Agència Valenciana de la Innovació

The Innovation Agency for the Valencian Region

UPV. DIH-WORKSHOP: Boosting Collaboration for Digital Transformation

Olivia Estrella. General Secretary AVI

València, December 14, 2021

GENERALITAT VALENCIANA

AVI AGÈNCIA VALENCIANA DE LA INNOVACIÓ

- Main strengths and weaknesses of the Valencian Innovation System
- Governance of the Innovation Agency for the Valencian Region
- Oriented and transversal innovation
    - Programmes and lines of support
    - Innovation Public Procurement
    - Inndromeda
- Long term vision

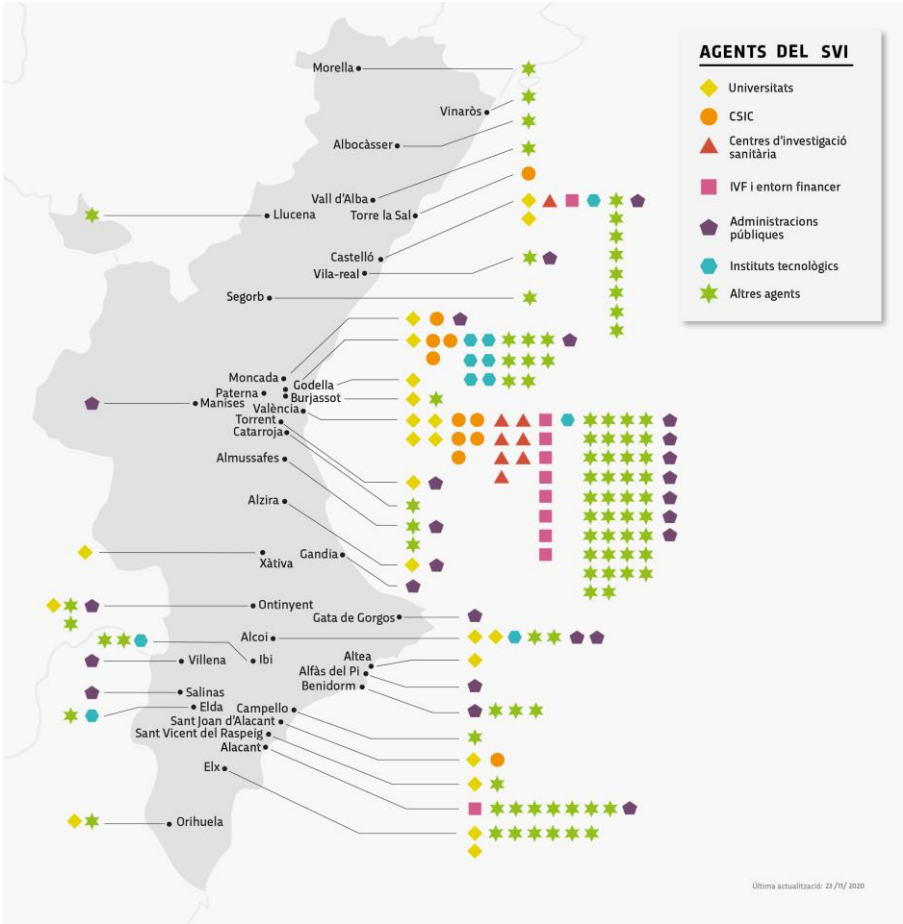
The Valencian Region is a prototype of a production model characterized by:

- high diversification from a sectoral point of view,
- open to foreign trade,
- holder of important industrial and tourism clusters in all its territory,
- with an acceptable adaptation capacity to the changing market conditions,
- and with a considerable entrepreneurial dynamism.

Excellent level a achieved by the different components of the Valencian System of Science and Technology.

Áreas	Grupos	%	Investigadores	%
Ciencias	333	22,5	3.192	21,2
Ciencias de la Salud	499	33,7	3.760	24,9
Ingeniería y Arquitectura	196	13,2	3.987	26,4
Ciencias Jurídicas y Sociales	313	21,1	2.819	18,7
Arte y Humanidades	140	9,5	1.333	8,8
Total	**1.481**	100	**15.091**	100

Grupos de investigación en la CV: número y actividad realizada

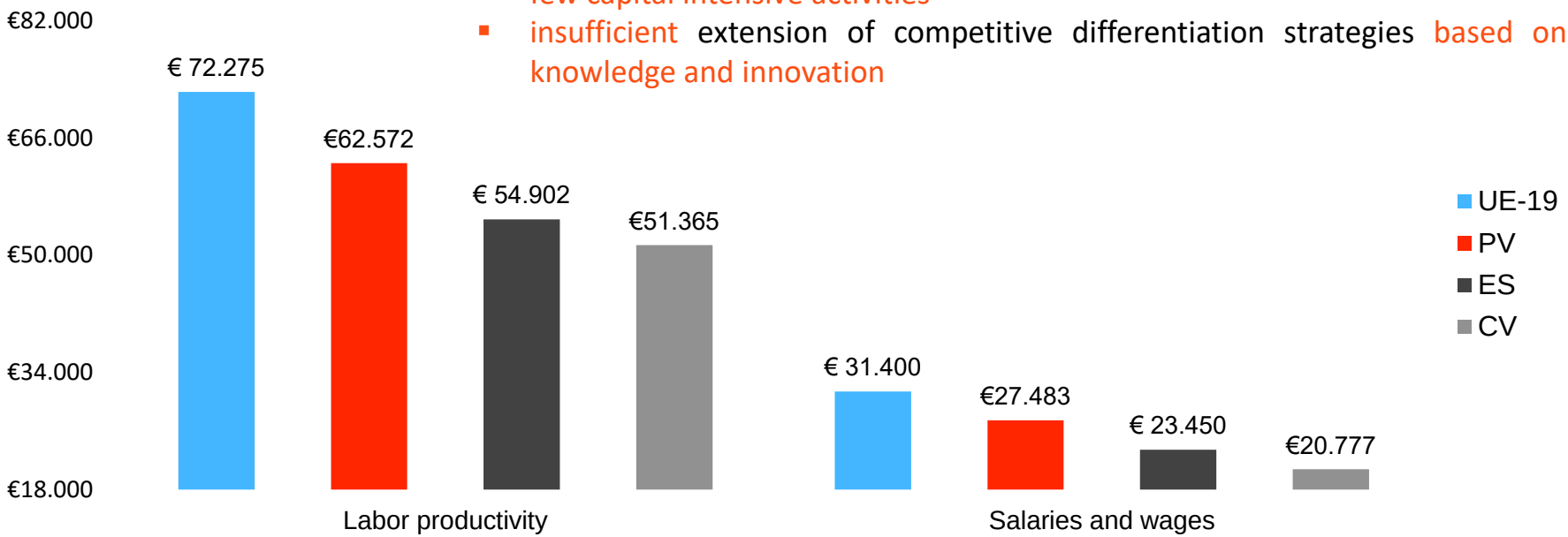


Algunos de los agentes del Sistema Valenciano de Innovación

Labour productivity and salaries and wages. Year 2018

Why?

- productive structure with little implementation of large companies,
- reduced weight of sectors with high and medium to high technological content,
  - few capital intensive activities
  - insufficient extension of competitive differentiation strategies based on knowledge and innovation

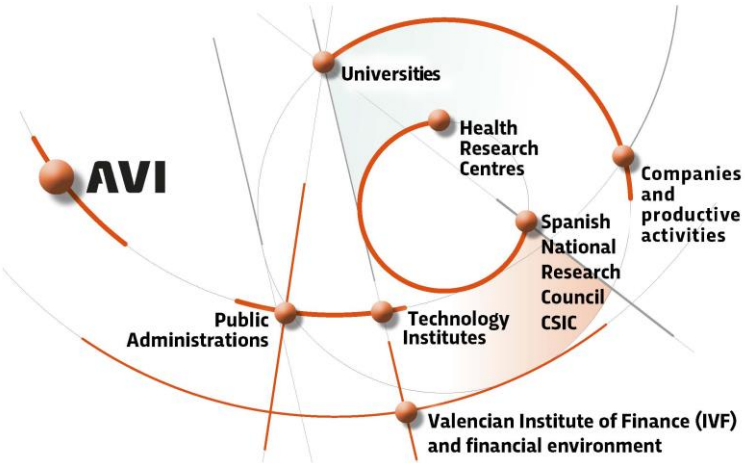


Source: Labor Productivity and Salaries and wages: INE (2020). Regional Accounting of Spain (Total GVA and Total Employment), 2018 and Eurostat (2020) (Employment and activity by sex and age - annual data [lfsi_emp_a] and Gross value added and income by A * 10 breakdowns by industry [nama_10_a10], 2018 GDP: INE (2020). Regional Accounting of Spain, GDP per capita base 2010 and Eurostat (GDP per capita at market prices EU-28 and Spain. National accounts indicator (ESA, 2010), 2018.

There is an evident asymmetry between the production capacity of high quality knowledge and the general behavior of the production model

It is necessary to ensure that the different environments of the Valencian Innovation System dialogue and cooperate with each other with sufficient fluidity and efficacy

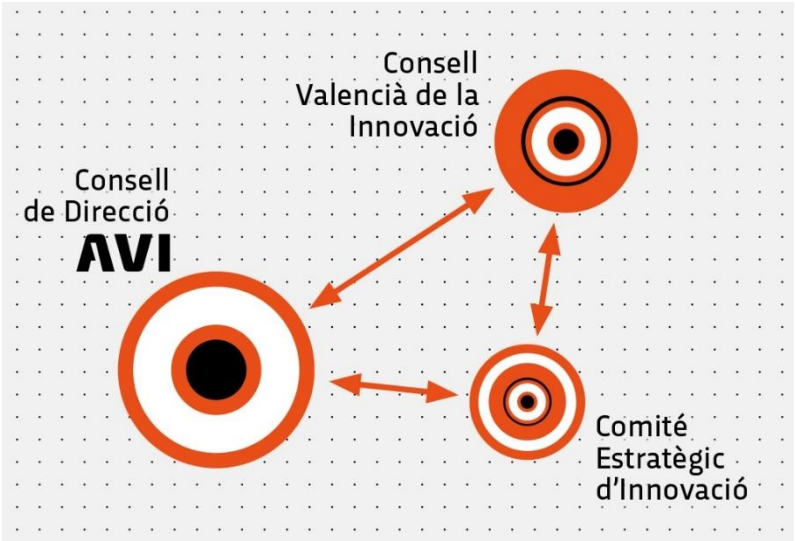
including an in-depth review of the different interface mechanisms and incentive mapping



Singularities:

- transversal nature
- the fact that its presidency corresponds, in turn, to the person who holds the presidency of the Generalitat Valenciana, endorses the transversality in terms of governance and makes it explicit that the improvement of the production model through innovation is a strategic and priority issue of government policy
- the person in charge of the highest operational level of the Presidency, the executive vice-presidency, is elected by the Valencian Parliament, at the proposal of the President, by a qualified majority of 2/3 in the first vote, and by a simple majority in the second vote.

The message that the text of the law itself wishes to convey is that the AVI is a transversal, professionalised institution, governed by the Innovation System as a whole, with a long-term vision and perspective, and safe from electoral cycles.



What is the improvement of the production model?

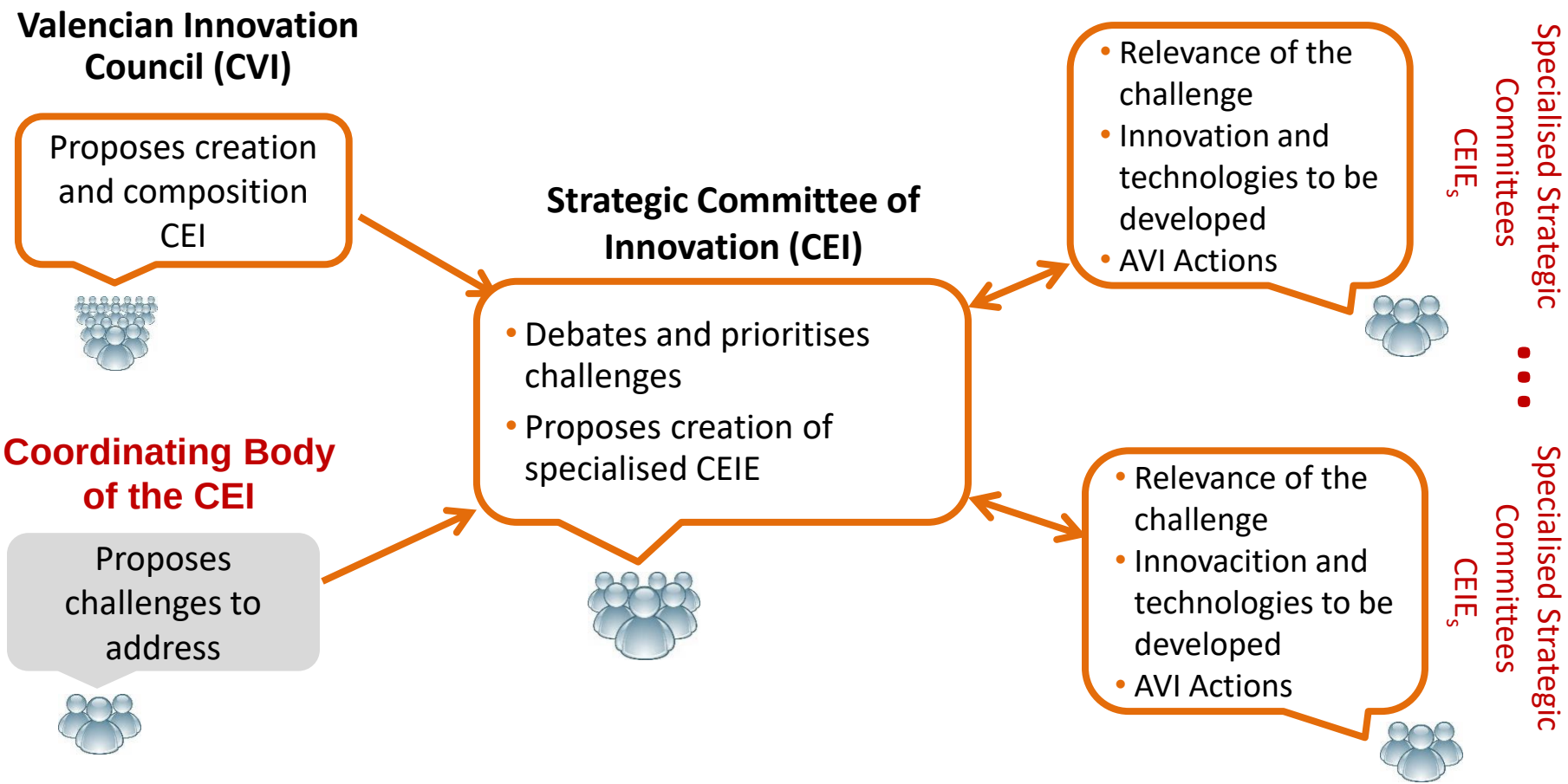
What are the challenges?

Are there scientific, technological and business capacities to deal with innovative solutions?

Deployment of incentives for cooperation between innovation agents?

Objective: improvement of the production model, through the mobilisation of all the knowledge available in its Innovation System.

Boosting targeted innovation

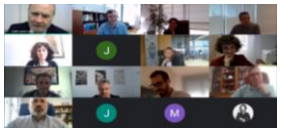

Valencian Innovation Council (CVI)
Proposes creation and composition CEI
Coordinating Body of the CEI
Proposes challenges to address
Strategic Committee of Innovation (CEI)
• Debates and prioritises challenges
• Proposes creation of specialised CEIE
• Relevance of the challenge
• Innovation and technologies to be developed
• AVI Actions
Specialised Strategic Committees CEIEs
• Relevance of the challenge
• Innovacition and technologies to be developed
• AVI Actions
Specialised Strategic Committees CEIEs

Priority areas to address challenges and opportunities

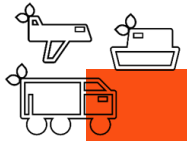







- Agri-food
- Automotive industry and sustainable mobility
- Circular Economy
- Emergencies
- Sustainable Habitat
- Health
- Hospital food and diet
- Enabling Technologies
- Smart Tourism Destinations
- Mobility, Transport and Infrastructure
- Unwanted loneliness in vulnerable groups



Challenge 1

Detection of the state of infrastructures and their maintenance needs to improve safety in general and critical situations in particular, allowing for short- and medium-term actions. It includes:

- Development and application of methodologies and techniques for monitoring infrastructures using remote or non-invasive techniques.
- Development and application of technologies related to prediction, early warning and artificial intelligence systems.
- Development and integration of innovative tools and processes for work, monitoring and training of people dedicated to detection and maintenance.

Challenge 2

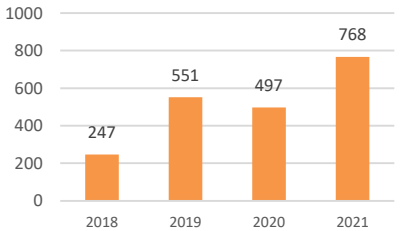
Design, construction and operation of resilient infrastructure to help mitigate the effects of climate change and the impact of its consequences. It includes:

- Development and application of nature-based technological solutions.
- Development and application of multifunctional or high performance materials.

AVI focus on innovation

Stakeholders: various actors that make up the Innovation System

Main objective: obtaining significant increases in added value, through the incorporation of knowledge within the productive system



Evolution of the number of applications to competitive programmes

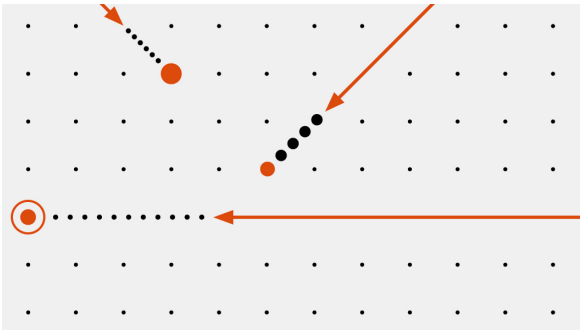
- Valorización y transferencia de resultados de investigación a las empresas
- Promoción del talento: agentes de innovación, incorporación de tecnólogos en empresas y doctorandos empresariales
- Impulso a la compra pública innovadora
- Proyectos estratégicos en cooperación
- Consolidación de la cadena de valor empresarial
- Acciones complementarias de impulso y fortalecimiento de la innovación

All actions are oriented to

...strengthening the connections between knowledge providers and users, primarily

Calls on competitive basis of award whose main actions can be summed up as follows:

- **Valorisation** of research results and their transfer to companies
- **Talent** promotion: innovation actors, incorporation of technologists and doctoral students in companies
- Promotion of **innovative public procurement**
- Collaborative **strategic projects**
- Consolidation of the corporate **value chain**
- **Complementary actions** to boost and reinforce innovation



The programme for the valorisation of research results and their transfer to companies aims to help research groups to take their projects a few steps closer to the market, so that companies can effectively assess whether the knowledge developed could be of use to them.

The creation of Scientific Units for Business Innovation (UCIE) within the research centres themselves, justified because, although they have a great capacity to generate knowledge that can be used by the productive environment, they do not have the infrastructures or economic resources outside their main activity (basic research) to establish systemic relations with it.

Valencian Network of Innovation Agents, aimed at strengthening and extending the use of interfaces that facilitate the connection between the various knowledge centres and companies and sectors, trying to ensure that opportunities are not lost due to mere mutual ignorance or the lack of a collaborative culture among them.

The Public Procurement of Innovation (PPI) programme, aimed at companies and public institutions, aims to promote the development and subsequent commercialisation of innovations, products and technologies which, while improving the quality of public services, stimulate the diversification of the productive system

> The advantage for the companies involved of having a certain guarantee that there is a buyer "at the end of the road" in case of success is an extremely important variable for undertaking innovation projects that otherwise would not have been initiated. E.g. health

The Strategic Projects programme aims to promote the development of large R&D&I projects in cooperation between various SVI agents, as a way of achieving innovative joint solutions to problems of common interest.

The Value Chain programme specifically promotes the development of innovative solutions with an impact on the business value chain, and is a particularly useful instrument for extending innovation to their suppliers or clients, by those companies considered as driving forces.

Summary resolution of grants in competitive concurrence 2021

Types of beneficiary	No. Granted	%
Company	**259**	**57%**
Value chain	95	37%
Innovation Public Procurement	6	2%
Strategic cooperation	105	41%
Promotion of talent	53	20%
Local Entity	**21**	**5%**
Complementary action	3	14%
Innovation Public Procurement	16	76%
Promotion of talent	2	10%
Non-profit entity	**28**	**6%**
Complementary action	6	21%
Innovation Public Procurement	4	14%
Strategic cooperation	4	14%
Promotion of talent	14	50%
Accredited Health Research Institute and Health Entity and Institution	**24**	**5%**
Complementary action	1	4%
Strategic cooperation	12	50%
Promotion of talent	6	25%
Assessment	5	21%

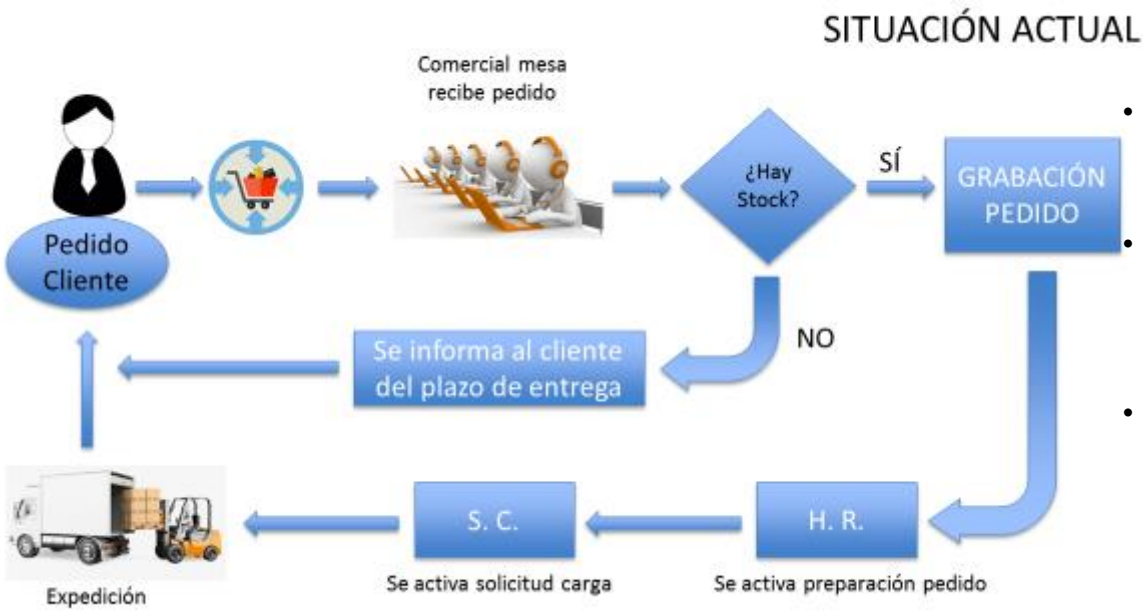
Types of beneficiary	No. Granted	%
Technological Institute	**40**	**9%**
Strategic cooperation	35	88%
Promotion of talent	2	5%
Assessment	3	8%
Public Research Organization (PRO) - Other Research Centers	**11**	**2%**
Complementary action	1	9%
Strategic cooperation	7	64%
Promotion of talent	1	9%
Assessment	2	18%
University	**69**	**15%**
Complementary action	6	9%
Strategic cooperation	40	58%
Promotion of talent	8	12%
Assessment	15	22%

Types of beneficiary	%
Company	52,21%
Public University	19,14%
Non-profit Entity	7,81%
Technological Institute	7,55%
Health Institution and Entity	3,65%
Local Entity	3,65%
Accredited Health Research Institute	2,86%
Public Investigation Agency	1,95%
Other Research Centers	0,91%
Private University	0,26%
Total	100 %

Relative weight of type of beneficiary in the projects granted. Relative weight of the programme in projects granted by type of beneficiary

Optimising the business supply chain by incorporating artificial intelligence (Colorker, ITI y UJI)

- Orders only during business hours
- Orders based on historical data
- Customer has no traceability of the order, except via commercial channels



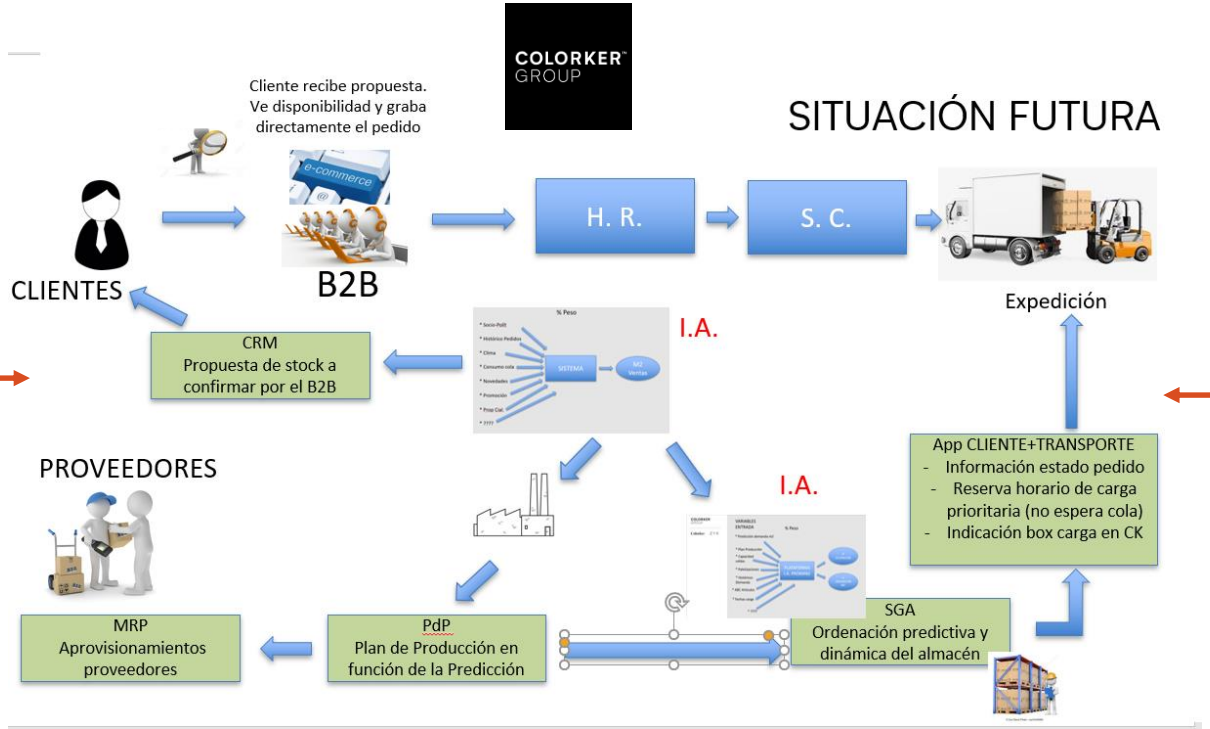
- Large volume of factory stock and customer stock in slow-moving products.
- Logistics companies do not have order traceability, except via the customer.
- Long delays in loading products due to oversaturation of loads, due to the lack of traceability.

Ineficiencia: todas las gestiones que conlleva un pedido, desde la generación, la preparación, la carga, etc. deben de tramitarse siempre a través de una persona de la organización

CEIE Key enabling technologies

researching and developing a machine learning system for forecasting medium-term demand developments beyond the historical one

B2B platform development and ERP interfacing



The new logistics platform will improve communication and provide transparency, so that customers will have detailed tracking of the status of their orders, shortening the phases and generating greater efficiency.

Improved diagnosis and prognosis of sepsis and septic shock, one of the leading causes of death, through the development of a machine learning-based test (Hospital Clínico Universitario de València, INCLIVA e ITI)

What is the economic and social impact of sepsis and septic shock?

There are 49 million cases of sepsis worldwide, with an estimated 11 million deaths each year.

- Approximately 2% of hospitalised patients and up to 75% of ICU patients develop sepsis.

- 20-50% of patients with sepsis develop septic shock and of these 30-60% die.

- The incidence worldwide is increasing at a rate of 7-9% per year.

The estimated annual cost of sepsis exceeds $20 billion in the US, and €7.6 billion in Europe.

CEIE health

INCLIVA | VLC
Instituto de Investigación Sanitaria

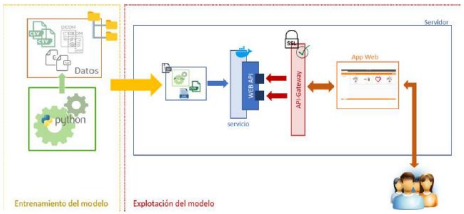
development of a test for faster diagnosis and prognosis of sepsis and septic shock through the application of algorithms based on Artificial Intelligence.

development of a diagnostic and prognostic software prototype based on Machine Learning techniques.

ITI INVESTIGATE TO INNOVATE

Hospital Clínic Universitari de València

patient recruitment and clinical database review



Schematic diagram of the IT platform

Sales potential of the test

1.108.657,00	Camas en UCI de los 8.288 hospitales con UCI en Europa
7,80	Días de media que un paciente permanece hospitalizados en UCI en Europa
1	Determinación/paciente y día
	Precio kit
8.647.524,60	nº kits que se venderían en 1 año en Europa

- Technological Dialogues
- Programmes and Supporting lines
- Singular actions

Incorporate the innovation component in **Public Administrations** through innovation requirements in their purchases. Thus achieving the development of innovative markets through public procurement. And an improvement in the efficiency and quality of the Generalitat Valenciana's public services..

Iniciativa ad-hoc AVI

The Ministries and City Councils are the main purchasing agents of the Valencian Innovation System. Among the joint actions, we can find:

- **Identify potential purchases (early demand analysis)**
- **Advising and supporting all phases of the purchase from start to finish**
- **Provide training to the actors involved in the process**

Programa de ayudas

Facilitate the **greater presence of Valencian companies and research centres** in public tenders for innovative products and services.

Milestones in the promotion of IPP by AVI

2017	2018	2019	2020	2021

AVI creation

Starting the **IPP unit**

User's guide IPP for Public Procurement Departments

Grants for IPP to local entities and companies

Investment
2018-2020: **3.290.865 €**

- **Local entities** supported (2018-2020): **30**
- **Non-profit entities** supported (2018-2020): **6**
- **Companies** supported (2018-2020): **5**
- **Technological and research centers** (2018-2020): **5**

Preliminary Market Consultations (2018-2020): **10**

Specific guides IPP (2018-2020): **3**

Invesment
2021:
4.280.000 €

Assistance and advice on IPP

Authorities of the Valencian Regional Government,
advised in processes **IPP: 5**

Course participants "The PPI in the Valencian Public Administration" (35h): **49**

Self-training course (20h), just started

GENERALITAT VALENCIANA
Conselleria de Sanitat Universal i Salut Pública

Bidding
FID Health
IMAS

GENERALITAT VALENCIANA
Conselleria d'Hisenda i Model Econòmic

PMC challenge
Innova-Neteja

GENERALITAT VALENCIANA
Conselleria de Política Territorial, Obres Públiques i Mobilitat

PMC challenge
i-BOI
FGV

GENERALITAT VALENCIANA
Vicepresidència Segona i Conselleria d'Habitatge i Arquitectura Bioclimàtica

Bidding challenge
Resilient Housing

EXCMO. AYUNTAMIENTO DE TORREVIEJA

Actions to promote the implementation of the IPP. Includes training, dissemination and promotion in the municipality.

Preliminary consultation to the market on the enhancement of the brine from the Laguna Rosa de Torrevieja for therapeutic uses

Elements to define:
technical infrastructure of intake, impulsion, channeling, distribution, accounting, extraction, pumping and evacuation to the sea, etc.

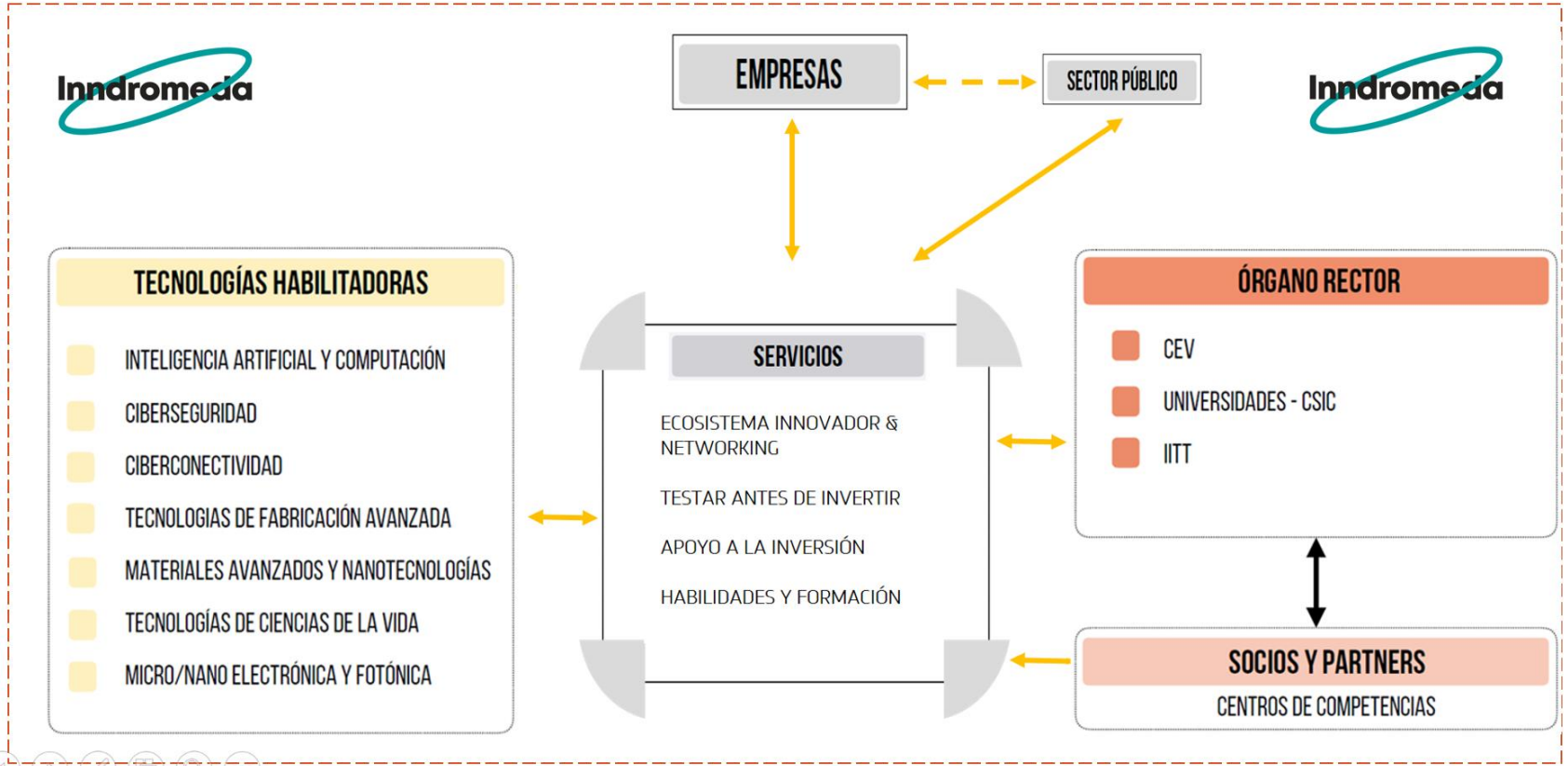
2019 | 2020 | 2021 | 2022 | 2023

Nodes IoT for Smart Alcoi preparatory actions for the implementation of IPP projects

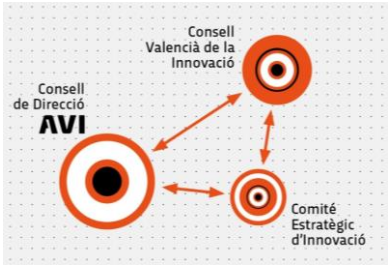
Project for the promotion and management of the IPP in the Alcoi city council within the strategic framework of the urban agenda

Positioning itself as a leader in combining policies to promote innovation and sustainable urban development

Ajuntament d'Alcoi


Inndromeda
EMPRESAS
SECTOR PÚBLICO
Inndromeda
TECNOLOGÍAS HABILITADORAS
INTELIGENCIA ARTIFICIAL Y COMPUTACIÓN
CIBERSEGURIDAD
CIBERCONECTIVIDAD
TECNOLOGIAS DE FABRICACIÓN AVANZADA
MATERIALES AVANZADOS Y NANOTECNOLOGÍAS
TECNOLOGÍAS DE CIENCIAS DE LA VIDA
MICRO/NANO ELECTRÓNICA Y FOTÓNICA
SERVICIOS
ECOSISTEMA INNOVADOR & NETWORKING
TESTAR ANTES DE INVERTIR
APOYO A LA INVERSIÓN
HABILIDADES Y FORMACIÓN
ÓRGANO RECTOR
CEV
UNIVERSIDADES - CSIC
IITT
SOCIOS Y PARTNERS
CENTROS DE COMPETENCIAS

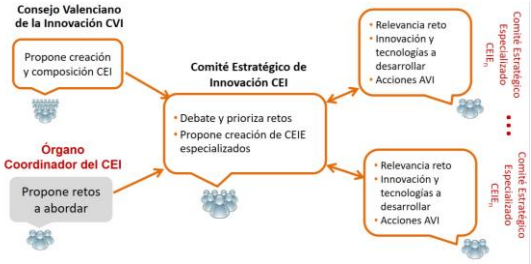
Governance system



AVI AGÈNCIA VALENCIANA DE LA INNOVACIÓ

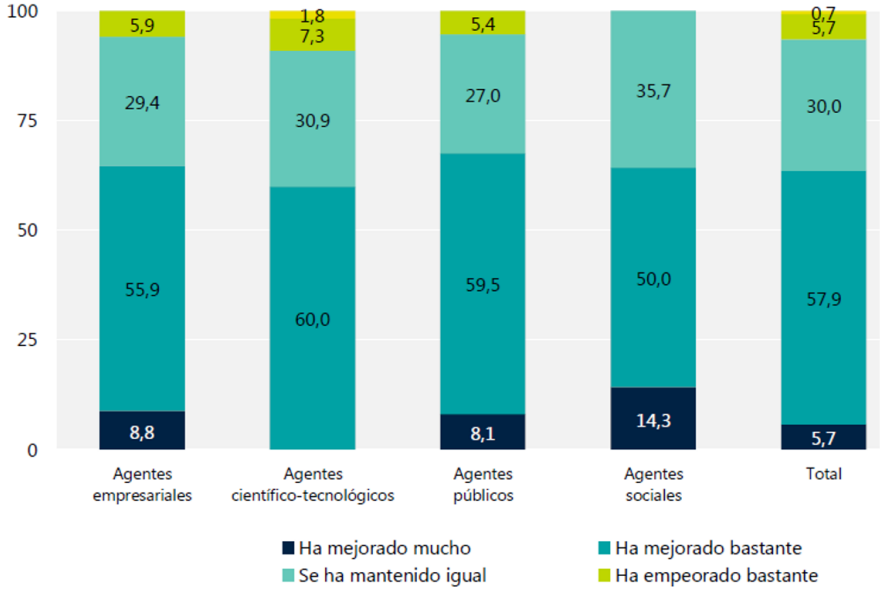
- Credibility among all SVI stakeholders
- Sufficient budget
- Long-term vision

Operating methodology



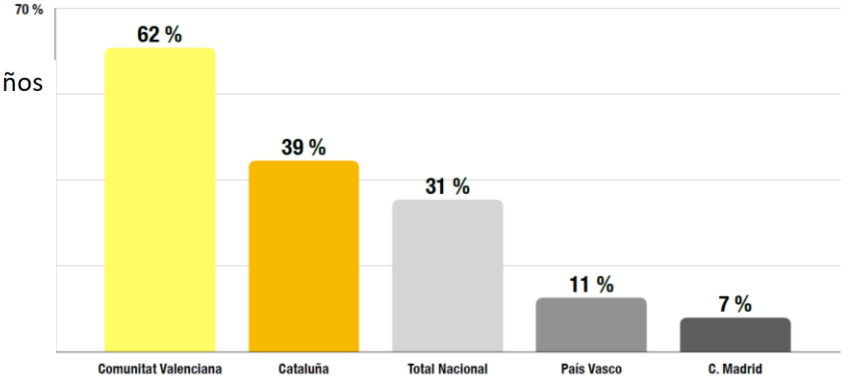
Recent statistics on innovation in the Valencian Region

Percepción de la evolución de la innovación en la Comunitat Valenciana en los últimos 5 años



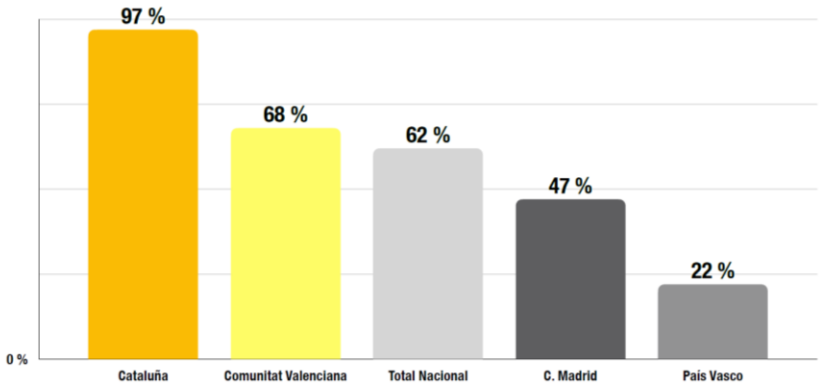
Fuente: Análisis de la economía valenciana y el sistema valenciano de innovación, IVIE (2021)

VARIACIÓN PORCENTUAL EN EL **GASTO EN INNOVACIÓN EN EUROS** 2019-2017



Fuente: INE. Elaboración propia a partir de la Encuesta sobre innovación de las empresas (Publicado en 2020)

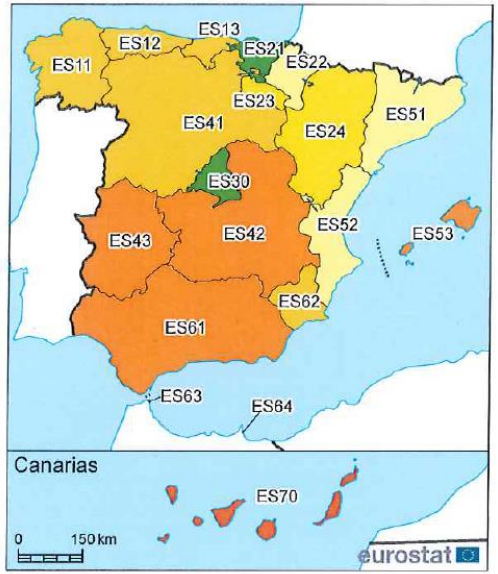
RIACIÓN PORCENTUAL DEL **NÚMERO DE EMPRESAS CON GASTO EN INNOVACIÓN** 2019-2017



Fuente: INE. Elaboración propia a partir de la Encuesta sobre innovación de las empresas (Publicado en 2020)

Regional differences in innovative performance are high in Spain. Thus, the Basque Country has a value in its Regional Innovation Index three times that of the City of Ceuta.

Two regions are "strong innovators", 10 regions are "moderate innovators" (including the Valencian Community) and 7 are "emerging innovators".



Fuente: Regional Innovation Scoreboard 2024 (Comisión Europea)

NUTS	Region	RII	Rank	Group	Change
ES11	Galicia	78.9	156	Moderate -	16.0
ES12	Principado de Asturias	73.7	166	Moderate -	8.9
ES13	Cantabria	73.5	168	Moderate -	9.5
ES21	País Vasco	103.6	93	Strong -	14.7
ES22	Comunidad Foral de Navarra	98.1	114	Moderate +	17.5
ES23	La Rioja	80.7	150	Moderate	7.9
ES24	Aragón	80.9	148	Moderate	9.1
ES3	**Comunidad de Madrid**	101.0	100	Strong -	13.7
ES41	Castilla y León	76.9	160	Moderate -	17.4
ES42	Castilla-la Mancha	64.4	183	Emerging +	12.3
ES43	Extremadura	61.1	188	Emerging +	14.1
ES51	Cataluña	98.9	108	Moderate +	16.9
ES52	Comunitat Valenciana	91.3	128	Moderate +	18.3
ES53	Illes Balears	67.4	178	Emerging +	9.9
ES61	Andalucía	67.5	177	Emerging +	10.6
ES62	Región de Murcia	76.3	161	Moderate -	17.5
ES63	Ciudad de Ceuta	33.6	231	Emerging -	4.2
ES64	Ciudad de Melilla	40.6	226	Emerging	12.5
ES7	Canarias	48.8	216	Emerging	10.7

RII: performance in 2021 relative to that of the EU in 2021. Rank: rank performance in 2021 across all regions. Group: respective sub-group. Change: performance change calculated as the difference between the performance in 2021 and 2014 relative to that of the EU in 2014.

The performance compared to 2014 improved for all regions, with the largest increase experienced by the Valencian Community.

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