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Robotics technology: a key enabler for green transition

Robotics technology is a key enabler for green transition. And Denmark's robotic industry is well placed to contribute to the green transition and leverage its huge market potential. But one significant barrier remains: lack of demand from customers.

That's the conclusion of a new report published today – the first of its kind that examines how robot, automation and drone companies in Denmark contribute to green transition today and identifies opportunities for an even stronger contribution in the future.

Researchers at the University of Southern Denmark compiled the report based on interviews with a range of robot companies, contextualising insights with references to existing analyses and political initiatives, not least the Danish government's National Robot Strategy published earlier this year that firmly put green transition on the industry's agenda.

Key findings

- Robotics technology is a key enabler for green transition
- Key contributions are reducing waste, minimising use of resources and CO2 emissions, re-using materials and extending the lifecycle of their and their customers' products
- Danish companies working with robotics technologies are already contributing in many ways and to many segments
- The most significant barrier to robotic companies in Denmark is a lack of demand from their customers for green solutions; demand is limited mainly to large companies and public sector organisations
- Despite lack of demand today, robotic companies are aware that green transition will be an important parameter in the future and therefore are actively working towards this agenda already.

“Our research demonstrates clearly that robotics technology is a significant enabler for green transition – and that Danish robotic companies are already actively contributing. Indeed, the industry is well placed to grasp the potential, given their leading market position and the government's focus on this area,” says the report's author, Kristina Vaarst Andersen, lecturer, University of Southern Denmark.

“Yet it's also clear that a significant barrier stands in the way: the large majority of robotic companies' customers simply don't demand green solutions and instead focus on price. Despite this, companies are very aware that this is likely to change in the future. As a result, they are already taking steps to deliver greener solutions, so they can meet demand when it arises.”

Unequivocal enabler

The report concludes that robotic technology is a key enabler for green transition. And shows that Danish companies are already making their contribution. It divides companies into three categories: companies 'born green' because their product is specifically designed to contribute to green transition; companies that indirectly contribute to green transition through their product and lastly companies that work strategically with green transition internally and through their product.

The report's empirical data indicate that Danish companies are contributing towards a variety of key green transition parameters, predominantly: reducing CO2, re-using resources, optimising production processes and replacing chemical with mechanical processes. And due to their global stronghold and leading position within robotics, Danish companies are in a good position to leverage the potential.

Good for business

Through company cases, the report shows that many Danish robotic companies have succeeded in creating a balance between green transition and a healthy economy for their own company and for their customers. In fact, it is often a focus on reducing waste, minimising use of resources and CO2 emissions, re-using materials and extending the lifecycle of their and their customers' products that is the key to a profitable business. In short, companies have turned green transition into a good business opportunity and demonstrate a strong commitment to making their contribution towards a greener future.

"It's very encouraging to see that Denmark's robot and drone industry is well positioned to grasp the innovation and market potential of green transition – and be a key enabler for range of segments and industries. There's no doubt that green transition will rise up the agenda in the years to come. That's why the national cluster will actively help robot, automation and drone companies explore how they can contribute towards this increasingly important parameter," says Mikkel Christoffersen, CEO, Odense Robotics.

The report is compiled by researchers at the University of Southern Denmark and commissioned by RoboCluster, which today is part of the new national robot and drone cluster, Odense Robotics.