

INDESIA

Consortio Nacional Industrial para
el Impulso de la Economía del Dato
y de la Inteligencia Artificial



Six major corporations create Spain's first industrial consortium for Artificial Intelligence

- Repsol, Gestamp, Navantia, Técnicas Reunidas, Telefónica, and Microsoft are the promoters behind IndesIA, a strategic consortium focused on Spain with a European outlook, that aims to integrate more companies and different business sectors.
- IndesIA is a catalyst project designed to promote the use of data and artificial intelligence (AI) among industrial businesses in Spain. The project is backed by the experience of organizations who were among the first to venture into this field, such as the Basque Artificial Intelligence Center (BAIC).
- For the more than 100 small and mid-sized businesses already in the process of joining the consortium, the integration of this technology throughout the value chain presents an opportunity to accelerate their digitalization processes and enhance both productivity and sustainability in the highly competitive industrial sector.

Six major corporations — Repsol, Gestamp, Navantia, Técnicas Reunidas, Telefónica, and Microsoft — have joined forces to create IndesIA, the first data economy and artificial intelligence consortium in the Spanish industrial sector. Focused on Spain with a European outlook, the consortium aims to take on more companies and integrate different business sectors.

IndesIA is a catalyst project whose goal is to position Spain as a leader in data and artificial intelligence applications for industry, while also stimulating a new economy to spark growth at the national level.

The Spanish industrial sector currently faces a number of important challenges. The need to become more competitive through automation and optimization of industrial processes stands out among these, as does improving sustainability through energy efficiency, developing new materials with lower environmental impact, and following through the commitment to the circular economy. Achieving all of this will require scaling the use of data and artificial intelligence throughout the value chain.

The new consortium — which draws on the support and experience of the leading organizations in this field, such as the Basque Artificial Intelligence Center (BAIC) — is also focused on working to galvanize employment and bridge the training gap in STEM disciplines (science, technology, engineering, and mathematics) to create new high-skill jobs, while also mobilizing the attraction and retention of tech talent in Spain.

To achieve these goals, this catalyst project has centered its attention on the following spheres of action:

- Identifying **use cases** in industry that can be resolved with data and artificial intelligence, thereby demonstrating the value and variety of applications offered by these technologies.
- Creating **acceleration mechanisms** to make the process of developing big data and artificial intelligence solutions more agile. This can be achieved by facilitating access to the technical and economic resources needed for their implementation.

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- Cultivating **ecosystems of start-ups, technological centers, and universities** specialized in research and development of **artificial intelligence** solutions with **industrial applications**, which will permit to share the most efficient knowledge and solutions.
- Powering the creation of a large-scale **interoperable industrial data platform** that promotes the development and consumption of artificial intelligence solutions.
- Reaching agreements to facilitate access to **cutting-edge technologies** (IoT, 5G, the cloud, supercomputing, quantum, edge computing...) that will enable case development.
- Opening a **Data & Artificial Intelligence School** to involve and train industrial sector professionals in data and analytics through training programs that also focus on promoting diversity, gender equality, and dedication to drawing on STEM profiles.

Over 60 use cases based on artificial intelligence and data analytics have been identified to provide traction across the value chain of five major industrial areas: energy, automotive, naval, telecommunications, and engineering. With this, data and artificial intelligence can be used in nearly any industrial process, in any business active in these areas, for improvements of any kind. Applying these technologies in processes common throughout these industries also offers a wide range of synergies, including predictive maintenance of equipment, optimization of production planning, smart logistics, the development of autonomous production plants, optimization of energy consumption in production, development of digital twins, automation of industrial processes, quality optimization, and development of advanced materials.

IndesIA envisions the creation of a library of industrial cases, all duly documented and with access to the data that enabled their resolution. In addition to being a source of reference material, such a library can stimulate and facilitate the adoption of artificial intelligence technology for companies, including the more than 100 small and mid-sized businesses that have already signed on to the consortium.

This catalyst project will power the creation of a large-scale interoperable industrial data platform to facilitate the development and consumption of artificial intelligence and data analytics solutions. The platform will accelerate data ingestion by working with the leading suppliers of industrial hardware and software to develop connectors that will guarantee real-time data capture of the activities of the various companies involved. This will lead to the creation of open data lakes with aggregate and reliable data, ready for a wide array of applications in developing artificial intelligence solutions. The platform will also serve to encourage the design and creation of models of data and universal semantic layers that foster the interoperability of data among industry sector companies.

Data processing will be carried out in strict adherence with EU data protection and sovereignty principles. This includes facilitating mechanisms for data owners to control where data is stored, who has access, and what type of processing can be performed. All these mechanisms will ensure secure processing of data (anonymization, etc.). Security and privacy of industrial and personal data will be the basic principle of design for the technology, platforms, and use cases developed and promoted by the consortium.

Development of these use cases has led to the creation of an ecosystem of start-ups, technological centers, and universities specialized in artificial intelligence solutions with industrial applications. This collaborative network will make it possible to rapidly spread knowledge and the most efficient practices, in addition to adapting them to each sector's particular needs.

The consortium is also working with public and private universities to strengthen employability through upskilling and reskilling for employees in STEM disciplines, with a special focus on artificial intelligence.

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For this, a variety of training programs will be developed, ranging from general courses (offering the general knowledge that industrial sector employees will require to better understand how these solutions can benefit them in their everyday work) to specialized courses focused on reskilling. Training will also be designed for internal use to develop new profiles, such as data scientists and data engineers.

BUSINESSES AND ORGANIZATIONS THAT HAVE EXPRESSED THEIR INTEREST IN JOINING THE CONSORTIUM

- Adher
- AGATA TECHNOLOGY
- Andamios Máxima Seguridad Plácido
- APPLUS NORCONTROL
- Asti
- Babcock Montajes
- BILOGISTIK
- Boslan
- Bravent
- Burotec
- CANDISPE
- Ciete
- CITESA
- DATUMIZE
- Elsamex
- Emetel Sistemas
- ESERMAN
- ESK
- Fernández Jove
- GAMCO
- GAS EUROPA
- Grupo Lagupres
- Grupo Tecnológico Artabria
- IDEA
- Ineltron
- Informática Catrian
- Iprocel
- Istobal
- ITURRI
- Kabel
- Lapesa
- Linke Information Technology
- LOGISTA
- Mantenimiento y Montajes Industriales
- Mecanizados Aranda
- Mides
- Miesa
- Norinver
- Opertek
- Optomation Systems
- PAN VELPA
- PETROTEC
- Pinasa
- PiperLab
- Proman
- QATRO
- QUANT DECISIONS
- Rafibra
- RETAILGAS
- Robine Iberica
- S2 Grupo
- SAPIMSA
- SEMS
- SIEMSA Industria
- SIRT
- Solarca
- StrategyBD
- Surcontrol
- TECAFRIC
- Teiga
- Teldat
- Tinámica
- Tivaygasa
- TLP
- Tlsi
- Tokheim
- TRANSMOL
- TURING
- Virtualware
- Wiloc
- Zylk

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Associations, organizations and technological centers

- AEPIA (Spanish Association for Artificial Intelligence)
- Basque Artificial Intelligence Center (BAIC)
- IIIA (Artificial Intelligence Research Institute)
- IMDEA Networks
- Investigate to Innovate
- ISDI
- OdiselA
- The University of A Coruña
- The University of Granada
- Technical University of Madrid
- Comillas Pontifical University
- VicomTech