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From knee surgery to home drudgery, the robot revolution beckons

Automation will play a growing role in people's lives and Europe has the know-how to lead the way, according to a top Italian researcher.

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Professor Maria Chiara Carrozza believes people in the 21st century will find life more liveable in the growing company of their machine equivalents: robots.

Carrozza, president of Italy's National Research Council, says advanced robots promise across-the-board improvements in the quality of life in Europe and beyond.

In places ranging from farms to factories, she foresees robotics being far more an ally of humans than a job threat to them.

'Robotics is a technology which is fundamental,' said Carrozza, a physicist and engineer who served 11 years ago as Italian minister for research. 'Robots can be a support for improving the quality of work.'

The EU research programme, the third-biggest part of the EU budget with funding of almost €100 billion in 2021-2027, has devoted considerable attention to robotics.

EU-funded projects have examined the potential of robots to do everything from collaborate with workers on factory floors to improve operations in hospitals.

Carrozza herself has a research focus on robotics. She says that Europe enjoys a competitive advantage in the field because the continent has long been home to world-class automotive manufacturers and they have traditionally deployed such technologies.

'We have the competences, we have the infrastructures, we have the companies – and very good engineers,' Carrozza said.

She says this expertise can be harnessed not just to bolster Europe's industrial base but also to ensure a prominent European influence over the development of robots for a range of emerging roles.

These include agricultural field work that people may have increasing difficulty carrying out as a result of climate change as well as basic home services right down to vacuum cleaning, according to Carrozza.

‘That means home-assistance provider – like, for example, supporting elderly people at home but also supporting ordinary life at home by automation of cleaning,’ she said. ‘This will be an important business for the future.’

Below is a Horizon Magazine video interview with Carrozza about the prospects for robotics.

Watch the video

More info