMOGENEOUS REGIONAL GOVERNMENT

- Measure 1. Civil Service Simplification and Rationalisation Plan
- Measure 2. Data Governance Plan
- Measure 3. Digital Presence of the regional government and design of the experience

LI.3. EFFICIENT AND INNOVATIVE REGIONAL GOVERNMENT

- Measure 1. Hyper-automation of processes
- Measure 2. Technological renovation of infrastructures and systems
- Measure 3. Promoting Artificial Intelligence (AI)
- Measure 4. Innovation laboratory for the Regional Government
- Measure 5. Development of the Information Technologies Operational Model of the Regional Government of Extremadura

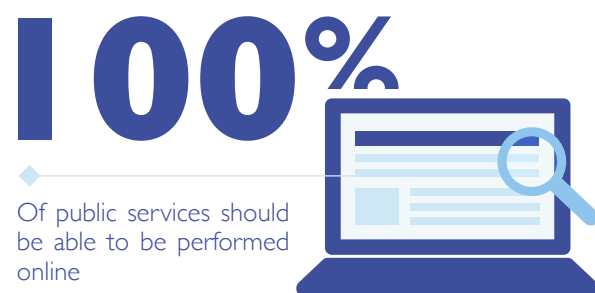
LI.4. REGIONAL GOVERNMENT ORIENTATED TOWARDS THE PROFESSIONAL DEVELOPMENT OF CIVIL SERVANTS

- Measure 1. Competence model and digital training for civil servants
- Measure 2. Change management for civil servants
- Measure 3. Modernisation of the workstation, and digital identity for civil servants

PILLAR I. REGIONAL GOVERNMENT SERVING CITIZENS

The aim of this pillar is to place the **Extremadura Regional Government at the vanguard and as the driving force in the digitalisation process**. The lines of action are designed to **transform it into a more modern and efficient organisation, that is centred around citizens** who exercise their rights swiftly and securely. Furthermore, it is orientated towards **proactivity in meeting the needs of citizens and businesses** by providing better quality services.

The European framework sets out the objective that **100% of public services should be able to be performed online**, including access to electronic health records, and that they should be enabled by digital identification methods²⁷. According to the results of the citizen participation survey, **the main difficulty citizens face when using public digital services is usability** (complex forms, lack of clarity in the process, portals that are not very intuitive, use of digital certificates and other complex encryption methods, etc.), and the **most important way to encourage the digital transformation is to improve these services to make them easier to use**²⁸.



According to the 2023 OECD Digital Government Index, **emerging public policies include citizen digital identity, the application of AI in the public sector and strategic collaborations with the private sector, including setting up innovation laboratories**²⁹.

According to the figures provided by the CAE 2023 report, **the average amount of portals that meet the AA accessibility level analysed in Spain's Autonomous Regions is barely 27%**. This indicates that there is an opportunity to lead this process, especially considering that the Citizen Folder of the Extremadura Regional Government is among those that offer the most data and services relating to the identity of a person. However, the region has still not adopted other European trends regarding digital identity.

This pillar will therefore promote the creation of a new digital identity which will give citizens a simple way to access digital public services. Special attention will be paid to the functional design, the usability and the user experience, as well as compliance with the most stringent accessibility criteria. Additionally, its implementation will require measures for administrative simplification and rationalisation of procedures, the implementation of single data governance and the use of advanced technologies such as AI, robotics and process automation, to increase efficiency and productivity.

In order to achieve effective change, it is essential for **civil servants to feel committed and empowered**. In this respect, they will be provided with the necessary technological tools, and training in digital skills. This will allow them to provide high quality services that are suited to the needs of citizens. By empowering civil servants with the adequate tools and abilities, an organisational culture will be fostered that encourages innovation and efficiency in the provision of public services.

LI.I. A CITIZEN-CENTRED REGIONAL GOVERNMENT

Digitalised public services and closer and easier relationships with citizens



Goals we are aiming for with this line...

- Increase the offer of digital public services and improve their quality.
- Establish communication channels between the Regional Government and citizens, which will allow for closer and more proactive interaction.
- Facilitate centralised access to public services, ensuring they are simple and convenient to use.
- Adapt public services to current needs, demands and trends in order to offer a swifter and more personalised experience.

Measure 1. Digitalisation of public services

The digitalisation of administrative processes and procedures is essential for the transformation of the Regional Government and the improvement of the citizen experience. This measure seeks to provide fast and efficient public services that put the needs of citizens at the forefront.

Digitalisation will eliminate the need to carry out processes in person or on paper, which will reduce the time and resources necessary to complete the procedures, in turn facilitating citizen access. This will make it possible to automate processes and procedures, and introduce new technologies and approaches that will improve the quality and efficacy of services, helping to ensure they are delivered quickly and efficiently.

As part of the **digitalisation of administrative processes**, progress will be made in the use of electronic signatures, adaptation to new payment methods and technological adaptation in line with trends in use by citizens. For this, a **responsive design will be used to adapt to the interface of different devices, developing better mobile applications** which will allow for simpler, more convenient and more personalised interaction with the Regional Government. Thus, public services will be redesigned to **improve the experience of bureaucracy and improve usability**, simplifying their use, without compromising citizens' guarantees in their relations with the Regional Government. In this regard, we will promote the development and **roll-out of chatbots** based on natural language processing technologies (NLP)³⁰ which rely on Large Language Models (LLMs)³¹ to improve the digitalisation of the Regional Government, making it closer and more accessible to citizens.

A main element of this measure will be the **evolution of the electronic office and general single access point of the Regional Government of Extremadura**. New digital public services will be incorporated, and their design, content and structure will be improved. By grouping administrative procedures by "vital events", moments or situations in people's lives (job search, birth of a child, marriage, etc.), it will be easier to locate procedures, documentation and processes through language that citizens can easily understand and associate with their needs.

Work will also be carried out on developing the digital platform that provides citizens with a **personalised, centralised and secure space** where they can check the status of their applications, consult information related to their files and interactions with the Regional Government, as well as access and manage their data. The development of this space will prevent users from having to navigate multiple platforms to access their information. Through this platform, citizens will be able to request that the

Regional Government proactively offer them services that may be useful depending on their situation, such as renewing a licence or official certification before the validity period expires. Furthermore, the section for sending suggestions, complaints and initiatives will be developed, to **encourage citizen participation** improve customer service processes.

Objectives

- Expand access and facilitate the execution of bureaucratic procedures and processes via digital channels, transforming administrative processes into simple, convenient digital services that are orientated towards citizens' needs.
- Optimise interaction between the Regional Government and citizens by centralising services and processes from a single point, to improve efficiency and the user experience.
- Increase transparency in the delivery of services to allow citizens to clearly track their processes and applications, and boost citizen participation via digital channels.

Measure 2. Citizen Digital Identity

The growing demand among citizens to have easier, more secure and multi-channel access to digital public services and their own information makes it necessary to respond to this need.

While private organisations have simplified their processing mechanisms, operations and electronic commerce, adapting them to the new needs, access trends and multi-channel usage without compromising the privacy and security of their users, the Spanish Government continues to face challenges. Despite being compelled by requirement to use digital certificates for identification and signature (encryption), these mechanisms, nearly 20 years after they started becoming widely used, still constitute the main obstacle for full development of the electronic administration.

As a result, we will move forward with the **Citizen Digital Identity**, a project which aims to offer a simpler and more intuitive electronic identification mechanism for citizens who voluntarily register on the platform created for that purpose. This platform, as well as enabling citizens to register on the Extremadura Regional Government's Digital Identity system, will develop the necessary functionality for digital services and procedures in order to perform a centralised authentication of citizen access, reducing the number of credentials and access systems that citizens need to maintain. In turn, it will allow us to reinforce the security of the credential through dual-factor authentication, by using everyday systems (mobile app, SMS, email, etc.).

²⁷European Commission Europe's Digital Decade: digital targets for 2030, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

²⁸Figures obtained from responses to the citizen participation questionnaire (EDTS27 participatory process), February 2024.

²⁹OECD, 2024, 2023 OECD Digital Government Index: Results and key findings, OECD Public Governance Policy Papers, No. 44, OECD Publishing, Paris, <https://doi.org/10.1787/1a89ed5e-en>

³⁰Natural Language Processing (NLP): an area of artificial intelligence (AI) that is focused on giving computers the ability to understand human language in the form of text or spoken words in the same way that humans do.

³¹Large language model or LLM: category of basic models trained on immense quantities of data, which makes them capable of understanding and generating natural language and other types of content to carry out a wide variety of tasks.

Designed for multi-channel access, it will have multiple registration options (registration on the platform), so that all citizens will feel comfortable performing this operation. This measure will involve a simplification for citizens without reducing the privacy or security of their information, an increase in digital confidence in the digital public services of the Regional Government of Extremadura, and a strong incentive to increase its use.

Objectives

- Increase the use of the Extremadura Regional Government's electronic public services by simplifying the citizen identification and electronic signature mechanisms.

Measure 3. Sectoral digitalisation plans

Due to the scale and heterogeneity of the existing systems, the particular characteristics of the services offered by the Regional Government and changes in the needs of the different sociodemographic and business categories, a proposal has been made to launch sectoral digitalisation plans in specific areas, which has been drawn up based on criteria of urgency, need and social impact. However, throughout the implementation period of the EDTS27, additional sectoral plans will be drawn up and implemented, as and when needs are identified.

Single Social Record

The digitalisation of social services and the implementation of the Digital Single Social Record in Extremadura will allow us to centralise all information on the social care received by users of the Extremadura social care system throughout their life. The public social care service will be significantly improved, providing response times tailored to the needs of citizens. The system will enable citizens to access the digital single social record at any time, it will provide information on benefits received, requested and in progress, as well as expert assessments, statements of dependency or disability, case tracking, information on social assistance centres and services, among other things, ensuring in all cases the right to personal and family privacy.

Extremadura Employment Service

The digital transformation of the Extremadura Public Employment Service (SEXPE) seeks to comprehensively improve the services offered to citizens and businesses within the workplace. The execution of this Sectoral Digitalisation Plan will impact upon aspects as diverse as career guidance and vocational training, the execution of active employment policies, the use of information held in the information systems, making proactive digital services available for unemployed people, among other measures. This plan will be supplemented with the creation of the new Extremadura Digital employment plan, which will constitute the cornerstone of the service, and will be based on the creation of a personal space for Extremadura residents who find themselves unemployed or facing a job change, a dynamic ecosystem of interaction between prospective employers, around which all services and functionalities offered to citizens and businesses will pivot.

Sectoral Plan for Industry

The industrial sector is a fundamental part of the economy of any region, and the role of the Regional Government is crucial in order to drive its development and sustainability. As a result, the Extremadura Regional Government offers a variety of programmes to support businesses in their growth, innovation and competitiveness. Facilitating administrative processes, offering support and creating a favourable environment for investment will contribute to the success of the industry's industrial initiatives, which will affect competitiveness and the transition towards industry 4.0. For this, a new management system will be developed with the aim of simplifying these processes, reducing unnecessary bureaucratic and administrative burdens that fall on businesses. This will allow us to reduce the costs of setting up and running a business, freeing up resources that could be dedicated to productive activities.

Tourism Platform

Tourism plays a crucial role in Extremadura's economy and development. That is why it is deemed essential to improve Extremadura's position as a tourist destination, at a national as well as international level. A Tourism Platform will be designed that will offer interested parties precise and detailed information about destinations, services and activities, applying generative AI techniques in a way that provides the user with a virtual assistant to help them not only locate information, but to plan journeys adapted to their preferences. Furthermore, for the purpose of supporting the commercialisation of tourist businesses and their online positioning, the platform will offer an overview of the business sector and travel agents. By adopting advanced analysis technologies and Big Data, we will gain deeper understanding of the tourism offering and the preferences and behaviours of visitors, which will allow us to design better public policies and allocate resources more efficiently.

Cultural Heritage

Within a social and democratic state with the rule of law, conservation, enrichment and dissemination of historical heritage constitute an obligation on the public authorities, which is legally enshrined in the Spanish Constitution.

The Cultural Heritage Inventory is an essential asset for managing information about Extremadura's culture and history. That is why we intend to design and develop new technological solutions to modernise the current ones and improve the identification and documentation of the region's movable, immovable and intangible heritage assets.

Extremadura's rich historical and cultural heritage will be available to discover on a website dedicated to the Culture of Extremadura, which will in turn promote cultural tourism and will thus be able to have a positive influence on the region's economy.

Sectoral Plan for Young People

The region's digital transformation, which the EDTS27 is aiming for, requires the active participation and involvement of young Extremadura residents aged between 14 and 30, as they are the first generation of digital natives, who think and process information in a different way. In view of this, the Regional Government must commit itself to constantly reviewing its communication processes, adapting the content of its communications to be on the same wavelength as these young people, with trends towards continuous and rapid access to information, so as not to lose touch with this sector of the population.

The European Union Youth Strategy for 2019-2027 focuses all its activities on three fields of action: "Engagement, connection and empowerment". Following the premises of these three verbs, which invite us to involve young people, get them communicating, and prepare them for participation in society, the Regional Government is going to design and develop a web portal that will act as the front door to the Regional Government for young people seeking information, training, mobility or volunteering opportunities, leisure resources, health resources, etc.

Also in line with the consumption habits of these young people, who use mobile devices as their main means of communication and access to information, a mobile app will be developed which will facilitate a fluid and pleasant experience for young people in their interaction with the Regional Government.

Objectives

- Improve the quality of social services assistance services in Extremadura through a system that makes it possible to obtain a centralised and coordinated overview of the data, needs and circumstances of each user.
- Improve the employment-related public services offered to citizens and businesses.
- Reduce administrative burdens and speed up administrative procedures for businesses, thereby promoting the region's economic growth.
- Offer a comprehensive and personalised experience for tourists and promote the growth and sustainability of the tourism sector.
- Modernise the management and dissemination of Extremadura's cultural heritage.
- Promote the full integration of young people in the digital society through tools that promote access to information on the Regional Government and their social participation.



LI.2. AGILE AND HOMOGENEOUS REGIONAL GOVERNMENT

Optimisation of public services, efficient management of data and a unified digital presence



The goals we are aiming for with this line...

- Simplify administrative procedures and processes to make them more accessible and efficient, reducing the Regional Government's bureaucratic burden and resolution times.
- Improve data management within the Regional Government, ensuring its integrity, security and compliance with regulations.
- Promote the interoperability and analytical use of data to improve the efficiency of public sector management.
- Consolidate a unified digital presence for the Regional Government of Extremadura, with a citizen-centred design.
- Increase transparency, providing clear, accessible and public information.

Measure 1. Civil Service Simplification and Rationalisation Plan

The implementation of a **Civil Service Simplification and Rationalisation Plan** is an opportunity to minimise bureaucracy and improve efficiency in case management. This initiative will have a direct impact on interaction between the Regional Government, citizens and businesses. For this, in 2022, Regional Law 4/2022 of 27 July was passed in Extremadura on the administrative simplification and rationalisation of Extremadura (LRSAX), which focuses its attention on administrative simplification as a means of facilitating citizens' relationship with the Regional Government. In line with this law, this measure seeks to optimise the processes, reduce the administrative burdens and improve the quality of public services, promoting interoperability between administrations.

In this regard, a set of measures will be implemented aimed at the **simplification, normalisation, digitalisation and/or automation of administrative procedures and files**. Processing and resolution times for files will be reduced, by reducing or eliminating phases, documents, processing times, requirements and processes, facilitating the application process with simple or pre-completed forms, and eliminating requests

for data and documents thanks to interoperability. Furthermore, process automation will be implemented, as well as the application of AI techniques, which will be used to reduce administrative burdens and speed up the delivery of services, and to create smart services to support administrative processes (ChatBots).

Objectives

- Simplify the electronic processing of administrative procedures and increase the efficiency of administrative management by reducing bureaucratic burdens and times, allowing for a more effective allocation of resources and greater agility in delivering public services.

Measure 2. Data Governance Plan

In the digital era, data use and management has become one of the fundamental elements for the efficient and effective functioning of any organisation. In the case of the Regional Government, smart analysis of vast quantities of data, much of which is sensitive and comes directly from citizens, is essential in order to develop policies and optimise public services.

Through the **Data Governance Plan** we will design and deliver a structured and coherent framework for managing data within the Extremadura Regional Government. This framework will cover the fundamental needs relating to data gathering and processing, and will allow for **Unique Data Management**, with a clear orientation towards both internal users (civil servants) and external users (citizens, businesses and other bodies that use digital public services), ensuring compliance with privacy and information security legislation.

A fundamental piece of the Data Governance Plan will be the campaign to **promote interoperability**. This set of actions will promote the capacity of different systems, platforms and applications within the Regional Government to communicate, exchange data and work together efficiently and effectively, both between the systems of other administrations and between the different regional ministries and bodies. Interoperability will facilitate the integration and coordination of the different processes and systems, allowing for more fluid service delivery, closer cooperation between the different bodies, and better customer service for citizens, who will not have to repeatedly give their details to each body.

Additionally, tools will be developed for data analysis and support for **the formulation of public policies**. **Big Data** techniques will be adopted to make it possible to identify patterns, trends and relationships in data for this action and any other relevant proposal. Data repositories will be created to improve services, and we will promote the publication of data sets on the **open**

data portal, facilitating public access and reuse of the Regional Government's information, free of charge and in interoperable formats, thereby contributing to socioeconomic development and greater transparency in public resources.

Objectives

- Design and provide a unified focus for data gathering, processing and management, ensuring efficiency, effectiveness and security in the use of information, in order to optimise public services as well as to develop more effective public policies.
- Promote interoperability between the different administrations, regional ministries and public bodies to improve delivery of digital services.
- Make a greater set of open data available to citizens to increase transparency and promote the development of new solutions.

Measure 3. Digital Presence of the regional government and design of the experience

In the context of the digital transformation, having a **plan for a digital presence and design system** is fundamental in order to provide a guide that the Regional Government of Extremadura can use regarding what its online corporate identity must be and how to organise and present the digital content in a homogeneous way. This way, it will be easier for citizens to locate relevant information or carry out administrative procedures, improving the usability of its services and increasing trust in the Regional Government.

Additionally, a **digital presence policy** will be drawn up with the aim of consolidating portals under a single identity through **Juntaex.es**, to enable citizens to easily identify the Regional Government's digital space and be able to obtain the information they need simply. The portal's current content will be reordered, and the **language used will be more natural**, avoiding technical or legal terminology and thereby improving the interaction between the Regional Government and citizens. Within this policy, a design guide will be developed that will establish the necessary **accessibility** requirements to guarantee the digital inclusion of people with a disability using the internet, taking into account the standards laid out by the W3C (World Wide Web Consortium).

As part of this measure, progress will also be made in developing a **Design System**. The design system establishes rules and elements for homogeneous appearance and function, and ensures an experience that is uniform, accessible and easy to use for all citizens. Furthermore, when developing reusable patterns and components, the Regional Government of Extremadura will be able to respond rapidly to new opportunities or needs that arise in the digital environment, which will improve its agility and result in cost savings.

Objectives

- Establish and consolidate a brand identity across all digital channels to strengthen citizens' digital confidence and recognition of the services provided by the Extremadura Regional Government.
- Establish rules to rationalise the development of new portals and consolidate the already existing ones, facilitating their design and development through a joint and uniform component design system.
- Ensure the accessibility of public services for all citizens, taking into account the different ability levels and considering the diversity of people, by using an inclusive and accessible design.

LI.3. EFFICIENT AND INNOVATIVE REGIONAL GOVERNMENT

Optimisation of infrastructure and systems with innovative solutions



The goals we are aiming for with this line...

- Improve operational efficiency through the digitalisation of key processes and incorporation of innovative technological solutions.
- Improve the quality of public services through the optimisation of technological infrastructure, consolidating redundant systems and adopting solutions.
- Promote innovation and adoption of emerging technologies, promoting collaboration with the private sectors, universities and other stakeholders.
- Increase the use of resources in the field of information technologies, using tools and methodologies that maximise quality and productivity.

Measure 1. Hyper-automation of processes

Faced with constant technological advances and the growing demand for services from citizens and businesses, it is essential to adopt solutions that allow us to optimise the execution of administrative tasks. This measure will not only contribute to improving the efficiency and quality of the services offered by the Regional Government, but it will also help to reduce costs, free up resources for activities with greater added value, and ensure greater precision in the execution of tasks.

The automation of processes within the EDTS27 will be supported by the setting up of a **Centre of Excellence (CoE) for Hyper-automation of Processes**. This CoE for automation of processes will be responsible for developing policies, processes and tools that will make it possible to effectively manage the whole life cycle of automations. From the discovery and feasibility assessment phase of automation, to the development of the business case, to the prioritisation of the processes to be automated, the CoE will handle each stage of the process. Furthermore, it will be responsible for the development, testing and production of automation solutions. As part of the measure, specific projects will be set up to apply **Robotic Process Automation (RPS)** in different areas. These projects will have the primary aim of speeding up the resolution of processes via automation of repetitive tasks and optimisation of workflows. Furthermore, a Usage Policy for smart automation will be developed, as well as a governance model. The governance of this CoE will guarantee efficient and effective management of automation initiatives, ensuring that they comply with the strategic objectives of the Regional Government of Extremadura, and maximising the benefits derived from the implementation of these technologies.

Objectives

- Increase the operational efficiency of the Regional Government, reducing execution times, minimising errors through process automation, and allowing human resources to be reallocated to activities with greater added value.
- Improve the quality of public services by eliminating repetitive manual tasks, ensuring greater consistency and precision in the execution of processes, increasing the efficiency of the administrative management and delivery of public services.

Measure 2. Technological renovation of infrastructures and systems

The modernisation of the physical and logical infrastructures of the information systems presents a great opportunity to improve the Regional Government's capacity to provide public services and operations. Outdated equipment and software can cause problems with security, errors in the functioning of systems and a reduction in the quality of the service offered to citizens. Therefore, this plan will consist, on the one hand, of updating IT infrastructure, and on the other hand, modernising systems and applications.

Regional Government of Extremadura's IT Infrastructure Update Plan

This plan is centred on updating and improving the technology infrastructure used. For this, the corporate technology stack will be determined and implemented³². The strategy will also involve assessing the current status of the data centres, infrastructure and connectivity. Among the infrastructure that will be modernised will be the design and construction of a **new Data Centre**. This new data centre will modernise and optimise the infrastructure of the Regional Government Extremadura, and ensure optimal performance, better security and capacity to respond to the technological demands of the organisation and its associated bodies. In the same vein, the Backup Centre for other corporate Data Centres will be updated.

Regional Government of Extremadura's Systems Modernisation Plan

This Plan focuses on improving the technical architecture and applications used by the organisation. This includes analysing the current status of the applications, assessing their level of obsolescence and functional suitability, and designing a road map for updating and modernising them. With this modernisation of systems and applications, the risks associated with obsolescence will be eliminated, and they will be adapted to current and future technological trends (incorporating techniques such as APIfication³³ or interoperability), which will lead to technological synergies and improved efficiency, scalability, resilience and improved response capacity of the Regional Government of Extremadura. For this, the performance of the information systems and infrastructure will also be comprehensively monitored to ensure that they are functioning optimally, ensuring their availability, efficiency and security.

Objectives

- Update and modernise technology infrastructure and information systems, optimising the functioning of public services, ensuring optimal performance and a greater capacity to respond to technological demands.

- Mitigate the security risks associated with technological obsolescence, reducing the possibility for errors in the functioning of systems, and improving the protection of citizens' data and information.

Measure 3. Promoting Artificial Intelligence (ai)

The implementation of AI initiatives in the Regional Government responds to various current needs in terms of efficiency, improving services, effective resource management and decision-making, reduction of lead times, etc. Furthermore, in an ever more digitalised environment, it is crucial for the Regional Government to stay up-to-date with the latest technologies. The implementation of AI systems is part of this process of modernisation and adaptation to the new technological realities.

An **Artificial Intelligence Plan** will be drawn up to make the most of this technological innovation in order to improve the efficiency, transparency and quality of the public services offered by the Extremadura Regional Government. The plan's design seeks to apply AI techniques to administrative procedures and take advantage of AI's potential to improve the experience, optimise resources, and make decisions in the Regional Government.

Objectives

- Implement AI solutions to improve operational efficiency and provision of public services, optimising the administrative processes and reducing response times.
- Promote proactive administration through the use of AI systems that make it possible to propose public services that anticipate the needs and preferences of citizens.

Measure 4. Innovation Laboratory for the Regional Government

The incorporation of emerging technologies in the Regional Government's business models and processes is presented, so far, as an unusual and difficult-to-achieve practice. This was due to insufficient material and human resources available to implement these projects, and the lack of interest from the various layers of management to boost technological innovation within the Regional Government itself.

Through setting up **innovation laboratories (GovTechLab)**, the Regional Government of Extremadura wants to reverse this situation and start to boost the development of Proof of Concept (PoC) and internal pilots that make it possible to study the potential of applying advanced technologies to specific uses and to the Regional Government's own business processes. These PoCs and pilots will be carried out under different themes, prioritising themes such as cybersecurity, hyper-automation and generative AI.

This measure will allow us to test how certain uses of advanced technologies can optimise specific processes and services, providing substantial improvements to their development and exponentially improving the day-to-day jobs of civil servants and, as a result, the experience offered to citizens.

To set out and enrich the PoCs and pilots planned, we will count on the participation of the University of Extremadura, the Digital Innovation Hub (DIH) of Extremadura and other socioeconomic players, which will allow us to expand the innovation approaches and work together on solutions to the regional needs and expectations of the Regional Government, businesses and citizens.

Objectives

- Discover and experiment with new ways of applying advanced technologies to the Regional Government's business processes.
- Develop, select and scale up pilot projects to implement high-impact projects in the Regional Government and in Extremadura society.
- Make the Regional Government's business processes and procedures more efficient.

Measure 5. Development of the Information Technologies Operational Model of the Regional Government of Extremadura

In order to achieve an improvement in the provision of public services, and improve their quality, the **Information Technologies (IT) Operational Model** will be updated, focusing on the delivery of services from beginning to end by the competent departments in digital matters, describing the guidelines and policies for the design, management, operation and maintenance of IT resources, solutions and services and the Model of relationship between all the regional ministries on policies and actions in digital matters.

Designing this model will require a series of key actions that will address various fields of action. First of all, an **IT Management and Operation Model** will be implemented, which will establish, among other things, an **IT project management methodology**, which will provide a structured focus to plan, execute and supervise technological initiatives, such as the adoption of an **IT Service Management Methodology (ITSM)**, with the aim of ensuring a more effective operation that is aligned with business and user needs.

In second place, the **development of the Operational Model** will also involve revising the current Organisational Model with the idea of evaluating the activities and skills of the IT team, and adapting them to the new challenges of the IT role in the Regional Government, and creating a catalogue of technology services.

³²Corporate technology stack: specific set of technologies, tools and platforms that will be used in a standardised way in the Regional Government to support its operations and activities.

³³APIfication: widespread use of APIs (Application Programming Interface) in managing the business strategy. An API is an interface that allows different software modules to interact, and it has become an important tool in the digital transformation of organisations.

Finally, as part of this development, work will continue on improving the **Relationship Model and management of the technological demands and needs of the different ministries of the Regional Government of Extremadura**, which will make it possible to strengthen relationships between departments and prioritise and efficiently allocate available resources to satisfy the technological needs of the different ministries.

Objectives

- Organise the management of IT within the Regional Government, through updates and continuous improvement of the processes, methodologies, tools and operational practices.
- Adapt the allocation of human, financial and technical resources to the technological needs of the Regional Government of Extremadura, and optimise their use.

LI.4. REGIONAL GOVERNMENT ORIENTATED TOWARDS THE PROFESSIONAL DEVELOPMENT OF CIVIL SERVANTS

Improvement in the digital tools and capabilities of civil servants



The goals we are aiming for with this line...

- Invest in the talent of civil servants.
- Provide the skills, knowledge and tools necessary to carry out their roles efficiently and effectively.
- Promote a collaborative and participative work environment, where civil servants feel motivated and involved in the digital transformation process.
- Create a modern and adaptable work environment that promotes the wellbeing and satisfaction of civil servants.

Measure 1. Competence model and digital training for civil servants

The digital transformation consists not only of incorporating technology into the administration or job setting, but also the need to develop the skills and abilities required by civil servants to respond to the challenges of the future.

In this context, both the **Competence Model** and the **Digital Training of Civil Servants Plan** are presented as key instruments to ensure that civil servants are prepared to face the challenges of the future, improve the quality of the services delivered to citizens, and ensure that the Regional Government is agile, efficient and proactive.

The model will establish a series of digital skills and abilities that are necessary according to the employee's profile, which will be classified by levels (from the most basic to the most advanced). The skills model proposes to combine generic digital skills (aligned with the DigComp European framework) with specific skills linked to the current situation of the Regional Government of Extremadura. This process will be customised and will start with a self-assessment of the skill level of each employee, which will be assessed using a self-diagnostic tool which, depending on the result, will produce a proposal for competency-based itineraries that will lead to reaching the desired level.

Employees' commitment to acquiring and developing these digital skills will be necessary to ensure the success of the technological transformation within the organisation.

Objectives

- Promote the capacity of civil servants to adapt to rapid technological changes, as well as new ways of working and digital procedures.

- Provide specific training and development programmes to improve the digital skills of civil servants, including handling the relevant digital tools and technologies for their area of work.

Measure 2. Change management for civil servants

The technological evolution and digitalisation of public services: requires civil servants to acquire new skills and abilities to adapt to workplaces that are increasingly digital and automated. The process of administrative modernisation involves changes to the way of working, and to the processes, the implementation of new technologies and methodologies, and the optimisation of resources.

Change management actions will be incorporated, to ensure employees understand the Regional Government's digital transformation and feel part of it, eliminating resistance to change and supporting them in this transformation.

There will be projects at different levels which, on occasion, may impact upon the same employee. This means it will be necessary to set out a single strategic approach for change management that incorporates the different projects under one umbrella of transformation.

It is necessary to combine actions in the areas of alignment (understanding change, involving key people, analysing impacts, etc.), learning (skills model, training actions, reception and recycling, etc.) and adoption (communication and support, etc.), and to support them through a measurement strategy at different levels (strategic vision, tactical vision and operational vision).

Objectives

- Promote an organisational culture that is open to change and innovation, through effective communication and awareness-raising on the benefits and reasons behind the digital transformation.

- Actively involve civil servants in the change process, providing them with opportunities to participate in decision-making, offering spaces to share ideas and concerns, and recognising and valuing their contribution to the success of the digital transformation.

Measure 3. Modernisation of the workstation, and digital identity for civil servants

The digitalisation and transformation of workstations is a powerful lever of modernisation that will provide civil servants with a collaborative, agile, flexible and secure work environment.

The actions to improve workstations and the employee support service will lead to the necessary transformation of the digital environment, the Regional Government's organisational culture and progression towards greater autonomy in managing their role. In view of this, a **workstation modernisation plan** will be implemented, which will seek to improve employees' experience and increase productivity by providing relevant digital tools and equipment, supporting the cultural change actions that are necessary to guarantee flexibility, collaboration, teamwork and mobility. Furthermore, a **digital workstation policy** will be drawn up, which will promote the development and use of collaborative tools.

Within the plan, actions will be implemented for the development of the **public employee secure digital identity** (digital administrative file, digital identity based on electronic certificate, etc.), and we will promote the implementation of a **personal digital space** from which employees will have access to their file and will be able to carry out personal administrative tasks.

Objectives

- Facilitate collaboration and increase productivity among civil servants.
- Provide a modern and flexible workplace that fosters wellbeing and satisfaction among civil servants.

PILLAR 2. CONNECTIVITY FOR A SMARTER AND SAFER TERRITORY

L2.1. COHESIVE AND CONNECTED TERRITORY

- Measure 1. Improvement in digital infrastructure and connectivity

L2.2. SMART REGION

- Measure 1. Development of a smart region

L2.3. CYBER-SAFE REGION

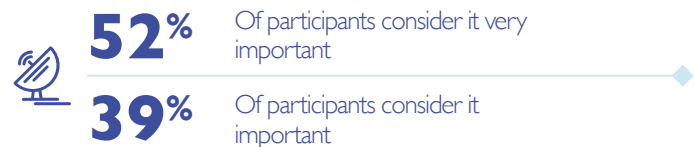
- Measure 1. Regional Cybersecurity Operations Centre (SOC)
- Measure 2. Education and awareness-raising around cybersecurity for citizens

PILLAR 2. CONNECTIVITY FOR A SMARTER AND SAFER TERRITORY

The second strategic pillar **-digital connectivity, smart region and cybersecurity-** focuses its efforts on boosting the roll-out of digital infrastructure and connectivity in the territory, especially in white zones,³⁴ grey zones³⁵, and zones of economic interest, and in developing a smart and cyber-safe region, facilitating digitalisation and the implementation of innovative technologies in Extremadura's key sectors, such as Industry 4.0, tourism and the services sector.

The overall objective is to develop an interconnected and cohesive region, promoting social and economic progress and ensuring the necessary security and resilience to combat possible scenarios of fragility, and avoid risks from emerging threats. This means that, in order to drive the digital transformation and mitigate the digital divide in Extremadura, the priority is to improve the digital infrastructure, especially in the rural parts of the region. Thus, according to the results of the citizen participation questionnaire, **networks and connectivity in rural areas were classed as very important by 52% of participants, and important by 39%³⁶**. However, **14% deemed that the quality of mobile coverage in their area of residence was deficient, while 1% did not have coverage³⁷**.

Networks and connectivity in rural areas



In order to strengthen these actions, improvements to the Regional Government's Corporate Network and the Extremadura Science and Technology Network, which will allow for the expansion of the fibre optic infrastructure and high speed networks in the region.

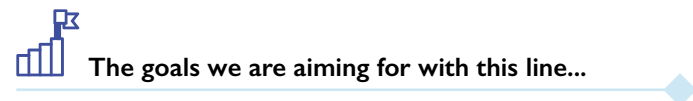
However, the progress of digitalisation and connectivity also brings with it new threats and vulnerabilities when it comes to cybersecurity, which are increasing in sophistication as well as frequency. Aware of these new threats, Extremadura will create a **Regional Cybersecurity Operations Centre (SOC)** which will improve the Regional Government's capacity to respond to security incidents, ensuring a secure digital infrastructure and minimising the risk of possible threats.

The whole of Extremadura society will be involved, through awareness-raising campaigns on cybersecurity, with the aim of **making Extremadura a cyber-secure region**.

Additionally, this pillar will also address economic, social and technological challenges, through initiatives such as the **development of smart villages and cities**, the improvement of rural governance and stimulation for rural entrepreneurship, making the most of technology to improve citizens' quality of life and the economic growth in these areas.

L2.1. COHESIVE AND CONNECTED TERRITORY

Supporting the territory with the digital transformation



- Extend access to quality digital infrastructure to citizens and businesses throughout the whole region.
- Improve and promote shared use of existing telecommunications infrastructure.

Measure 1. Improvement in digital infrastructure and connectivity

Digital infrastructure and stable connectivity are fundamental elements to drive the digital transformation of the regions, develop the digital capabilities of citizens and promote growth of business and industry. The EDTS27 establishes actions that will help provide a response to the challenges surrounding connectivity, such as access to high speed fibre optic broadband, expansion of mobile network coverage, making the most of advanced technologies such as 5G, exploitation of areas of economic interest, and the gap in internet access between urban and rural areas.

First of all, the **Regional Government's Corporate Network** will be expanded and improved, and network operators will make it possible to use their excess capacity, with the aim of reaching full coverage across the region and reaching all municipalities in Extremadura. This network will provide access to quality digital services for citizens and businesses, promoting efficiency in administrative management and stimulating collaboration between the public and private sector.

Secondly, the **Science and Technology Network** will be strengthened – a telecommunications infrastructure designed to support projects and initiatives led by the Regional Government of Extremadura in scientific research, technological innovation and development of the information society in the region. This network will be extended to new public facilities and centres to give them a greater connection capacity and access to a more reliable, secure and flexible communications infrastructure.

Furthermore, the **fibre optic network in areas of economic interest** will be improved, ensuring fast and stable internet access. Work will be done to provide industrial estates, logistics centres and other areas with a high concentration of businesses with very high speed broadband networks to ensure they are able to provide services at speeds of 1 Gbps.

Finally, we will promote collaboration with other Regional Governments, service providers and private sector operators to ensure effective implementation of these actions, putting the focus on the roll-out of 5G infrastructure to respond to the region's future needs and make the most of the capabilities offered by these emerging technologies when applied to the region's productive sectors, especially in Industry 4.0.

Objectives

- Expand and boost the use of the Corporate Network and the Science and Technology Network of Extremadura.
- Provide broadband networks in business areas that are key to the region's economic development.
- Promote the roll-out of fibre optic broadband and 5G in collaboration with telecommunications operators and other administrations.

L2.2. SMART REGION

Technology at the service of the natural, rural and urban territories



- Promote Extremadura as a Smart Region, through the development of smart villages and cities.
- Stimulate technological entrepreneurship and strengthening of local businesses in rural areas.
- Support the growth of the silver economy.

Measure 1. Development of a smart region

The need to address economic, social and environmental challenges (such as unemployment, depopulation, the ageing population and the digital divide, among others) in some areas of Extremadura, especially rural areas, requires the implementation of mechanisms and actions that make it possible to transform the region into a smart urban or rural area – one that is modern and sustainable and makes the most of technology to improve the quality of life of its citizens – and to boost economic growth.

In order to implement these actions, a collaboration framework will be set up between companies established in the areas, local organisations and the Regional Government of Extremadura, with the aim of rolling out smart digital services in an innovative way in line with current trends relating to the development of **smart villages**. This collaboration will seek to boost sectors such as the regional government, mobility, wellbeing, energy efficiency, the urban environment and the circular economy, paying special attention to the development of solutions or services with a direct impact on citizens, that are scalable and interoperable. Taking into account these factors, and related to the demographic characteristics of Extremadura – which show a clear ageing of the population – special attention will be paid to supporting businesses that boost the development of the **silver economy**, as understood to mean any economic activity, product and service aimed at meeting the needs and expectations of the population aged over 50 with a certain amount of purchasing power, which encompasses multiple sectors such as banking, health, leisure, tourism, etc. In this regard, support for the creation and strengthening of local businesses specialising in the care economy and their coordination with municipal social services also becomes relevant, thus promoting the implementation of technological healthcare and assistance solutions and services that make the daily lives of the elderly easier (such as alarm bracelets, digital electric locks, etc.).

Finally, at a more institutional and regional level, this measure will also seek to improve the management of municipal public resources and services, establish governance models for rural development (led by Local Action Groups), create networks that stimulate entrepreneurship and strengthen local businesses, promote the spatial data infrastructure of Extremadura (IDEEX) to improve urban mobility, and implement environmental monitoring systems, among other services that directly impact the quality of life of the citizens of Extremadura.

³⁴White zone: Area that has a connection less than 30 Mbps and for which no improvement is foreseen in the next three years.

³⁵Grey zone: An area which, although it has coverage, or a forecast improvement in the coming years, only has one operator, and its speed is lower than 100 Mbps.

³⁶Figures obtained from responses to the citizen participation questionnaire (EDTS27 participatory process). February 2024.

³⁷Idem.

Objectives

- Modernise urban and rural infrastructure through the implementation of smart technology solutions.
- Promote the development of innovative digital solutions and services by local businesses that have a special impact on citizens.

L2.3. CYBER-SAFE REGION

A region protected against threats, through cybersecurity



The goals we are aiming for with this line...

- Improve the Regional Government's capacity to respond to security incidents, ensuring a secure digital infrastructure, minimising possible threats.
- Increase the maturity level of Extremadura's cybersecurity sector.
- Increase the provision of cybersecurity infrastructure and services available to businesses.
- Raise awareness and increase knowledge among citizens and businesses regarding cybersecurity.

Measure 1. Regional Cybersecurity Operations Centre (SOC)

Currently, organisations are facing a wide range of cyber threats, which are constantly evolving and becoming more and more sophisticated. Furthermore, with the growth of digitalisation, organisations increasingly depend on technology, which increases the surface areas vulnerable to exposure and attack, increasing the risk of vulnerabilities, making it necessary to adapt accordingly.

The creation of the **Regional Cybersecurity Operations Centre (SOC)** will play a crucial role in the protection and strengthening of the region's digital infrastructure, bringing not only the skills to prevent, but also detect, respond to and recover from security incidents. It will be a fundamental piece in the region's cybersecurity strategy, providing advanced protection and surveillance capabilities for the digital assets and critical infrastructure of the Regional Government and other public bodies in the region that decide to join the project. With this measure, we aim to strengthen the region's cybersecurity and resilience and protect it against the growing threats on the

network. The approach is to focus on cybersecurity in a regional and coordinated manner, extending services to all public bodies, as well as providing training to and raising awareness among private organisations. In addition, the centre has been designed to be scalable and adaptable to the changing needs of the region, and to allow for other public bodies to be incorporated into its structure.

In addition to the implementation of the SOC, work will continue to improve the corporate security policy and adapt the Regional Government's information systems to the National Security Scheme.

Objectives

- Manage and reduce the risk of cyber-attacks and security breaches.
- Protect the infrastructure and data supporting public sector management in the region.
- Increase the capacity to respond to and recover from cyber incidents.

Measure 2. Education and awareness-raising around cybersecurity for citizens

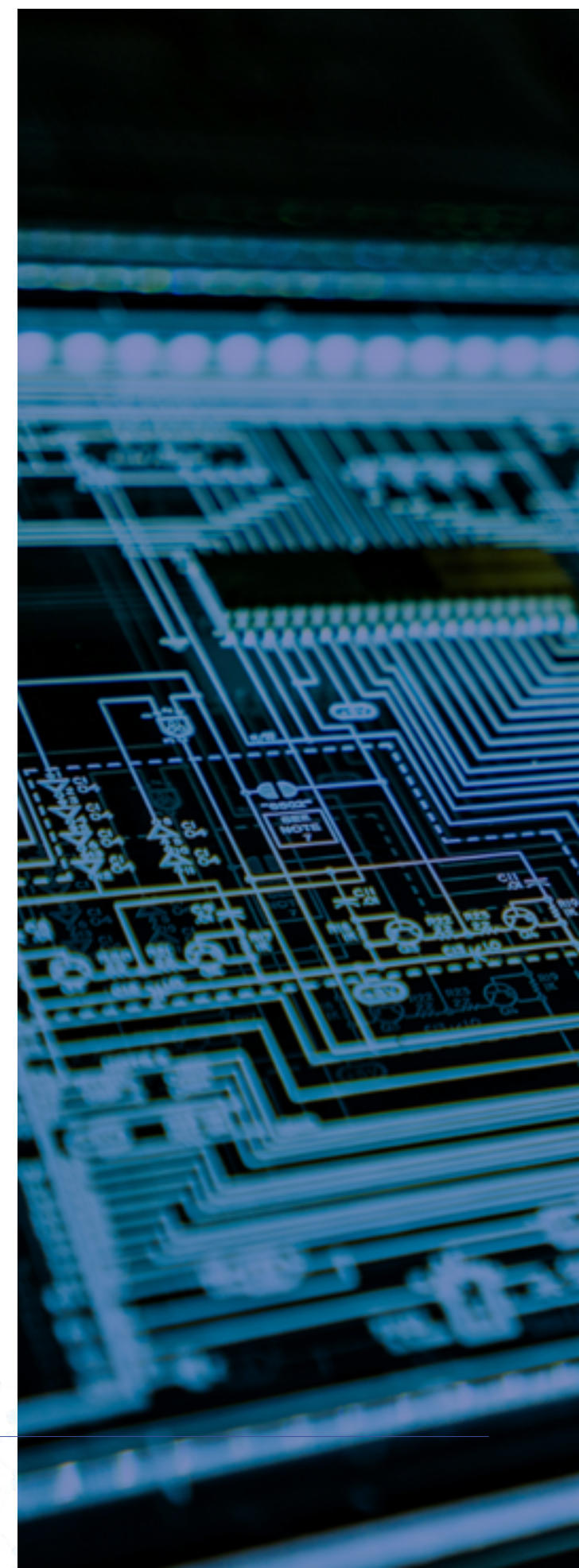
With the growing use of and dependence on technology in the habits and activities of daily life, cyber threats are on the rise. Cyber-attacks happen every day, they take multiple forms, and can affect any type of user or system, from the hacking of databases belonging to large multinational organisations, to fraudulent access to citizen's bank accounts, arising from the unconscious misuse of their mobile telephones or other devices.

However, the current reality is that many people lack basic knowledge on cybersecurity, and are not aware of existing cyber threats and their possible consequences. In this respect, according to the results of a survey carried out by the Spanish National Institute for Cybersecurity (INCIBE), 91.6% of the population feels that they should have training on internet security, one in four people does not know what encryption of data or documents is, and 39.6% do not know how to recognise whether their equipment is up-to-date or not³⁸. These figures reveal that it is crucial to raise awareness, educate and empower citizens on the topic of cybersecurity.

With this measure, a series of actions will be undertaken with the aim of **educating citizens and raising awareness about cyber threats and promoting secure online practices**, improving their knowledge and ability to identify and understand the risks of using the internet and the vulnerabilities we are exposed to. Furthermore, tools and resources will be provided help people protect themselves in the digital environment. Finally, as part of this measure, special attention will be paid to the prevention and elimination of a growing trend in cybersecurity: digital gender-based violence. This form of violence includes all behaviour that falls under harassment, threats, breach of information, aggressive messages, dissemination of sexual content without consent, or bullying, carried out via information and communication technologies. Workshops, chats and training sessions relating to this new form of violence will be held, which will help people to understand the risks that come with performing certain actions on social networks, their consequences, and the psychological impact it has on victims, their lives, and the people around them.

Objectives

- Raise awareness and educate citizens on the risks regarding cybersecurity, reducing their vulnerability to these incidents and threats.
- Promote security measures and protection to prevent and eliminate gender-based violence in digital environments, especially against new types of gender-based violence through social networks.
- Promote the responsible and appropriate use of digital content, services and tools.



³⁸INCIBE (Spanish National Institute for Cybersecurity), 2022. 92% of the population recognises the need for more training on internet security. Press release. 02/06/2022. <https://www.incibe.es/incibe/sala-de-prensa/el-92-poblacion-reconoce-necesita-mas-formacion-seguridad-internet>.

PILLAR 3. TOWARDS A DIGITAL SOCIETY

L3.1. INCLUSIVE SOCIETY

- Measure 1. Digital inclusion of citizens
- Measure 2. Comprehensive digital skills and lifelong learning plan
- Measure 3. Plan to awaken early digital vocations
- Measure 4. Extremadura Digital Health Plan

L3.2. DIGITAL TALENT AND EMPLOYABILITY

- Measure 1. Creation of digital talent
- Measure 2. Support digital employability and re-skilling
- Measure 3. Attracting and retaining talent



PILLAR 3. TOWARDS A DIGITAL SOCIETY

The third strategic pillar **-towards a digital society-** places people at the centre of the digital transformation of our society and economy. In its Digital Decade strategy, the EU considers this field as fundamental for promoting inclusion, equity, respect and fulfilment of rights and freedoms and improvement in citizens' quality of life.

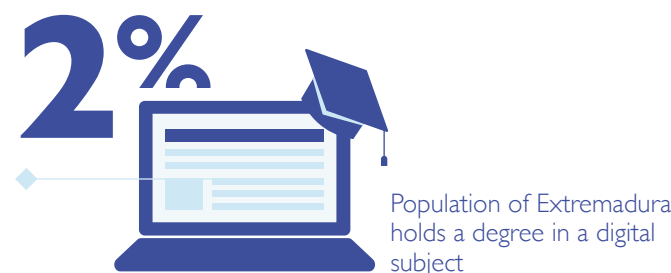
Extremadura has a digital divide that can be clearly seen, since **only 58% of the population has basic or advanced digital skills**, which limits their full participation in the digital society³⁹. Furthermore, **24% of households do not possess computers of any kind (including devices such as netbooks, tablets, etc.)**, which reflects significant differences between families and demographic groups⁴⁰. One of the goals of this strategic pillar is to tackle this digital divide through literacy, training, awareness-raising and improving access to technology for the section of the population who are lagging behind and vulnerable groups, such as the elderly, women, the unemployed and people with a disability.

 **58%** Population of Extremadura has basic or advanced digital skills

Furthermore, after an analysis and diagnostic, the urgent need to multiply and consolidate digital talent was identified. **Only 9% of businesses in Extremadura hire specialists in technology departments** (compared with the national average of 16%), and **61% of businesses in Extremadura state that they encounter difficulties filling these vacancies** due to a lack of suitable work experience among candidates for those posts⁴¹. Despite that, Extremadura has a high ranking nationally in terms of quality of life, which stems from having less travel time to and from work, more affordable house prices and greater healthcare provision per inhabitant⁴². These important advantages will be used, on the one hand, to find and attract external talent (digital nomads) and, on the other hand, to try to retain talent from Extremadura and dissuade them from leaving to go to other regions.

This challenge is aggravated by the fact that, currently, **only 2% of the population of Extremadura holds a degree in a digital subject**, compared with over 10% in the most competitive subjects and almost 6% on average nationally⁴³. In this regard there is a clear need to awaken the vocation from an early age and, in particular, nurture an interest among girls in pursuing university studies and higher education in technology. It is relevant to

highlight that, during the academic year 2022-23, although 56.42% of enrolled students were women, they only represented 9.6% of enrolments in IT and 28.7% in the branches of engineering, industry and construction⁴⁴.



There are highly qualified (over-qualified) people in saturated specialisms where there is no demand for employment (phantom over-qualification), which produces evident frustration in young people who have dedicated years of effort to their training when the reality of the job market does not have anything for them. This situation is not just an individual problem, it also has a negative impact on the regional and family economy. The direct relationship between the total digital talent and per capita income of the regions is a direct testimony to the transformational impact that digitalisation can have on regional prosperity.

Furthermore, according to the citizen participation questionnaire, **42% of respondents feel that the current professional and university training offered is not adapted to the needs of businesses**⁴⁵. In this regard, it will be necessary to make joint efforts between all stakeholders in the education system, university system and job market, within and outside of the Extremadura Regional Government, to achieve fundamental structural changes, and redesign the life cycle of training in the region (careers advisers, materials, vocational training degrees, university degrees, etc.) in order to adapt it to the current and future needs of the digital environment.

The availability of digital talent produces a virtuous circle of economic growth, better employment and greater competitive capacity in the region, which in turn contributes to retaining talent. The economies that possess a labour force with vast digital talent are more able to compete in the global market. Digital innovation allows businesses to offer more advanced, efficient and personalised products and services, reducing costs and capturing a larger share of the international market.

This situation creates an extraordinary opportunity: the regions that are early to promote a high rate of digital talent creation and take the necessary measures to take advantage of it will be the ones that lead the economic and social transformation in the digital era. For Extremadura, it is advisable to take these steps and make a strong commitment to accelerating, and recovering the progress not yet achieved, in order to avoid being left out of the game. What's more, it now has the necessary ingredients to achieve it. For this, the responsibility and leadership of regional governments in the drive towards digital transformation are more crucial than ever. Their role must not be limited to being a passive facilitator or regulator; indeed, they have the duty to actively lead the transition towards a digitally advanced economy. This implies responsible and transparent management that not only identifies areas of specialisation with greater demand and future, but also actively promotes them to young people. The importance of this task cannot be underestimated, given that the economic future and wellbeing of our society depend to a large extent on the capacity to adapt, innovate and compete on the global digital stage.

The EDTS27 not only aims to close the digital gap and ensure the inclusion of all citizens in the digital age, but also to cultivate specialised digital talent and improve the employability of the active population, redirecting people who find themselves unemployed or trapped in a state of job insecurity towards a sector that presents the largest number of high-added-value opportunities and the best conditions and salaries of the whole job market.

L3.1. INCLUSIVE SOCIETY.

Involving citizens in the digitalisation process

 **The goals we are aiming for with this line...**

- Reduce the digital divide, through digital literacy and continuous learning throughout life.
- Boosting digital skills of workers and the general population, focusing on the needs of the job market.
- Stimulate and promote an interest in technology from an early age, focusing on the digital vocation in girls and reducing the digital divide in education.

- Increase the number of people studying in STEM fields⁴⁶, especially women who are interested in working professionally in technology.

- Promote the digital transformation in the healthcare system.

Measure 1. Digital inclusion of citizens

In a society in which technology is increasingly present, where digital services are proliferating in all areas of life, it is essential for citizens to have the digital skills, knowledge and abilities to ensure they are not left out of the digital networks and services offered by the market and public institutions.

The goal of this measure is to eliminate situations of risk of digital exclusion in Extremadura society, whether existing or potential, focusing on those groups that are especially vulnerable, such as the elderly, women, people with a disability, populations in rural areas, etc. This measure will bring technology closer to people, educate them, and raise their awareness about the use of technology, improving their quality of life and facilitating access to digital services that would otherwise be limited. The focus will be on the promotion and development of **specific training actions adapted to the European DigComp Framework**, establishing training itineraries from the most basic levels, alongside actions for raising awareness and supporting especially-vulnerable groups.

In order to implement these programmes, collaborative actions will be carried out with other public and private organisations at a regional level, through agreements and direct aid grants: the Extremadura Rural Development Network, Chambers of Commerce, Agri-Food Cooperatives of Extremadura and Professional Agricultural Organisations.

Objectives

- Raise awareness about the importance of digital skills through digital literacy programmes.
- Improve basic and intermediate digital skills among citizens, specifically the population at risk of digital exclusion, through specific programmes.
- Establish alliances with private companies, not-for-profit organisations and educational institutions to develop joint digital inclusion programmes, making use of additional resources and knowledge.

³⁹INE (Spanish National Statistics Institute). <https://www.ine.es/jaxi/Tabla.htm?px=39524&I=0>

⁴⁰Extremadura ICT Observatory (Observatorio Extremeño de las TIC), 2022. https://extremaduradigital.org/indicadores/viviendas-que-disponen-de-ordenadores-de-cualquier-tipo-incluidos-netbooks-tablets-de-mano-etc/?_post_id=449

⁴¹INE (Spanish National Statistics Institute) 2022. <https://www.ine.es/jaxi/Tabla.htm?px=53940&I=0>

⁴²COTEC, 2024. Mapa de Talento (Talent Map) 2023. <https://online.flippingbook.com/view/396676381/>

⁴³COTEC (National Institute for Cybersecurity), 2024. Mapa de Talento (Talent Map) 2023. <https://online.flippingbook.com/view/396676381/>

⁴⁴Ministry for Universities, 2023. Data and Figures from the Spanish University System. Publication 2022-2023. https://www.universidades.gob.es/wp-content/uploads/2023/04/DyC_2023_web_v2.pdf

⁴⁵Figure obtained from responses to the citizen participation questionnaire (EDTS27 participatory process). February 2024.

⁴⁶Acronym formed of the initials of Science, Technology, Engineering and Mathematics

Measure 2. Comprehensive digital skills and lifelong learning plan

Digital training must include actions aimed at ensuring that each person can find an option to improve and make progress at their digital level, throughout life. A solid foundation of digital knowledge and skills promotes inclusion and social progress, and provides qualified professionals, which are necessary for economic growth and innovation. However, this digital training process must be adapted to each individual, according to their starting point in terms of digital skills. Thus, the digital literacy and training plans are not enough, and must be supplemented with the development of intermediate and advanced programmes.

The **Comprehensive Digital Skills and Lifelong Learning Plan** is closely linked to the European lifelong learning policies, which are understood to mean any useful learning activity, carried out continuously throughout life, with the aim of improving citizens' qualifications, knowledge and skills.

This measure will promote the development of **training and skills accreditation programmes**, adapted to the DigComp Framework. Through these programmes it will be possible to obtain accreditations and micro-credentials to certify the results of small learning experiences and help people acquire the knowledge, skills and abilities they need for their personal and professional development. In turn, an Extremadura digital skills accreditation system will be developed for all those who need to demonstrate a certain level of technological skills and knowledge when applying for any job in the public or private sector.

Due to the geographical inequality in Extremadura, these training and accreditation actions will be of particular relevance in rural areas and areas with demographic difficulties, which will ensure the capillary nature of the actions through training centres and classes located in these specific areas.

As with the previous measure, in order to implement this programme, collaboration actions will be activated with other public/private bodies at a regional level, through agreements and direct aid grants: the Chambers of Commerce, Agri-Food Cooperatives of Extremadura and professional agricultural organisations.

Objectives

- Establish a system to recognise and accredit digital skills, to motivate participation in digital training and lifelong learning programmes, and improve employability.
- Promote the development of intermediate and advanced digital skills in rural areas.

Measure 3. Plan to awaken early digital vocations

Awakening early digital vocations is crucial in order to prepare new generations for the world of work and the sustainability of a digital regional economy. In today's landscape, digital skills are essential for the future, and careers related to digitalisation and innovation are at the forefront of economic growth. However, young people often face prejudices that suggest that digital careers are "hard", or "not for girls". As a result, it is essential to overturn these stereotypes and awaken early digital vocations, showing success stories that demonstrate that girls as well as boys can prosper in the digital field. A good formula to avoid prejudices is to inspire young people with success stories and provide them with opportunities to explore the digital world, encouraging them to choose careers that will not only be rewarding for them, but also vital to the economy and society. Fostering an interest, and technological training from childhood, are crucial to prepare future generations for an increasingly digitalised world, thereby ensuring the sustainable development and competitiveness of the region in the long term.

With this objective, **educational programmes and activities will be launched, designed to introduce students to basic concepts in science, technology, engineering and mathematics (STEM) from an early age**, using interactive methods and practical experiences to stimulate their curiosity and creativity.

With this inclusive and proactive focus, this measure will also help to prevent the digital divide from forming early on, which is especially evident in technological fields. The weak representation of women in these areas, accentuated by the lack of female role models, represents a challenge that this measure proposes to confront with determination.

Through specific initiatives and programmes, scientific and technological vocations will be cultivated in girls from primary and secondary school. From the development of digital skills to the promotion of female role models in technology, this measure will mark a milestone in Extremadura's commitment to lead the technological vanguard with equity and excellence.

Objectives

- Promote studies in science, technology, engineering and mathematics (STEM) with a focus on gender, improving digital abilities and skills and ensuring equity and inclusion in these disciplines.
- Give visibility to professionals in the digital and computing world that have greater demand and higher remuneration in the job market.

Measure 4. Extremadura Digital Health Plan

Currently, at a global level, we are facing an increase in pressure from the demand for healthcare and assistance deriving from the ageing population, the increase in the chronic nature of some previously lethal diseases, the change in the role of patients in managing their health, and the explosion of social media and mobile technology as new channels. These factors make it necessary more than ever to increase efforts to push for the digital transformation of the regional health services.

Extremadura is no stranger to this global situation, and so, within the framework of the ETDE27, a **Digital Health Plan** will be developed that will promote the digital transformation of the Extremadura Health Service (SES), the main objective of which will be to strengthen the regional health system through the implementation and effective use of digital technologies that allow us to optimise health processes and improve their efficiency and effectiveness. This plan is structured along four main lines of action:

- **Development of digital health services:** we will promote the creation of digital services aimed at citizens and the internal processes of the SES, with a focus on equity and accessibility. This includes offering new and better tools to health professionals in their day-to-day jobs, ensuring continuity of care and strengthening coordination between the different levels of care.
- **Interoperability of health care information:** we will promote the integration and exchange of information between the different bodies and agencies of the Regional Government of Extremadura, as well as with other regions, and at a national and international level. Within this line, we will promote the adoption of policies that ensure the management and governance of health data, and will push for the creation of a Health Data Space at a regional level that will facilitate the generation of scientific knowledge and the evaluation of healthcare services.

- **Analysis of health data:** we will strengthen the analysis of data relating to health, its determinants, and the functioning of the Extremadura public healthcare system, with the aim of improving decision-making and strategic planning.
- **Educating Extremadura citizens so they can play an active role in caring for their health:** we will facilitate access to the personal health information of each citizen and promote their participation in digital health services.

With the implementation of this measure, we aim to develop the SES into a care model based on the 5P principles of medicine (Preventive, Predictive, Personalised, Participatory and Precision), which also promotes research and the adoption of innovative technologies to meet the specific demands and characteristics of the Extremadura population.

Objectives:

- Optimise and evolve healthcare and improve the efficiency and effectiveness of the services delivered by the Extremadura Health Service through the implementation and effective use of technology.
- Promote citizen participation and joint responsibility in caring for their health and preventing illnesses.

L3.2. DIGITAL TALENT AND EMPLOYABILITY

Creation of technological talent and specialisation of the active population



The goals we are aiming for with this line...

- Position Extremadura as a leader in producing digital talent.
- Promote the creation of highly specialised and well-paid, quality employment in digital and technology sectors.
- Improve employability through the development of digital skills in the active population.
- Adapt training and re-skilling to the demands of the digital labour market.
- Retain digital talent and attract high-potential workers who will help to revitalise the local and regional economy.

Measure 1. Creation of digital talent

In order to turn these “potentials” into reality, Extremadura must embark on a double course of urgent action. On the one hand, in the short term and as recommended by the European Commission, it is necessary to implement quick-impact actions, such as **digital re-skilling**, reducing divides (in terms of gender, rural areas, and generational) and multiplying digital skills. On the other hand, it is crucial to initiate changes in design starting now which, in the medium term, will result in **fundamental structural changes to the education system**. These changes must foster early digital vocations, increase the number of young people choosing well-paying careers such as computer and industrial engineering and maths, and boost the number of students taking degrees in these disciplines, for which there is high demand and a promising future. Furthermore, Vocational Training in specialisms within this sector must be promoted.

In Extremadura, we need to be aware of the urgent **push that is needed in universities and vocational training towards digital specialisms**. This push must happen in both educational spheres, simultaneously and starting now, because both complementary perspectives are essential to develop a future with robust and multifaceted digital talent to prepare for different roles if we want to build a solid digital ecosystem. While university must go into depth on the fundamentals of latest-generation engineering, foster innovation and research and the development of new technologies, offering a solid foundation for understanding advanced concepts and preparing for very high-value specialised roles, vocational training needs to focus on developing practical skills by delivering highly applied training.

The synergy between these two educational pillars will allow for a learning continuum to be constructed, which will span from specific technical training through to advanced research. **We need both to be agile and adaptive in their approaches, and always aligned with the demands** of businesses and society, both present and future, rapidly updating their programmes to equip students with the latest foundations, trends, tools and technologies. Furthermore, both pillars, in different dimensions, must multiply their links with industry to prepare students to effectively enter the digital job market.

With this measure, the study plans for university degrees and training courses will be revised and updated to include relevant content on emerging technologies and digital skills that are necessary for the current and future job market. Furthermore, new academic programmes will be developed that focus on digital disciplines. A new computer engineering degree will be developed, a new digital vocational degree, and specialised programmes in cybersecurity, AI, advanced programming, quantum computing, blockchain, cloud computing, and other emerging technologies.

For this, collaboration with educational institutions, public bodies and private sector companies will be essential to ensure their relevance and effectiveness, and develop joint training programmes, such as a new dual vocational degree on the cloud, as well as offering internships to facilitate students' entry into the workforce after completing their training.

Within the university sphere, university faculties and departments will play a fundamental role in promoting the creation of new knowledge, thus facilitating the transfer of knowledge and technologies between academia and industry. They will also be responsible for promoting the development of specialised talent through training programmes and specific events.

Objectives

- Prepare and educate citizens in relevant and up-to-date digital skills for the current and future job market.
- Stimulate research in areas relating to the digital transformation and new technologies, such as AI, cybersecurity, data analysis, among others, to drive technological development and competitiveness in Extremadura.
- Collaborate with educational institutions and businesses to identify the most in-demand digital skills, and develop specific training programmes.

Measure 2. Support digital employability and re-skilling

There is often a gap between the needs of businesses and the skills of the active population, so digital employability is a significant challenge. In order to reach full employability and promote high quality employment, the development of digital skills will be promoted, focusing on two types of digital **re-skilling** and **up-skilling** programmes for the labour market.

For these training programmes, we will be relying on public-private collaborations to identify the needs of business. Among others, the Extremadura Employment Service will be a main player in improving employability in technology fields; identifying the skills currently demanded by the labour market and predicting future skills through solutions that use Big Data data analysis. Public-private collaboration will also be essential for creating job opportunities in the digital field.

With the aim of promoting employability, a technology platform will be established that will have **tools to assess soft skills and digital competencies**, in line with current technological trends. This platform will serve as a **meeting point to connect digital talent in new technological areas with job or entrepreneurial opportunities** in Extremadura.

Objectives

- Establish alliances with businesses to create employment opportunities and to carry out internships with digital skills.
- Provide workers with completely new or different skills, adapting to the emerging job roles or sectors that require different skill sets (re-skilling).
- Improve workers' existing skills within their current fields of work, strengthening specific skills and ensuring they stay competitive in their professional roles (up-skilling).

Measure 3. Attracting and retaining talent

In order to foster social and economic development in the region, Extremadura can benefit enormously from the contribution of people with talent. This includes Extremadura citizens who currently reside and work outside of the region, as well as people from outside the region who are looking for new opportunities in a more flexible work context, such as working from home. Extremadura enjoys good quality of life, so it needs to exploit this asset to attract and retain talent to drive economic growth in the region.

Extremadura has ideal conditions to turn itself into an attractive destination for **digital nomads**. As a result, one of the objectives of this initiative is to attract these nomadic professionals, focusing especially on talented young people, and counteracting the trend towards depopulation in the region's rural areas. In order to accomplish this, comprehensive services will be provided, facilitating contact between companies that offer options for working from home and professionals interested in settling in the area. Furthermore, training will be offered in the skills required for the jobs available, thereby facilitating entry into the workplace. In parallel, services and facilities will be provided to assist with integration into the community, including support for administrative procedures, advice in looking for housing, information on available co-working spaces, and access to municipal services, and more.

The second channel of action will focus on **talent retention**. The shortage of opportunities for highly qualified employment in the digital and technological sphere lead to a flight of talent to other regions with more job opportunities. Likewise, people who want to build their business project cannot find the staffing they need. To promote talent retention, a technology platform will be developed which will allow us to put talent in contact with digital initiatives in the region. This programme will be aimed at people who want to adjust their profile to work in specific sectors or businesses, change their career path, or start up new business projects in the digital setting.

Objectives

- Facilitate the return of professionals from Extremadura who are living and working outside the region, connecting talent to the opportunities that Extremadura's digital ecosystem has to offer.
- Promote talent retention in the region by implementing mechanisms that connect demand for employment with opportunities in the Extremadura job market that favour the development of local entrepreneurs in the digital field.

PILLAR 4. BUILDING A COMPETITIVE AND INNOVATIVE REGION

L4.1. COMPETITIVE AND DIGITAL BUSINESS COMMUNITY

- Measure 1. Digital transformation programme for scaling up businesses
- Measure 2. Programme for the digital transformation of the production ecosystem
- Measure 3. Personalised digital transformation consultation programmes for businesses

L4.2. TECHNOLOGICAL SPECIALISATION AND DIGITAL INNOVATION ECOSYSTEMS

- Measure 1. Digital Innovation Hub (DIH)
- Measure 2. Drive innovation and technological entrepreneurship
- Measure 3. Strengthen the technology sector through the development of advanced technologies

L4.3. BOOSTING THE STRATEGIC REGIONAL SECTORS

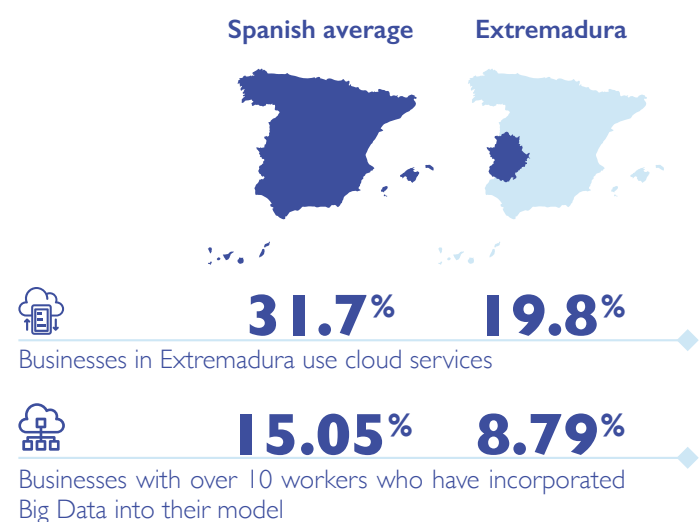
- Measure 1. Digital transformation plan for the agricultural sector
- Measure 2. Digital industry 4.0
- Measure 3. Extremadura, smart tourism destination
- Measure 4. Boost the digital audiovisual sector



PILLAR 4. BUILDING A COMPETITIVE AND INNOVATIVE REGION

This pillar is centred on the digitalisation of business, **making use of innovative technologies, data, AI, blockchain⁴⁷, robotics, and the internet of things (IoT)⁴⁸** to achieve increases in productivity, scaling up of businesses, and internationalisation. In this way we aim to boost strategic sectors in the region and strengthen their ecosystem of innovation and entrepreneurship.

The European framework sets ambitious goals in this area, aspiring for 75% of EU businesses to adopt cloud computing, data and/or AI, and at least 90% of SMEs to reach a basic level of digital intensity^{49 50}. However, currently, **only 19.8% of businesses in Extremadura use cloud services**, compared with the national average of 31.7%⁵¹. Extremadura is **more than 6 percentage points behind the Spanish average when it comes to businesses with over 10 workers who have incorporated Big Data into their business model** (8.79% in Extremadura in 2022 versus 15.05% in Spain in 2022)⁵². In this regard, there is a long way to go to reach convergence, which is why the EDTS27 includes concrete actions aimed at increasing the competitiveness of Extremadura businesses through digitalising their processes and incorporating advanced technologies in order to develop new business models.



In addition, with the idea of accelerating the digital transition of the comprehensive production model in Extremadura, technological specialisation, innovation and digital entrepreneurship will be

promoted. This will be achieved by strengthening the regional strategic sectors, relying on the Digital Innovation Hub (DIH), technology incubators and already-established knowledge networks. As part of this strategy, focus will be placed on strengthening the primary and agri-food sector; Industry 4.0, (integrating technology into industrial processes), the tourism sector and the technology and audiovisual sector, as key sectors for the region.

L4.I. COMPETITIVE AND DIGITAL BUSINESS COMMUNITY

Increase in competitiveness through the digitalisation of business



The goals we are aiming for with this line...

- Drive the scaling up of businesses through the digital transformation to create employment, promote innovation, increase the region's competitiveness, and drive attraction and investment.
- Strengthen the business network in Extremadura through the digitalisation of processes and business models, with the aim of increasing competitiveness and productivity of businesses, driving electronic commerce and boosting the IT sector.
- Increase the use of disruptive technologies in businesses and decision-making based on data.
- Attract IT businesses (national and international) and new technology investment projects to Extremadura.

Measure 1. Digital transformation programme for scaling up businesses

Scaling up businesses is the process through which a business grows significantly in terms of income, size of the organisation, geographical scope or market impact. Unlike conventional business growth, scaling up implies a rapid and sustained increase in the business' capacity to create value and obtain a significant market share.

The drive for **business scaling programs** at a regional level is increasingly important because companies that are in this phase contribute significantly to the GDP growth of the communities

in which they are based, and are drivers of job creation, since this transformation usually requires a considerable number of employees to be hired in order to meet the growing demand for the products or services offered. A relevant figure in this respect is that Spanish SMEs that reach business scaling levels contribute between 47%-69% of the new employment generated by companies with more than 10 employees⁵³. Furthermore, due to their high potential for growth and profitability, these businesses tend to be targeted by national and international investors, which can help attract more foreign investment and consolidate a robust business ecosystem in Extremadura.

As part of this measure, intensive work programmes will be designed to help and guide companies and start-ups from any business sector that are based in Extremadura to scale up their operations and expand their business to new market segments, both nationally and internationally. These programmes will have a specific duration, will be designed in waves, and will lead to a series of actions that will be focused on providing training on business, technology for digital transformation and scaling methodologies such as Lean Start-up, personalised mentoring with experts and group masterminds, access to national and international investors by presenting projects, holding events and networking sessions, among other actions.

In addition to these actions, and as a pillar that will support the success of each programme, we will start with the preparation of an initial diagnosis of the situation of each business or project that will allow us to design a customised roadmap for the digital transformation of each business model. Depending on the degree of digital maturity of each business or start-up, this roadmap will incorporate the need or convenience of applying innovative technologies such as AI, IoT, blockchain, cybersecurity, digital twins⁵⁴, etc. to the business, or staying with more conventional digital transformation models.

Objectives

- Facilitate the accelerated growth of businesses through implementing IT solutions, helping them overcome barriers that may be limiting their growth, and providing them with the resources and support they need to expand their operations.

Measure 2. Programme for the digital transformation of the production ecosystem

There is a broad consensus on the contribution of digitalisation as one of the key instruments that enables companies, and SMEs in particular, to be more resilient in times of crisis, strengthen their ability to adapt to adopt new processes, apply digital technologies to the transformation of their business and achieve an increase in their productivity, competitiveness and profitability.

In this regard, it is essential to incorporate actions that promote the adoption of digital transformation processes by Extremadura businesses. The **programme for the digital transformation of the production ecosystem** is configured as a pillar on which these digitalisation processes will be leveraged, which will contribute directly to the region's economic development.

This programme is especially aimed at SMEs, micro-SMEs and self-employed people of Extremadura who want to make progress in their level of digital maturity, covering all their digitalisation needs, for which it will address the following areas:

- **Incentives to incorporate technology into production processes.** These will range from assistance in the implementation of basic technological solutions (CRMs, ERPs, online sales, etc.), licenses or hardware; to business consulting in digitalisation; to advice and assistance in the implementation of more advanced technology.
- **Knowledge and self-diagnosis of the degree of digital maturity of the business.** A service will be made available that will show the starting position of the company before the digitalisation process, and the needs and gaps that need to be covered.
- **Promotion of digital culture.** Awareness-raising and training actions will be carried out on the convenience and advantages of digitalising production processes and adopting new business models based on technology. Emphasis will be placed on the adoption of electronic commerce, cybersecurity and the use of automated processes and data in business processes.
- **Promotion of advanced technologies for the development of Industry 4.0.** (collaborative robotics, blockchain, AI, IoT, additive manufacturing processes, digital twins, etc.): Initiatives will be implemented to improve the performance, productivity and competitiveness of the industrial sector. This promotion will be carried out from different forums, such as the Extremadura ICT Demonstration Centre (CDTIC) and the Digital Innovation Hub (DIH).

⁴⁷Blockchain: technology that facilitates the gathering and storage of large amounts of data in a way that is shared and decentralised. It generates a unique and immutable record that guarantees the security, accessibility and transparency of each record stored in it.

⁴⁸Internet of things (IoT): interconnection of physical devices through the internet, allowing them to gather and share data to automate processes and create smart systems.

⁴⁹Digital Economy and Society Index (DESI), annual report published by the European Commission. According to this report, "digital intensity means that a business uses at least 4 out of 12 selected digital technologies (such as use of the cloud, business resource planning IT programmes, artificial intelligence, social networks and online sales)."

⁵⁰European Commission Europe's Digital Decade: digital targets for 2030. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

⁵¹INE (Spanish National Statistics Institute) 2023. https://www.ine.es/prensa/tic_e_2022_2023.pdf

⁵²Extremadura ICT Observatory (Observatorio Extremeño de las TIC), 2022. https://extremaduradigital.org/indicadores/de-empresas-con-mas-de-10-trabajadores-que-analizaron-big-data/?post_id=492

⁵³OECD, 2021. Understanding Firm Growth: Helping SMEs Scale Up, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, <https://doi.org/10.1787/16c60b04c-en>

⁵⁴Digital twins: a virtual replica of a physical object, process or system in the real world — an aeroplane turbine, the production chain of a business, etc. — into which data is entered in real time, captured through sensors or Big Data technology, and subsequently processed by AI and Machine Learning systems. These replicas make it possible to analyse processes, experiment with physical objects that already exist, and create hypothetical scenarios to predict behaviour (execute simulations, study performance issues and generate possible improvements).

⁵⁵Additive manufacturing: technology that makes it possible to convert digital models into solid three-dimensional models through 3D printing without the need for moulds or tools of any kind. It has been established as one of the pillars of Industry 4.0.

Objectives

- Drive a digital revolution among micro, small and medium-sized enterprises and self-employed entrepreneurs in Extremadura, providing comprehensive support for the adoption and effective application of innovative digital solutions.
- Promote the creation of collaborative digital ecosystems where businesses can share resources, knowledge and experience to drive business digitalisation, innovation and competitiveness in the region.
- Promote digitalisation in traditional sectors of the Extremadura economy, such as agriculture, livestock farming or the agri-food industry, through the use of innovative technologies such as IoT, drones or data analysis.

Measure 3. Personalised digital transformation consultation programmes for businesses

The businesses of Extremadura, mostly SMEs and micro-businesses, have not adopted digital technologies due to financial limitations, lack of knowledge or resistance to change. However, the digital transformation is crucial in order to improve efficiency, productivity and the capacity to compete in an ever more digitalised market. Therefore it is necessary to provide them with adequate support so that they can embark on this process effectively, feeling supported by professionals who will ensure the success of their transformation process towards a digital way of working.

As a response to this need, work will be done to implement **personalised digital transformation consultation programmes for businesses**, with a comprehensive focus, transforming their traditional business models into ones that integrate digital capabilities as a fundamental part of the business. Numerous businesses in Extremadura perceive that the current programmes are generic or lack the necessary tools to guide the process of business digitalisation. As a result, the priority of these programmes will be to offer highly personalised consultancy and provide customised support to each business in designing and developing their digital transformation strategy. The consultants, experts in business digitalisation, will help businesses who take part in the programme to identify areas of opportunity, select the appropriate technologies for their specific needs, implement them effectively and manage the organisational change that this process brings.

The personalised digital transformation consultancy programmes comprise a series of stages and activities designed to address the specific needs of each business, commencing with a diagnostic of their starting position and needs, then laying out a personalised digital transformation strategy, through to follow-up during the process of implementing the strategy.

Objective

- Design and implement digital transformation strategies adapted to the needs and capabilities of each business, with the aim of improving their efficiency, productivity and competitiveness in an increasingly digitalised business environment.

L4.2. TECHNOLOGICAL SPECIALISATION AND DIGITAL INNOVATION ECOSYSTEMS

Boosting the technology sector through regional knowledge networks, digital entrepreneurship and the development of advanced technologies



The goals we are aiming for with this line...

- Establish an environment that is ripe for innovation, experimentation, and collaboration between public and private players, allowing the region to remain at the forefront of technological advances in the market.
- Promote digital entrepreneurship and innovation in businesses, with a focus on the creation and strengthening of start-ups and technology-based companies.
- Boost Extremadura's innovation ecosystem to facilitate the transfer of digital knowledge between the different players and businesses that make it up.
- Consolidate a robust digital and technology sector, focusing on the development of emerging advanced technologies.

Measure 1. Digital Innovation Hub (DIH)

The Digital Innovation Hub has become a key infrastructure in Extremadura's digital innovation infrastructure when it comes to creating and consolidating connections between the various players that make it up (businesses, universities, research centres, chambers of commerce, regional governments and other bodies and institutions). In this way, and through this space, knowledge

networks will be set up which will foster innovation and the adoption of emerging digital technologies in the region.

In addition, the DIH provides a catalogue of digitalisation and innovation support services to its members that provide high added value to business activity, and aim to improve competitiveness and drive the creation of products and services based on digital technologies. Without being exhaustive, this catalogue offers support services and expert advice on digital transformation, technology testing and experimentation programs through proof of concept and prototypes, training for companies, holding events, seminars and demonstration sessions, and finding sources of financing, among other services.

This measure is focused on promoting the use of the DIH and its services, as well as facilitating the expansion of **Extremadura's digital innovation node**, supporting the growth of this initiative to add more and more players to the regional network, disseminate a common methodology and expand the catalogue of services and assets that the ecosystem has to offer to help digitalise the Extremadura economy.

The services of the DIH focus on four conceptual areas: technologies for efficiency, mainly in the use of energy; technologies for ecology, to promote the ecological transition and sustainability in SMEs; technologies for the economy, orientated towards developing and implementing Industry 4.0; and technologies for equity, aligned to serve society. Thus, the activity of the DIH is essential to promote innovation, support businesses, promote entrepreneurship, facilitate collaboration between sectors and respond to the social and environmental challenges through the use of digital technologies.

Objectives

- Boost the Extremadura digital innovation node through the DIH and other knowledge networks in order to increase the number of players involved and active in the ecosystem, promoting the digitalisation and competitiveness of the regional economy.
- Expand the catalogue of support services specialising in high-added-value innovation and digitalisation offered to businesses and organisations in Extremadura.

Measure 2. Drive innovation and technological entrepreneurship

The economy of Extremadura is characterised by being focused on traditional sectors such as agriculture, livestock farming, the agri-food processing industry and tourism, which require a high level of innovation in their processes and business models to differentiate themselves, be competitive and grow sustainably in the global market. The promotion of innovation and technological entrepreneurship is therefore a strategic way to reach this objective. The creation of technology-based businesses and start-ups in the region focused on the development of innovative advanced technologies that improve processes and models in the most traditional sectors, will make it possible to increase their competitiveness, generate high quality employment, drive regional development and attract external investments to Extremadura.

In this way, through **boosting Extremadura's network of technology incubators**, such as the **Extremadura Open Future** acceleration hub in Atalaya, or **Extremadura Open Innovation**, we aim to develop areas of innovation that are specialised by sector. These incubators will allow businesses to implement technology testing and experimentation programmes applied to specific processes, such as agricultural and livestock farming systems, improvements in parts of the food processing chain and new ways of forecasting tourism demand. All of this is with the aim of providing high added value to industries. Furthermore, this network will provide businesses, start-ups and technology-based businesses with a series of specialised spaces that encourage incubation and acceleration of business ideas and the birth of new businesses or projects, and offer specific services to support these activities: mentoring, access to an international investment network, methodology to implement entrepreneurial initiatives, networking and participation in collaborative networks, visibility networks, and more.

Finally, through these spaces, we will promote the dissemination of specialised technological knowledge, assessing the regional availability of the most advanced training and innovation capabilities. This assessment will consider indicators such as high-tech exports, the creation of new innovative companies, industrial property statistics, the number of scientific publications, etc.

In this context, examples of sectoral projects related to the agri-food sector include genetics applied to the quality of meat and processed products, optimisation and development of food production processes, and innovation in new conservation technologies.

Objectives

- Consolidate and strengthen Extremadura's technology incubator network, specialised by sector.
- Promote the creation of start-ups and technology-based businesses that will develop innovative solutions to improve the competitiveness of the traditional regional sectors, thereby connecting Extremadura's driving-force businesses to the R&D&i ecosystem.
- Bring private financing closer to innovative digital projects.

Measure 3. Strengthen the technology sector through the development of advanced technologies

The promotion of a technology sector focused on developing emerging advanced technologies such as AI, blockchain, IoT and digital twins, etc., responds to the needs and demands of current Extremadura society which, with the aim of improving its position within an increasingly globalised market, requires a boost to its competitiveness and its rates of industrial productivity⁵⁶. Additionally, the development of these technologies will help to boost innovation, competitiveness and sustainable economic development in the rest of Extremadura's business sectors.

This measure will promote research, development and adoption of solutions based on advanced technologies by Extremadura technology companies, identify opportunities for the application of these technologies, provide resources and support for their implementation, and create an environment conducive to digital innovation and technological entrepreneurship.

Objectives

- Strengthen the technology and digital sector in Extremadura, especially innovative businesses focused on the development of emerging technologies.
- Promote the development and application of advanced technology to improve competitiveness and growth in Extremadura's industrial sectors: collaborative robotics, internet of things (IoT), blockchain, additive manufacturing and 3D printing, AI, digital twins, etc.

L4.3. BOOSTING THE STRATEGIC REGIONAL SECTORS

Promote initiatives that affect sectors such as agriculture, industry, the digital tourist experience or the audiovisual sector, among others



The goals we are aiming for with this line...

- Boost the digital transformation of the agriculture and agri-food sector to improve efficiency, traceability, food safety and promote sustainable innovation.
- Facilitate Extremadura's transition to Industry 4.0, promoting digitalisation and the incorporation of advanced technologies in the industrial sector.
- Promote the region as a smart and sustainable tourist destination, optimising the tourist experience, contributing to the sustainable development of rural areas and promoting the regions values, landscape and cultural and urban heritage.
- Achieve the digital transformation of the audiovisual sector to improve operational efficiency, increase accessibility of content, promote innovation in the production and distribution of media, and reinforce the sector's competitiveness.

Measure 1. Digital transformation plan for the agricultural sector

The **digital transformation plan for agriculture in Extremadura**, co-led by the Regional Ministry for Agriculture, Livestock Farming and Sustainable Development, responds to the need to modernise the agricultural sector; improve its competitiveness and tackle environmental challenges. Digitalisation will facilitate the optimisation of processes, effective resource management, improvement in the quality of products and reinforcement of the supply chain.

In line with European initiatives on the transformation of the agri-food sector; this measure aims to develop the food system towards a sustainable model. In this way, focusing on the pillar of sustainable production, processing and distribution, the plan will seek to promote sustainable agricultural practices, improve traceability and digital transparency in the agri-food chain, and support local production.

In order to promote these actions and encourage specialisation, innovation and digitalisation, it will be necessary to carry out training programmes, awareness-raising and communication

actions, and to encourage collaboration between the training centres and the agricultural branch of the research and innovation system of Extremadura.

One of the main initiatives on which work has already started is the **Agri-Food Network Platform**, promoted by Extremadura, Castilla-La Mancha, Castilla y León and La Rioja to create a digital ecosystem throughout the agri-food chain using AI. The project's aim is to use AI and emerging technologies to provide workers and all players involved in the agri-food value chain with tools to enable them to access detailed information on crops, adopt advanced environmental technologies and ensure product traceability. Furthermore, we aim to make use of the available data and promote exchange of knowledge in order to optimise decision-making. This initiative will translate to a significant improvement in traceability and trade within the agri-food sector; thereby driving its digitalisation and competitiveness.

Objectives

- Facilitate the rapid adoption of cutting-edge technologies tailored to the specific needs of arable farmers, livestock farmers and industries, in order to accelerate the process of digital transformation in the agricultural sector.
- This will lead to progress towards a food model that will promote sustainability and transparency, strengthening digitalisation and competitiveness in the agri-food sector.

Measure 2. Digital industry 4.0

Within this measure, actions will be adopted to accelerate the transition of Extremadura's industry towards **Industry 4.0** – also known as the **Fourth Industrial Revolution** –. It is an industry based on smart factories where advanced technologies are integrated, such as IoT, cloud computing, AI, robotics, augmented reality, additive manufacturing or blockchain to carry out online management of production in all its facilities and operations.

There needs to be a clear and rapid evolution of traditional industry and its industrial processes towards integration of these technologies, with the aim of improving the efficiency, productivity and competitiveness of the whole industrial and production system. Technological progress is quickly transforming the way in which industrial operations are carried out, and businesses must adapt so as not to be left behind.

However, the transition to Industry 4.0 business models and the implementation of these digital technologies in industrial processes must be orderly, methodical and sequenced in order to improve efficiency, increase industrial productivity and generate business benefits.

In this way, **programs will be launched to help companies in the industrial sector understand what Industry 4.0 is and how it can be applied specifically to their business context**; how to evaluate the business maturity index in this context; identify priority areas for growth and innovation; and learn about and choose the existing technologies that best apply to their organisation, sector and business model. Through this methodology and specialised consultancy, we will respond to the transformation needs of industrial businesses in Extremadura.

On the other hand, as we have seen before, this measure will be complemented with actions to strengthen the Extremadura technology sector; seeking to promote the development of advanced technologies applied to specific products and services in the industrial sector; making it possible, for example: to control parameters and manage costs (Big Data), carry out efficient monitoring in real time (IoT and sensors), automate processes and eliminate inefficient tasks or manuals (RPA and robotics), produce simulations and modelling (digital twins), and more.

Objectives

- Facilitate the transition of industrial business in Extremadura to Industry 4.0, providing consultancy services and a clear methodology to achieve change in their business models.
- Stimulate the design and creation of new products and services based on advanced technologies applied to the industrial sector.
- Increase operational efficiency, optimising industrial processes through innovation to maximise value generation throughout the production and supply chain.

Measure 3. Extremadura, smart tourism destination

Recognising the role of **tourism as a driver of economic growth in the region**, this measure seeks to make the most of new technologies and promote Big Data to offer more personalised, efficient and sustainable tourist experiences. In collaboration with the General Directorate for Tourism, initiatives will be developed that range from implementing sensors to control the flow of visitors, to promoting digital tourism through personalised smart platforms, positioning Extremadura as an innovative and attractive destination for travellers.

⁵⁶Industrial productivity is the measure used to calculate productive efficiency, in other words, the relationship between the production obtained and the quantity of inputs used to manufacture the resulting products or goods.

We will therefore promote **smart heritage projects**, the development of smart tourism services and infrastructure, from public Wi-Fi to mobile applications with virtual guides and tourist information, to improve the accessibility and quality of the visitor experience. Furthermore, digital training and education will be provided to business owners in the tourism sector to improve their business skills and promote the adoption of digital technologies to manage and promote their businesses. Tourism sustainability plans will be developed, financed by NextGenerationEU funds, which will include measures such as the digitalisation of customer services, promotion of digital marketing, or improvement in the coordination between business owners and hotel owners, among other measures. The Regional Government will develop a new tourism portal to help boost the sector and contribute to economic growth in the region.

Objectives

- Promote the competitiveness and sustainability of the tourism sector through the adoption of new technologies such as Big Data, advanced analytics and engines for personalising the tourism offer.
- Implement smart solutions and digital tools to offer a safer, more enriching and more personalised tourist experience, that allows visitors to explore Extremadura's cultural and natural heritage in an innovative way.
- Convert Extremadura's tourist towns into Smart Tourism Destinations.

Measure 4. Boost the digital audiovisual sector

The audiovisual sector is experiencing an important revolution due to the appearance of new audiences (such as gamers, eSports, etc.), changes in consumption habits (pay-per-view, subscriptions, streaming platforms, etc.), the impact of technology (immersive content, avatar production, etc.) and the influence of social networks as a channel for disseminating content. This process has been intensified by the sector's transformational role on other industries, such as health, education, culture, tourism and smart cities, among others. Audiovisual content is applied to various activities, and possesses huge economic potential, which requires adaptation to technological advances in order to maintain its competitiveness and sustainability in the long term. All of these changes, along with the emergence of new technologies, offer numerous opportunities to innovate in the production and distribution of latest-generation audiovisual content, as well as to explore new formats and user experiences.

This measure will implement programmes and actions that will be structured around three pillars:

Innovation

The digital audiovisual sector has huge potential to develop and adopt advanced technologies, fundamentally through the application of virtual and augmented reality, data analysis, AI, web 3.0, metaverse, etc. In this regard, we will promote experimentation and development of new forms of production, distribution and creation of new formats and content.

Economic development and talent creation

We will foster vocations and the development of professional profiles in areas such as production, post production, graphic design, software development and digital marketing, showing the importance of this strategic sector within and outside of Extremadura. Furthermore, we will aim to attract public and private investors interested in making the most of the region's economic and cultural potential.

Boosting internationalisation

Participation and international collaboration of the Extremadura digital audiovisual sector in the global market will be increased, and its visibility outside of the region will be promoted through the holding and participating in specialised events and fairs within the region.

Objectives

- Foster the creation, production and distribution of audiovisual and immersive content and new associated technologies, providing financial, technical and logistical support to entrepreneurs and businesses in the digital audiovisual sector.
- Boost the presence and visibility of Extremadura's digital audiovisual industry in national and international markets.



5 GOVERNANCE AND MONITORING MODEL OF THE EDTS27

PARTICIPATIVE AND TRANSPARENT GOVERNANCE

In order to **guarantee the success of the Extremadura Digital Transformation Strategy 2027**, a new stage for dialogue has been set up when planning and developing the digitalisation actions of the Extremadura Regional Government which, together with monitoring the performance and impact indicators presented in the following chapter “Model for Monitoring the EDTS27: specify and measure” Model for Monitoring the EDTS27: specify and measure, will ensure optimal execution of the specific measures planned, and fulfilment of the strategic objectives during the implementation period of the strategy.

The **governance model** that has been drawn up will seek to encourage the participation and collaboration of stakeholders involved in developing the strategy, and it will be broken down into several **governance levels**, ensuring transparency in the execution of the actions, allowing for proper accountability and communication of the results and impact achieved.

However, the **initially-proposed structure is flexible, and could be adapted as the implementation of the EDTS27 progresses**. If new needs for governance and management of the measures are identified, new bodies or mechanisms may be created to optimise monitoring of the process and coordination between the participating players.

BOOSTING INTER-ADMINISTRATIVE COLLABORATION

According to **Decree 234/2023**, of September 12, which establishes the organisational structure of the Regional Ministry for the Economy, Employment and Digital Transformation for 2023, the **General Secretariat for Digital Transformation and Cybersecurity** is responsible for promoting and coordinating cross-cutting measures for digital innovation, technological modernisation, and implementation of the Digital Civil Service. Specifically, Article 7.1 a) establishes that it is the responsibility of this body to “**promote the Digital Transformation Strategy of Extremadura, both of the Regional Government and its public bodies, (...) as well as matters relating to the institutions, companies, organisations and citizens of the region.**”

Based on this premise, the organisational structure of the EDTS27 governance model will be made up of several bodies that will ensure the organisation and involvement of the different players that will work on the development of the Strategy, led by the Regional Ministry for the Economy, Employment and Digital Transformation. Thus, at an intra-administrative level, the coordination framework will consist of the following governance bodies:

Governing Board

The **highest governing body that will exercise leadership and make decisions on the EDTS27**. This body will be chaired by the **Regional Minister for the Economy, Employment and Digital Transformation**, with the vice-chair being the head of the General Secretariat of Digital Transformation and Cybersecurity, within the scope of his or her powers.

In turn, this body will be made up of eleven seats, distributed as follows: two assigned to the heads of the General Directorate of Digital Civil Service and the General Directorate of Regional Digitalisation, with the remaining nine held by the General Secretariat of Equality and all the ministries of the Regional Government of Extremadura. This will guarantee the integration and coordination of the strategic formulations of the different areas of government.

The Governing Board will have a **Technical Support Group** which will prepare annual follow-up reports on the implementation of the strategy, and will help the board to design and draw up the specific programmes deriving from it. Furthermore, this unit will be charged with setting out and developing the **Biennial Action Plan** which will be laid out as a dynamic document, the aim of which is to materialise the ambitions, strategic lines and specific measures planned in the EDTS27 into concrete plans and projects.

Sectoral Committees and Coordination Committees

For the development and monitoring of the strategic lines in specific areas of government, **Sectoral Committees** will be set up. These committees will serve as a forum for active listening, participation and follow-up for all of the governing bodies of the Regional Government of Extremadura involved in the digital transformation process within their area of knowledge and specialisation. Notwithstanding further organisations joining, at least four Sectoral Committees will be created which will provide continuity to the Inter-administrative meetings held as part of the process of drawing up the strategy.

In addition, and on an ad hoc basis, when **high-impact joint projects** are being developed, **Coordination Committees** may be established and held in which all the governing bodies responsible for their development, execution and monitoring are represented, still within the framework of the EDTS27.

Both the Sectoral Committees and the Coordination Committees will be assisted by **operational working groups** which will be made up of those directly responsible for the actions and their teams. These teams will be responsible for setting out, developing, implementing, detecting incidents and risks, and conducting the operational monitoring of the projects specified in the Biannual Action Plan.

PROMOTING COLLABORATION WITH SOCIOECONOMIC STAKEHOLDERS

This Collaboration Framework with social and economic and social players involved in the development of the EDTS27 will be essential for its successful execution. It will be materialised in two advisory bodies:

Advisory Board

The Advisory Board is an **advisory body that facilitates the institutional participation of social and economic players of special relevance in Extremadura**, the main aim of which is to provide advice and guidance to the Governing Board in exercising its role. Its main functions are to provide guidance and support in decision-making on matters submitted to it by the Governing Board within the context of the Digital Transformation Strategy, based on its experience, independence and good criteria.

At a minimum, it will be comprised of the following institutions and corporations: Provincial Councils; City Councils of major cities; the University of Extremadura, through experts in different technological specialisms of the institution; Business Schools; Chambers of Commerce; Organisations with high representation as social actors, such as, for example, Trade Unions; Employers' Association; Business Corporations of Cáceres and Badajoz; key organisations of the Foundation Sector; entrepreneurs of recognised prestige in the regional digital sector in various fields, such as software development, AI, cloud computing, robotics, industrial automation and digital animation; and national/ international organisations and/or corporations.

The appointment of the entities and persons that make up the Advisory Board will be published in the Official Journal of Extremadura. Initially, the body will be composed of 25 members who will homogeneously represent the different types of regional socio-economic players and business sectors. However, depending on the relevance and initiatives adopted by this Board, more vacancies may be included or the initial designations modified.

The composition, roles and internal organisation of this body will be specified in its articles of association. The Advisory Board sessions must be held at least once a year and their purpose will be to present to the Governing Board an evaluation report and a report on the actions carried out during the current year and a proposal for improvement actions for the following period.

Executive Committee

In order to establish **an operational point of connection between the Governing Board and the Advisory Board**, an Executive Committee will be created, made up of members of both bodies.

This instrument will hold work sessions on demand based on the cooperation and management needs that arise, and will resolve technical issues regarding the development of specific measures that bring together the Regional Government and socio-economic stakeholders. The members of the Executive Committee will inform their respective bodies of the origin of the decisions taken and updates made as part of their activity.

The composition, competencies and specific rules of operation will be established in the committee's articles of association.

Business Forum

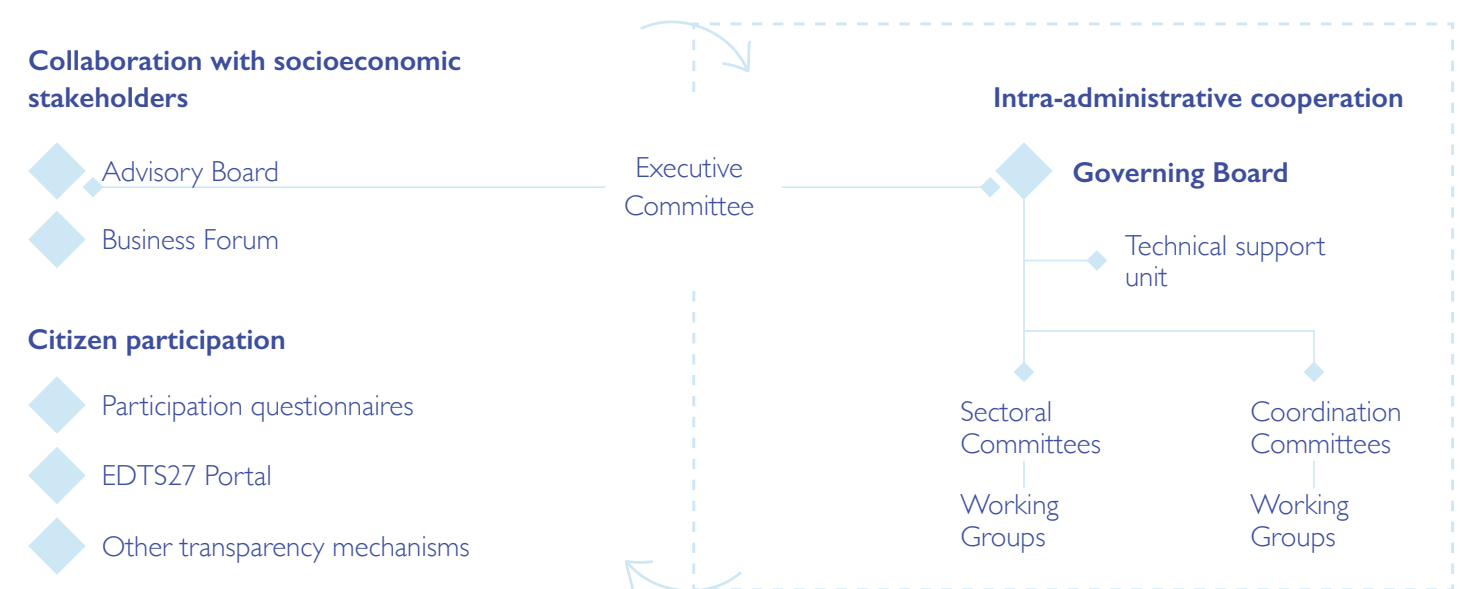
A dialogue forum will be established, made up of a **dynamic ecosystem** in which **all businesses involved in the development, execution and support of the EDTS27** will be represented. This forum will be held within the context of the Digital Innovation Hub (DIH), in which a large proportion of the businesses that make up the Extremadura economy currently take part.

SOCIAL PARTICIPATION

With regards to social participation, actions aimed at **dialogue with citizens will be promoted, providing information related to the development and execution of the Strategy**, such as: the publication of reports, the launch of the Portal of the Extremadura Digital Transformation Strategy, in which content will be published and its projects will be monitored (where performance and result indicators, relevant news, publications related to current issues on digital transformation, etc. will be presented); or the implementation of questionnaires or other participation mechanisms to listen to and take into account citizens' needs, opinions and suggestions.

This will promote transparency and dialogue with society, involving it and making it part of the success of the EDTS27.

ORGANISATIONAL CHART OF THE GOVERNANCE MODEL



MODEL FOR MONITORING THE EDTS27: SPECIFY AND MEASURE

In order to carry out real monitoring and effective governance, it is necessary to **“specify and measure”**. Setting strategic objectives and indicators for the specific measures laid out in the EDTS27 is key to achieving it.

It is also essential to incorporate continuous monitoring and review mechanisms for projects in development, and the evaluation of the objectives achieved, through **impact and performance indicators**, so that an evaluation of the achievements can be made, barriers to their fulfilment can be detected and actions can be taken to mitigate them.

These indicators will be the main source for knowing the status and degree of implementation of the Strategy at all times, ensuring **transparent governance that transmits confidence** to the stakeholders involved in the process and in Extremadura society as a whole.

 PILLAR 1	OKR	2023	2027	SOURCE
L1: A Citizen-centred Regional Government	Administrative procedures or processes that could be performed digitally	45%	100%	CAE (Electronic Civil Service Questionnaire)
	Level of citizen satisfaction with digital public service (out of 10)	7.4	≥9	DGDA, 2023
L2: Agile and homogeneous Regional Government	Reduction in the resolution times of simplified administrative procedures	-	30%	DGDA
	Increase in the number of interoperable data through the intermediary platform (PID)	127.71	155	CAE, 2023
L3: Efficient and innovative Regional Government	Launch of the new Data Centre (CPD)	-	Yes	DGDA
	Integration of innovative technologies to improve public services	-	15	DGDA
L4: Regional Government orientated towards the professional development of civil servants	Public employees who move from a basic level of digitalisation to an intermediate level, according to the Competency Model Framework	-	50%	DGDA

 PILLAR 2	OKR	2023	2027	SOURCE
L1: Cohesive and connected territory	Homes that have an internet connection	93.3%	95%	INE (Spanish National Statistics Institute)
	Businesses that have access to the internet via cable and fibre optic networks	78%	90%	ONTSI (Spanish National Observatory of Technology and Society)
	Coverage of 5G networks	76.51%	85%	Extremadura ICT Observatory (Observatorio Extremeño de las TIC)
L2: Smart Region	Actions that have been carried out across all calls for tender for the development of smart villages	260	340	DGDR
L3: Cyber-safe Region	Creation of the Regional Cybersecurity Operations Centre	No	Yes	DGDR / DGDA
	Creation of the Interinstitutional Monitoring Commission on Cybersecurity	No	Yes	DGDR
	Training and awareness-raising campaigns on cybersecurity	-	15	DGDR

 PILLAR 3	OKR	2023	2027	SOURCE
L1: Inclusive society	Population with at least basic digital skills	58%	68%	INE (Spanish National Statistics Institute)
	Women enrolled on STEM degree courses	19.1%	30%	University of Extremadura
L2: Digital talent and employability	Graduates in technology specialisms	2%	5%	Extremadura ICT Observatory (Observatorio Extremeño de las TIC)
	Campaigns to attract digital nomads in rural areas of Extremadura	-	10	DGDR

 PILLAR 4	OKR	2023	2027	SOURCE
L1: Competitive and digital business community	Businesses with a broadband connection that have an online presence	71.3%	80%	INE (Spanish National Statistics Institute)
	Businesses that use cloud computing	20% (2022)	30%	INE (Spanish National Statistics Institute)
L2: Technological specialisation and digital innovation ecosystems	Companies with more than 10 workers that use artificial intelligence technology (AI)	6.09 %	15%	INE (Spanish National Statistics Institute)
	Systematisation of digital assets for the provision of advanced digitalisation services to businesses	271	400	DIH Extremadura
L3: Boosting the strategic regional sectors	Agro-industrial businesses that have adopted new technologies	-	20%	Extremadura ICT Observatory (Observatorio Extremeño de las TIC)
	Initiatives supported through regional initiatives to drive Industry 4.0	-	40	DGDR

TABLE OF IMPACT INDICATORS

Setting the impact indicators that are laid out and associated with each pillar and strategic line of the ETDE27 will make it possible to **periodically evaluate compliance with the goals laid out** in this document. Additionally, it will enable adjustments to be proposed to the road map, Biennial Action Plan or, ultimately, to the EDTS27 (change of priorities, calendar modification, planning new projects and indicators, etc.).

Furthermore, additional and specific impact indicators for each action and specific performance indicators (KPIs) will be established in conjunction with the projects defined in the **Biennial Action Plan**. These two categories of indicators are closely linked. The performance indicators are instruments to assess and monitor the development of projects and activities that will allow us to reach the objectives reflected in the impact indicators. Therefore, the KPIs are centred on measuring the efficiency, quality and quantity of the activities performed and the products or services delivered during the implementation of a project or programme and, in addition, they will enable us to:

- Identify best practices that can be applied both within the project itself (for example, specific actions carried out while implementing an action), and to the rest of the Strategy (e.g. improvements implemented in the management and roll-out of a particular project).
- Initiate the cycle of continuous improvement when deviations are detected, making it possible to identify the causes of the deviation and set out and implement corrective actions.

6 ROAD MAP



EDTS 2027 ROAD MAP



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