North Brabant: where high-tech meets defence innovation

Inside North Brabant's defence tech hub: clusters and collaboration drive growth.

Most people will know the Brainport Eindhoven region because of its semiconductor role. Nonetheless, the province of North Brabant is a strategic one for the Dutch defence industry. As geopolitical tensions put a strain on international relations, the intersection of high tech with defence is critical in developing cutting-edge defence systems. To this extent, clusters are fertile ground to make these connections happen.

The <u>Clusters meet Regions</u> two-day event in Eindhoven brought together representatives from industry clusters from all over the EU to learn about local cluster initiatives. The Safety & Security track of the event took place at Eindhoven's <u>Strijp-T MELT</u> building. Attendees could get insights from players active in this space, from policymakers to the Army and local institutions.

A grip on supply chains: Avular's case

As the host, Albert Maas, CEO of <u>Avular</u>, kicked off the session, introducing his company to the audience. The robotics firm conducting research and development at the MELT building-home to Europe's tallest indoor drone cage-is all in for making labor shortages a thing of the past through drones and ground robots.

In a complex and tense geopolitical scenario, technological sovereignty and security are as up to date as ever. Part of Maas's address was particularly on point as he took the audience through one of Avular's core principles: having a proprietary architecture. "As the Western world, in the past few decades, we have diverged from producing everything ourselves, but we need to gain more control of our supply chains again. It is an immense challenge, but it is something we need to do," underlined the entrepreneur.

To this extent, Avular is developing entire drones and ground robots in-house. After the talks, attendees could also visit the company facilities, including the electronics testing lab, the ground robots test area, and the drone cage.

A new aviation cluster

The youngest cluster in the province of North Brabant is the <u>Hive Aerospace Collective</u>. The civil-military aerospace cluster comprises 21 organizations and is located at the Woensdrecht air base. The aerodrome is also home to the Aviolande business park. The park's managing director, Ivo van der Vlis, delved more into the newly established collective's mission.

"This synergy arises from the need to tackle current challenges together. Defence tech has to step up, but at the same time, aviation must become more sustainable, bringing in a whole other set of challenges. The program partners agreed on a common vision of goals to achieve," explained Van Der Vlies.

Fighting together

The Dutch Airforce is one of the cluster's members. Colonel Robin Schoonen commands the Airforce Logistics Center at Woensdrecht Airbase and presented the Airforce's point of view. Embracing the motto "fight tonight, fight together, fight tomorrow" entails thoroughly planned logistic resources and coordination across different stages of preparation and execution of Airforce assets.

"Fight together is, in a way, working as a cluster. Many of the systems we use are also deployed by NATO partners, with which we also share allot of technical support. We work also closely with industry to develop new aircrafts like the NH-90 helicopter and (logistically) support the Airforce fleets. Moreover, what makes the difference in the battlefield is having systems always available and linked to each other, where logistics and data is continuously organized, reorganized, and rerouted," said the Colonel.

Facilitating cooperation

As with every efficient cluster, local public institutions must build bridges between the different actors. Eindhoven's development agency, Brainport Development, is active in multiple verticals, including security and defence. As the project manager of Brainport Innovation & Technology for Security (BITS), Midas de Rooij, underscored the necessity to set a tight cooperation network working in this scenario.

De Rooij highlighted NATO's <u>DIANA project</u> in showcasing the many initiatives carried out as BITS. Eindhoven is the site of the defence tech acceleration program, which funds and coaches five international startups.

"Every summer, NATO launches a new challenge to startups. Those selected get funded and take part in the program. It is a highly challenging environment for them to work in, and it opens many doors for them. For instance, <u>Lobster Robotics</u>, one of the companies of the previous cohort were trained by ex-Estonian Special Forces in freezing weather as they had an adventurous part within the programme as well," the manager explained.

EU's defence tech boost

Several opportunities are available for defence tech, at the European level. Paul Kruis, policy officer at the European Commission Directorate General for Defence Industry and Space, provided an overview on the work carried out in Brussels.

The European Defence Fund has a budget of €7.3 billion for the period 2021-2027 and promotes cooperative R&D projects with defence applications. The calls for 2025 are currently open, offering many opportunities for industry. 33 defence-related topics have been defined, for which more than €1 billion in funding is available, covering a wide range of technological areas.

In addition, there is the White Paper on European Defence Readiness, with the proposal for ReArm Europe. "It identifies seven critical capability areas and aims at making Member States spend more, better, and in Europe," underlined Kruis. ReArm Europe Plan/Readiness 2030's proposal aims to mobilize €800 billion in defence investment.

€150 billion would come as loans backed by the EU budget, from the financial markets, while the most significant chunk would result from activating the national escape clause of the Stability and Growth Pact. It can result in up to 1.5% gross domestic product increase in defence budget in the following four years.

More funding for defence technology, especially dual-use technology, is on the horizon. With Europe planning to bolster its defence capabilities, cluster collaboration can add value.