A portrait of UCN's Research Centre for Industrial Digital Transformation

Interview with Anders Vestergaard, Head of the Research Centre for Industrial Digital Transformation at the University College of Northern Denmark

What is the Research Centre for Industrial Digital Transformation?

As part of the University College of Northern Denmark (UCN), the Research Centre for Industrial Digital Transformation aims to build an internationally recognized academic environment connecting Northern Denmark with the rest of Europe. The Centre seeks to enhance the digitalisation of small and medium-sized manufacturing companies in its region. Hence, the research effort focuses on a deeper and broader understanding of the many emerging digital technologies in the industry. Vestergaard explains that UCN is comparable to a traditional university of applied sciences but still different because "in Denmark, the university system is different". University Colleges differ from the seven traditional universities in Denmark as they focus more on education and award only bachelor's degrees. Historically, there were no research activities at University Colleges, but in 2014 it was decided that University Colleges must provide research-based education.

What do you want to achieve?

Implementing the shift from education-based to research-based education is precisely the area Vestergaard covers. Concretely, he aims "to establish a research culture at UCN and to get more colleagues to engage in research and development activities". This is not always easy, but as Vestergaard explains, "needed as research and innovation activities keep our education up to date". Vestergaard is confident that UCN is on the right path to establish a research and innovation-led mindset but has not reached its goal yet and concludes that UCN "needs to do more of what we are already doing and needs to do it better". The research centre also aims to build on the experiences of others and therefore is striving to improve its competencies in how to use knowledge from abroad, get inspired by other cultures, and elaborate and co-create European projects.

What is the specific role of the UAS within the innovation ecosystem?

Vestergaard describes the Aalborg innovation ecosystem as unique: "it is based in a rather small city in a rural part of Denmark and is therefore used to stand together to stay strong". Higher education institutions are crucial to the ecosystem and work very closely together. To illustrate this, Vestergaard explains that the main campuses of UCN, Aalborg University and TECHCOLLEGE, one of Denmark's largest vocational colleges, are all within walking

distance and, therefore, “know each other and have much trust in each other’s organisations”. This is not only proven by the geographic proximity but also by the way they work together. Staff, including Vestergaard, who worked for 15 years at the university, shift from one institution to the other. Joint PhDs or Postdocs are set up, as are joint European applications. In some cases, the institutions also collaborate by playing very distinct roles. Vestergaard describes this with the image of a manufacturing company, where engineers, technicians and installers are all equally needed. However, while the TECHCOLLEGE provides the best education for installers, future engineers choose the university and future technicians UCN.

In other cases, like applied research and innovation, the institutions can find themselves competing with one another in certain fields. However, Vestergaard describes that the “best strategy to avoid too strong competition is to partner up and focus on the interest areas of each other”. Hence, UCN needed to find a niche to avoid competing too much with its neighbour and found its mission in very close collaborations with small companies or, as Vestergaard puts it, “we primarily work to support the region while the university supports Danish industry more broadly”. Especially in collaborations with small companies, universities sometimes struggle to work with the teams because of the different working attitudes, or as Vestergaard says, “they don’t speak the same language”, a gap that UCN can fill. On the other side, the University of Aalborg is known for its excellent Europe-wide cooperation and openness, which brings great new technologies into the ecosystem. Another focus area for UCN is life-long learning activities. Vestergaard explains that “for 15 years, we have had a special business unit at UCN (UCN act2learn) to upskill employees from companies, also in R&I activities”. This is essential for the innovation ecosystem and even helps the R&I activities of the university, sometimes realising that the staff of the companies they collaborate with would need upskilling to implement innovations. They can then refer to UCN, which provides a particular upskilling programme.

> *“We primarily support the region while the university supports Danish industry more broadly.”*

How do you connect to other ecosystems across Europe?

From his experiences at the university, Vestergaard already had an international environment and wanted to bring the positive energy of international cooperation also to UCN. Hence, he looked for several partnerships with organisations that were, as Vestergaard puts it, “fairly small, fairly local and therefore often more willing and hungrier for collaboration”. Erasmus+ strategic partnerships were a natural fit, which is why UCN has already participated successfully in a few of these projects. Furthermore, UCN is also active

in the EIT Higher Education Initiative, which "allows us to partner with diverse countries like the Czech Republic, Albania, Ukraine, Italy, Portugal and Spain". Concretely, UCN is part of HEI4Future, an initiative that reinforces teaching in the field of emerging skills associated with sustainability and climate change mitigation. Vestergaard describes UCN as a newcomer in the field of international cooperation and explains that "therefore, we always had to perform 110% in all the projects and to gain a reputation of always delivering and even deliver a bit more and a bit faster than the other partners". This strategy seems to pay off as UCN nowadays is invited by former partners and can even choose different options. Another proof of UCN's success in interconnecting different ecosystems across Europe is its participation in FIT4FoF, a project analysing technology trends across six industrial areas aiming to develop a new education and training framework, which places workers at the centre of a co-design and development process that recognises and addresses their skills needs. Vestergaard is particularly proud of this cooperation "as it was the first time ever that a Danish University College was a partner in a Horizon project".

How can further partners get involved?

UCN's Research Centre for Industrial Digital Transformation collaborates with local, national and international actors. On a local level, it is part of the European Digital Innovation Hub AddSmart, a cooperation in the field of smart manufacturing that includes the whole ecosystem of Northern Denmark. On a national level, the research centre is a member of the Manufacturing Academy of Denmark (MADE), a Danish Cluster for Advanced Manufacturing, including all universities and all university colleges with a technical focus. Both initiatives are open to further partners. UCN's management decided to focus on the European programmes, which automatically leads to additional possibilities for cooperation. In summary, UCN is already very well connected but still eager to expand its network to connect with other innovation ecosystems and their actors.

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UAS4EUROPE represents over 2.000.000 students and 60.000 research staff in more than 450 UAS from 24 European countries.