Automation

Global robotics surge: A glimpse into the future of automation

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Robotics is on the rise! In 2022, over half a million new robots were installed worldwide, a five percent increase from 2021, reveals data from the IFR. Asia dominates consumption, with China alone consuming more then halve of it. Meanwhile, Europe installed 71,000 robots; Germany led, but Italy showed an impressive eight percent growth from the previous year. What's in store for 2023 and beyond?

Marina Bill, president of the IFR International Federation of Robotics, gives an overview of the global robotics sector. (Source: Ucimu)

The worldwide industry of robotics is experiencing a positive phase. Based on the data analysed by the IFR (International Federation of Robotics) in 2022, over half a million new robots were installed, corresponding to five percent more than the installations recorded in 2021. Asia took the lion’s share, taking up 73 percent of consumption, followed by Europe, with 15 percent and then by the Americas, with ten percent.

China alone accounts for 52 percent of world demand. Therefore, it is clear where automation is pushing more, but interesting performances are registered in other countries, including the United States and Italy. In 2022,

the United States saw the number of new installations grow by ten percent over the previous year, driven by investments from the automotive sector.

In Europe, 71,000 new robots were installed in 2022. Germany acquired 36 percent of new installations, however showing a slight decrease versus the previous year; on the other hand, Italy absorbed 16 percent of the total in the area, marking an eight percent increase in consumption compared to 2021.

The year 2023 should also have a positive sign: we expect a seven percent rise in the demand for robots, corresponding to about 590,000 new units. The trend should continue in 2024, when IFR expect sales to reach 600,000 units.

The main innovation trends for robotics

User-friendliness, digitalisation and sustainability: undoubtedly, these are the three main trends that most influence — and will continue to influence in the near future — the robotics sector. In particular, the first trend concerns the accessibility and user-friendliness of robots, so that they can be managed and driven by all operators, even less experienced ones.

The second trend, that of digitalisation, is indispensable for the sector today. Indeed, robots are now part of a connected digital ecosystem, which includes cloud computing, big data, 5G, AI and brings benefits in terms of costs, speed and variety of applications.

Finally, sustainability: robots considerably contribute to increasing the competitiveness of enterprises and, in particular, to optimising material and energy costs. In the next years, we expect numerous innovations and advancements in this field!

Deployment of AI and robotics in the manufacturing industry

Artificial Intelligence is an essential element in the connected digital ecosystem just mentioned and its solutions are valuable instruments to make the most of the use of robots in factories. Population decline, difficulty in finding and having qualified personnel available, as well as the possibility of unpredictable situations, such as the pandemic in 2020, make these technologies increasingly indispensable. Robotics and artificial intelligence go hand in hand more and more, as they can represent an interesting response to the need to bring a part of production back to traditional countries, as well as to the development of the business activity of small and medium-sized enterprises. Thanks to artificial intelligence, these companies can pursue their digital development path faster and more consciously. In order to facilitate this “leap into innovation”, IFR has just launched the Go4Robotics project, a digital platform for new users with little knowledge or little experience, offering support, guidelines and help in understanding and making best use of the latest solutions in these fields.

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