Spain's Industrialization of Digitalization

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PrometheEUs

Fabricate, not just import

The digitalization of the economy has another important dimension:

the industrialization of digitalization

- Opportunities to manufacture software and devices to respond to the new digital demand.
- Some countries are in it. The European South is lagging behind.
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- The Spanish RRP envisages "strengthening a digital industry of its own", although still insufficiently.

- To achieve added value and quality employment in quantity by manufacturing digital tangibles and developing intangibles for domestic use and for export.

- It is part of industrial policy.
- Especially in advanced devices and deep technology, the timescales are longer, five to 20 years, than the Recovery Plan.

- National and international, European in first place, partnerships but also other partnerships are needed to achieve this.

Intangibles

Priority areas in **intangible products**:

- software industry,
- artificial intelligence,
- quantum computing and communication,
- Cybersecurity
- Language industry

Language Industry

- **the Spanish language industry**

In the language industry, Spain has much to gain, especially in terms of translation - text and voice - computerized and increasingly automatic, and also interpretation. And in the natural language of machines or programs.

The government has launched a Plan for the Promotion of Language Technologies and a PERTE (Strategic project for the economic recovery and transformation) for the new economy of language.

The RRP envisages a boost to the so-called "natural language tools" that are the key to Artificial Intelligence and Big Data on a Spanish basis, with excellent research in this respect in Catalonia and the Basque Country.

In this field, Spain is leveraging on the rest of the Spanish-speaking world. But if it does not act quickly, others, including companies from the US and China, as well as Mexico and Chile, for example, could beat it.

Another potential winner is the **audiovisual industry**, to nurture platforms. Objectives is **to turn Spain into a hub** for the audiovisual industry in Spanish for the world.

Plan de Impulso de las Tecnologías del Lenguaje (2021): https://plantl.mineco.gob.es/Paginas/index.aspx

Tangibles

In **tangibles**

in addition to infrastructures, which are essential,

the RRP contemplates the fields of

- Sensors
- microprocessors and microelectronics
- submarine cables
- cross-border communication infrastructures
- Cloud and data centers
- 5G
- communication satellites

The industrial Internet is central.

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Spain has strengths in this field, such as 3D printing or advanced/intelligent manufacturing, the circular economy and fashion, in which Spain is a leader with Inditex and others.

Including the relationship between the Internet of Things (IoT) and quality tourism.

Also proposed are "multi-country projects in cloud, satellite and quantum communications, and microprocessors, as well as consolidating and extending existing technologies", which will allow "anticipating future challenges and potential dependencies in key strategic technologies over the next 20 to 30 years".

Spain will participate in GAIA-X, a Franco-German initiative for the next generation of European **data infrastructure**

The government has decided to create a national Gaia-X hub with the aim of generating a Spanish data sharing ecosystem

Regarding **5G Spain** envisages EUR 770 million of public funding for the deployment of 5G access network infrastructure and transmission network reinforcements, including EUR 150 million to create passive mobile infrastructure in rural areas without 4G coverage.

Collaborating in Europe in the **semiconductor industry** is essential for the industrialization of digitalization.

The **connected car**, even more than being electric, is going to be essential.

In terms of **submarine cables**, various initiatives.

It could be the great alternative to the saturation of these cable links in the UK. The government will remove obstacles to these investments, in order to put into value the country's strategic geographical position.

The most recent has been the arrival in Sopelana (Bilbao) of Google's Grace Hopper cable to link Bilbao and New York, and then England.

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PERTES

Another weakness of the Spanish economy is the excessive weight in it (80% of the employment) of SMEs.

The government has launched new mechanisms for cooperation between large companies and SMEs: the PERTEs (*Proyectos estratégicos para la recuperación y transformación económica* or Strategic projects for the economic recovery and transformation), public-private, which are an integral part of the RRP.

The PERTEs are strategic projects with a great capacity to boost economic growth, employment and the competitiveness of the Spanish economy, with a high degree of public-private collaboration and transversal to the different administrations.

So 11 PERTEs already decided or on the way.

Although all of them are connected to the digital transition, four of them are directly linked to the digital issue:

- **on electric and connected vehicle**
- **on the new economy of language**
- **on semiconductors**
- **on digitalization for the use of water**

IPCEIs

IPCEIS are EU Important projects of Common European interest.

They involve more than one EU Member State and are designed to be disruptive and have and a broad R&D&I ambition.

Moreover, they are a tool to circumvent the limitations on State aid in the EU, as they can involve up to 50% of public funding.

Spain participates in the one on Next Generation Cloud Infrastructures and Services (IPCEII-CIS) (with France, Italy, Germany, Belgium, Hungary, Latvia, Luxembourg, the Netherlands, Poland and Slovenia),

Planning to participate in the one on microelectronics, and possibly on semiconductors.

However, while the German approach to IPCEIs is the result of an interactive process within its science, technology and industry system, Spain lacks such a system, due to a lack of priorities and comprehensive mechanisms to define them.

Need to link more PERTEs and IPCEIs

Deep Tech

Compared to Germany, France, United Kingdom and even Israel, Spain lacks a national plan or strategy for what is called deep tech, that need high public and private investments, and bringing together several technologies.

Larger time frame

Need for a national Deep Tech Strategies.

The European South is lacking them

Goes beyond the RRPs

Thank you!