

Productive 4.0 – information technology that takes the production industry to new levels.

Together, 19 countries and 108 partners from across Europe are part of the flagship project Productive 4.0, which aims to promote the development of technologies that facilitate digitalising the industrial sector. Sweden is one of the leaders of this EU project, which gives industrial actors the opportunity to produce and develop their products in a completely new way and at a faster pace.

Professor Jerker Delsing of Luleå University of Technology heads the Swedish component. He explains that the aim is to pave the way for technologies that enable integrating knowledge between different parts of a production's systems – both within companies and between actors. The Government's strategic partnership programme 'Connected industries and new materials' has identified digital infrastructure for industry and industrial testbeds as key. The project is completely in line with Sweden's priorities.

“It is currently possible for a company to gather information from different parts of its production systems. The challenge is to get the different systems in these parts to interact and share information and so streamline production and product development. For example, information that emerges in the final stages of production may be of major significance to, say, product design,” says Mr Delsing.

Focus on system architecture

The Swedish team is primarily focusing on system architecture for production automation and digitalisation. The aim is to develop tomorrow's platform for digitalising industry. This will be an important basis for digitalising industry throughout Europe. One example of how it may be applied is that a company can monitor how a product is used by end consumers. Product usage varies between different regions and countries, so the producer is interested in adapting the product to meet the requirements that exist in each country. Mr Delsing believes that certain scenarios are highly relevant in Sweden.

“Today we see that it is possible to deliver goods ordered online within four hours. For this to work, the trucks need to know where to go, where the goods should be collected, how they are sorted and much more. Building a system that can manage this is not cheap, with the final costs ultimately being passed on to the consumer. The price of goods will increase and certain products will be so expensive that no one will buy them. Findings already indicate that future technologies will substantially contribute to reduced development costs and related efficiency gains,” he says.

One Swedish project partner is IT company BnearIT in Luleå. It will have a key role and so make a difference for the entire industry. In addition, Volvo Truck Corporation is

participating in a sub-project that focuses on building tomorrow's production lines and testbeds. Through its participation, it will be able to make its production faster and more flexible.

Can share information

Mr Delsing believes that the cost factor makes the project interesting for both companies and end consumers. Previous similar projects have shown that companies can cut their system development costs by 60–80 per cent. There is also the possibility to profit from their information.

“We have begun looking into something completely new – nano payments. This means that a company can choose to share its information with other actors for a fee. By means of an automated service, money is transferred from one actor to another and the information is made available,” says Mr Delsing.

Cooperation on information between different actors is based on trust which, according to Mr Delsing, has been strengthened in recent years. Companies have seen evidence of the profits that can be made and are therefore positive to becoming involved.

Total financing of the entire project amounts to EUR 100 million. The Swedish component comprises almost SEK 75 million. The funders are the European Commission, participating Swedish partners and Sweden's innovation agency Vinnova. The goal is that, by 2020, the progress that has been made will have been implemented in new business deals and working methods at the participating companies.