

# DIGITAL TRANSITION



## 1. MOTIVATION

### Characterization

Industry in Navarra is the most important economic sector for its contribution to regional competitiveness and quality employment

The Digitalisation of society and economy is an exponential trend that is strongly impacting traditional sectors, even disruptively affecting the continuity of mature companies and businesses

The need to adapt is even more relevant in the export sectors, which require the adoption of new technologies to contribute to the improvement of process and production efficiency, to decision-making through information management, to sustainability and to approaching the increasingly digital end consumer

In addition, Navarra has a very relevant mechatronics and special machinery sector that integrates top-level production capacities in certain businesses (vending, white goods, special machinery...)

The ICT sector of Navarra is facing the opportunity to grow in response to the competitive needs of industry and society

### Value chain

**Companies:** Falcon electronics, Das Nano, Biko, CyC, Tracasa, Conasa, Cistec, Orbital, IAR, Azkoyen, GM Vending, MTorres...

**Knowledge entities:** NAITEC, UPNA, AIN, Salesians...

**Cooperation entities:** IRIS, ATANA, FPRINT, AIN, FIN, CITI...

### Emerging initiatives

**Start-ups:** UpTech Sensing, Elliot Cloud, Neuraptic, Nautilus, Pyroistech...

**Projects:** AIROB, artificial intelligence applied to complex industry; CHIPLESS, functional printing of RFID devices.

### International collaboration

AI&Data&Robotics PPP at Horizon Europe

European Partnership for Key Digital Technologies (KDT)

Partnership Artificial Intelligence and Human Machine Interface

Partnership SME Integration to Industry 4.0

CONETIC

DIH of Aquitaine (DIHNAMIC) within the framework of the Euroregion

DIH of Emilia Romana (ER2Digit) HPC

DIH of Tampere (SIX-Manufacturing), with a focus on manufacturing and robotic

## 2. STRATEGIC VISION

### Vision 2030



Navarra boosts productivity by developing and implementing digital solutions based on data economics, process automation, and advanced manufacturing technologies

#### FOCUS



- Digitalisation of production processes
- Mechatronic product development
- Artificial intelligence and data economics

### Trends

Integration of new manufacturing systems based on digital tools

More adaptable and higher capacity production techniques thanks to the automation of industrial processes, including robotization

Customisation of products for customers in continuous and mass production

Obtaining product and process data through the incorporation of sensors and electronics to products and processes, aimed at data collection

Integration of sensory through new technologies (e.g. wearables)

Real-time prediction and information, and process improvement with data analysis

Incorporation of new models of telecare, remote management, telepresence in the different industrial sectors, replacing the physical presence with virtual

Tools to certify the digital identity of the people necessary for digital presence in the administration-company-society relationship

Cost savings and service improvement through remote control and maintenance

New models of contact and interaction with the end customer, servitisation of the industry's business models

### International Line-up

One of the priorities of the European Commission is "A Europe fit for the digital age", from which hangs the strategy "Europe's Digital Decade: digital targets for 2030: Digital transformation of businesses" that sets goals for the digitalisation of companies by 2030

- Tech up-take: 75 % of EU companies using Cloud/AI/Big Data
- Innovators: grow scale ups & finance to double EU Unicorns
- Late adopters: more than 90 % of SMEs reach at least a basic level of digital intensity

Likewise, the new "European Industrial Strategy", reinforced after the impact of COVID, to focus on the transformation and resilience of the industry, betting on the location of 19 essential sectors

To take into account the concept of "Industry 5.0", which increases the vision of Industry 4.0 towards social and environmental objectives

Related SDGs



### 3. LINES OF WORK

Common lines of work		BO	GT	DT
<b>DIGITAL SKILLS</b>				
01	Digital awareness and training. Training and skills development in each professional setting			●
<b>BUSINESS AND VALUE CHAIN DIGITAL TRANSITION</b>				
02	Planning and support in the development and implementation of the company's digital strategy and in the generation of digital business models	●		●
03	Digitalisation of supply chain and supplier/ecosystem network: work order management, warehouse management, online sales, product traceability...	●		●
04	Digital relationship with the customer (sale, support, etc.) and servitisation orientation	●	●	●
05	Leveraging data economics (artificial intelligence, business intelligence, consumption trends...) applied to all business areas	●		●
06	Promotion of telepresence (teleworking, telemanagement, telemonitoring...)	●		●
<b>DIGITAL TRANSITION OF PROCESSES, PRODUCTS, AND SERVICES</b>				
07	More autonomous, flexible production lines, integrated with information systems, implementing new manufacturing technologies	●		●
08	Incorporation of new features into data-based products/services and servitisation models	●		●
09	Cybersecurity, biometrics, and digital identity. Optimisation of business communications and information securitisation	●		●
10	Application of digital simulation and rapid prototyping (digital twins, virtual reality, augmented reality...) in product design processes, production lines, maintenance, security, training...	●	●	●
11	Development of industrialised construction: use of digital technologies, robotics, 3D simulation for prefabricated product development and industrialization of the construction process	●		●
Specific lines of work		OE	TE	TD
<b>ELECTRIC AND CONNECTED MOBILITY</b>				
01	Development and sophistication of vehicle components: sensorisation, communications (between components and/or with Smart Cities infrastructure), new materials, and new functionality	●		●
02	Servitisation of mobility and power supply models, especially related to Smart Cities (communications and services)	●	●	●
03	New models of smarter, more sustainable logistics, last mile distribution, shared warehouses	●	●	●

Note: BO: Business Opportunity GT: Green Transition DT: Digital Transition

Specific lines of work		BO	GT	DT
<b>HEALTHY AND SUSTAINABLE FOOD</b>				
04	Precision farming. Sensing and remote detection for crop management	●	●	●
05	New technologies to ensure food safety and traceability	●		●
04	Evolution of online sales channels and consumer engagement	●		●
<b>GREEN ENERGY INDUSTRY</b>				
07	Development of systems for the smart management and integration of energy from various sources, including distributed generation, microgrids, and energy communities. Renewable energy certification	●		●
08	Technologies for remote management and predictive maintenance of facilities	●		●
<b>PERSONALISED MEDICINE</b>				
09	Design and manufacture of devices for teleworking and telemonitoring to support longevity, disability, and the treatment of chronic diseases	●		●
10	Development of software applications for prevention and improvement of patient care	●		●
11	Application of big data, artificial intelligence, and cybersecurity for the management of medical, genomic, and other data in the diagnosis, treatment, and prevention of diseases	●		●
<b>SUSTAINABLE TOURISM</b>				
12	Sustainable management of tourist spaces. Regulation of access and flows of visitors	●	●	●
13	Development of digital tourism marketing and innovation in products and processes adapted to the digital market	●		●
14	Tourist market smart system. Data collection on demand, preferences, and behaviours for decision-making in tourism marketing	●		●
15	Promoting competitiveness through training to shape an innovative, sustainable, and accessible tourism offer	●		●
<b>AUDIOVISUAL INDUSTRY</b>				
16	Development of digital animation and video games	●		●
17	Data exploitation (Big Data) and the application of Artificial Intelligence across the entire value chain, from audience analysis to content generation and connecting with viewers (capturing emotions, knowing preferences...)	●		●
18	More impactful content using new technologies such as virtual reality, augmented reality, holograms, and more sophisticated recording devices (drones, dolly systems, or slow motion...)	●		●
<b>INDUSTRIALIZED CONSTRUCTION</b>				
19	Development of industrialized construction: application of digital technologies, robotization, 3D simulation for the development of prefabricated products and industrialization of the construction process	●		●

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