

THE INNOVATION JOURNEY TOWARDS TERRITORIAL PREPAREDNESS

All we have learnt from the European territories about how innovation policies can leverage defence and dual-use industries and propel territorial resilience

Territorial preparedness. Exploring the place dimension of the European defence industry

'To deal with the challenging way ahead, we need to switch into a preparedness mindset'
– Ursula von der Leyen, President of the European Commission

In the current global scenario, Europe needs to be prepared to face geopolitical threats by strengthening its defence and dual-use industry. [The White Paper for European defence – Readiness 2030](#), published in March 2025 in the context of the [competitiveness compass](#), highlights these industries as a crucial factor for [EU preparedness](#), sovereignty and competitiveness, with territories playing a key role in their development.

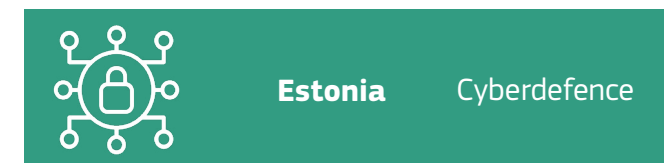
The European Commission's Joint Research Centre has developed an exploratory research activity called 'Regions, dual use and open strategic autonomy' (Regdualosa), aiming to address a critical question:

How can investments in the defence and dual-use industries, guided by place-based innovation policies, support territorial development within the EU's framework of open strategic autonomy?

What are Regdualosa's objectives?

- Understanding regional financial mechanisms for the dual-use and defence industries.
- Exploring policies for regional dual-use/defence industry ecosystems.
- Developing evidence-based policy recommendations for future EU frameworks.

During one year of work, this project has carried out three territorial case studies, focused on three different technologies:



Technologies and territories

Technologies

The project has centred on three technologies, identified as 'critical capability areas'.

Space technology: a vital enabler of defence capabilities. It encompasses a wide range of applications, from communication and navigation to surveillance. These technologies cater to both civilian and defence sectors, bolstering security across borders, enhancing disaster response efforts, and improving environmental monitoring.



Cyberdefence: indispensable for safeguarding our networks and information systems, their users and related infrastructure. It protects against cyber-attacks, electronic interference in global navigation, satellite systems, and a range of other threats.

Drones and aerial robotics: they provide real-time intelligence, enhance situational awareness, and enable precise targeting. The success of drone operations in Ukraine has highlighted the need for robust and resilient drone capabilities within the EU to ensure that its Member States are prepared for similar scenarios.



The EU's reliance on external suppliers like China, Israel and the United States for these technologies presents risks such as supply chain vulnerabilities, cybersecurity threats, and geopolitical leverage.

Territorial case studies

Podkarpackie region (Poland)
Ukraine border

The region prioritises aviation and cosmonautics in its smart specialisation strategy. Renowned for its aerospace sector and the 'Aviation Valley' cluster, it is also witnessing the rapid growth of a drone industry. Its proximity to the Russian war of aggression against Ukraine has emphasised its strategic relevance as a hub for defence innovation and cross-border resilience.

Partner: Marshal's Office of the Podkarpackie Region


Estonia

A leading Member State in cybersecurity and a global pioneer in e-governance. After facing a major cyberattack in 2007, it turned the challenge into an opportunity to build one of the world's most resilient digital societies. Today, nearly all public services are online, making Estonia a benchmark in digital innovation and security.

Partner: Ministry of Justice and Digital Affairs of Estonia



REPUBLIC OF ESTONIA
**MINISTRY OF JUSTICE
 AND DIGITAL AFFAIRS**

Andalusia (Spain)

The aerospace and defence sector in Andalusia is a key industrial powerhouse in the region. With a rich tradition in military aviation and a prominent cluster, the field of space technologies is bolstered by important infrastructures and major research centres. The region also boasts significant expertise in microelectronics, software, and energy systems.

Partner: Regional Ministry of Industry and Energy,
 Government of Andalusia

Recommendations from Regdualosa

Europe is facing a changing geostrategic landscape, and, as a result, the European Union is committed to increasing its defence spending and strengthening its ability to respond to threats. This effort is leading to more investments in new technologies and partnerships that can help build a stronger and more innovative defence industry.

There is a growing interest in technologies with high dual-use potential. Between 2007–2013 and 2014–2020, funding from the European Regional Development Fund across Europe for projects mentioning drones, cybersecurity, and space increased more than tenfold and the number of projects also rose sixfold.

However, the threat perception differs between territories, as both its impact and the capacity to address it vary significantly. Place-based innovation strategies, such as smart specialisation, can be tailored to enhance territorial preparedness and reinforce dual-use industrial ecosystems, ultimately strengthening the European defence technological and industrial base.



Recommendations for territories emerged from the discussions with with experts in the Regdualosa case studies:



Leverage the added value of the dual-use approach in territorial development strategies.



Reinforce whole-of-government coordination, overcoming policy fragmentation.



Remove access barriers to small and medium-sized enterprises, start-ups and less-represented regions in transnational defence projects.



Address the talent and skills gap in strategic technologies.



Foster market creation through demand-driven instruments.



Strengthen strategic enablers like quantum technologies and artificial intelligence.



Revisit smart specialisation strategies using the 'preparedness by design' approach.



Streamline combined access to multiple funding sources for strategic projects, making the most of the possibilities of [STEP](#) regulation.



Encourage regions with different innovation capacities to cooperate on dual-use projects.



Empower and strengthen clusters related to strategic technologies.

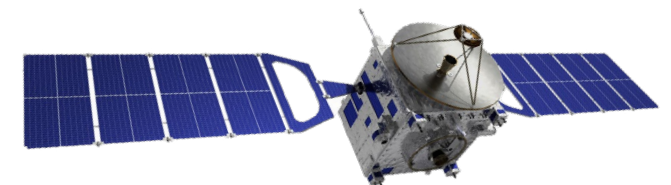


Support dual-use test beds and demonstration Infrastructures.



Establish observatories for dual-use technologies and defence needs, in collaboration with the ministries of defence.

To find out more [about Regdualosa](#):



The way ahead

EU territories can collaborate on the core principles of the [EU preparedness strategy](#) and the [competitiveness compass](#):



[Understand and manage multifaceted, complex crises](#), enhancing risk awareness.



[Boost industry and talent](#) in the innovation ecosystems. Developing a whole-of-government approach, considering multilevel governance and synergies.



[Address the funding gap](#) by optimising synergies between regional, national and European funding, promoting opportunities and access to defence projects.



[Encourage the emergence of a European market](#) for regionally developed solutions that leverage a value chain perspective.



[Promote public-private cooperation and citizens involvement](#), as proposed in the “whole-of-society” approach in the [Niinistö report](#).



[Take a collaborative approach to policy interventions that aim](#) to improve societal preparedness for upcoming crises.

The work of Regdualosa continues as part of the EU preparatory action ‘Innovation for place-based transformation’.

Are you interested? [Find out more](#) or contact us at: JRC-TRANSFORMING-TERRITORIES@ec.europa.eu

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