Symop

Les créateurs de
solutions industrielles

Membre de la FIM

Symop
the creators of industrial solutions

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CRITICAL ISSUES

FOR THE FUTURE OF ROBOTICS

Technological breakthrough has been underway for quite a number of years. In a changing world, one of the key drivers for growth is robotics with its capacity to change production methods, economic models as well as social relationships. Against this backdrop, Symop would like to take the lead in fostering active discussion and devising strategic proposals to meet the challenges of robotics and thereby continue expanding its initiatives to support the modernisation of the French industry and economy.

1. Creating a French committee on Ethics of Robotics and Artificial Intelligence

In light of technical and scientific progress, new opportunities have emerged and the use of robots has changed whether in the private, public or professional sphere and the tasks entrusted to robots in the direct service of the population have increased.

In response to these developments, Symop would like to create a French committee on Ethics of Robotics and Artificial Intelligence. Similarly to the CNIL (French data protection authority) that was created to predict and plan a framework for the development and use of personal data, this committee would be able to support these scientific and technological developments and prepare the incorporation of robotics into our way of life.

This body would bring together experts in the relevant areas (sociologists, anthropologists, philosophers, psychologists, ethicists, robotics engineers, legal experts, economists, representatives of the CNIL, etc.) and should eventually be taken over by the public authorities in order to be established at an institutional level.

2. Recognising the contribution of integrators in the value chain

With a view to strengthening and promoting the contribution of integrators in the implementation of a robotised solution, Symop has decided to launch an initiative designed to promote these professionals in the production chain and continue the professional development of an occupation which to date has been poorly outlined.

Measures need to be implemented in an effort to better match the customer demand with the solutions provided by integrators and raise the visibility and knowledge of this occupation and its possibilities. Accordingly, the goal would be to increase the understanding on how integrators add value (analysis, consulting, technical expertise, etc.), assist them in structuring their products and services, in order to facilitate a qualitative and safe implementation of robotised solutions which will be beneficial to the entire robotics industry.

One possible option would be to create a sector-based quality label allocated based on compliance with a list of criteria to be determined to allow integrators to win recognition amongst the industrial community as key players in the production chain. In addition, teaching and training material would need to be developed in keeping with the aim to support and promote the sector.

3. Building social acceptance of robots

Human beings' place in the world with respect to machines is a central issue. At a time when there is even closer interaction between robots and employees or private individuals, it is essential to provide the public with clear and educational information to guide and assist in this significant shift.

Advancements in mechanical engineering, electronics and information technology amongst other technological progress have made it possible to create conditions conducive to the development of the collaborative operation of industrial robots with humans. Since 2011, standardisation organisations have introduced pioneering texts in this field (ISO 10218-1:2011 and ISO 10218- 2:2011), offering the prospect of a shared common workspace between the operator and the industrial robot.

At present, new work situations, which do not only rely on the physical separation of human and machines, are possible with the robot on account of innovative safety solutions (mechanical architecture of the robot, control system, etc.).

With this innovation - developed robotised systems and possible work situations - comes the need to guide companies in the process of introducing collaborative work stations in their workshops and conduct awareness raising campaigns amongst professionals with regard to proper consideration of the place of human beings in robotised solutions designed for collaborative use.

Furthermore, in addition to the sound adoption by industrial players (manufacturers, integrators, users) of the safe implementation of collaborative workstations for the operator, studies should be undertaken to better understand the criteria for acceptance of the robot by the operator when both are required to work within a specifically designed application where safety is no longer traditionally managed by physical separation.

Within a societal framework, political policies must be implemented to promote the social acceptance of robots by individuals so that they can be deployed and integrated as is being presently done in Asia in particular (Japan, Korea, etc.).

With this aim in mind, the government may play an efficient role by becoming fully involved in the modernisation of schemes and regulations and thereby encouraging private individuals to embrace modernisation.

Finally, these measures should rely on a national public awareness campaign focused on doing away with the fantasmatic image that is too often linked to robots.

4. Determine a clear framework for management of data generated by robots

The social acceptance of robots and artificial intelligence can only be achieved via the establishment of a clear regulatory framework for the access and management of personal or other data produced by robots.

To this end, the European Commission has launched a public consultation on "Building a European Data Economy" which will contribute to a potential future EU legislation initiative.

Data accessibility and transfer, responsibility in the field of data based products and services, data portability, these are some of the issues to be addressed that the European Union may tackle. On account of the economic potential that it represents (272 billion euros in the European Union with an annual growth of 5.6% according to the European Commission), the data industry may employ 7.4 million people by 2020. The use of the data may help to practically improve all aspects of our daily life whether it is in relation to the supply of business analyses or weather forecasts, personalising medical care, improving road safety or decreasing traffic congestion. In this regard, the communication from the European Commission highlights the role of the free flow of data within the EU.

In this way, Symop supports its development and plays an active role in the discussions on this issue with the steadfast goal of assisting and acting for a stronger and more competitive French industry.

Symop, professional organisation for creators of industrial solutions is a key member of the Fédération des Industries Mécaniques (FIM - Association of mechanical engineering industries). It represents 270 companies aggregating 16,500 employees with a turnover of 2 billion euros. In 2005, it spearheaded the "Robotcaliser : Robotics to avoid relocating" operation and is the initiator of the ROBOT Start PME scheme which provides support to 250 small and medium industries in the acquisition of their first robot. It also launched the Productivez! initiative - Reindustrialise through production machines and technologies in 2012. In July 2015, it was one of the funding members of the Industry of the Future Alliance which was tasked by the government with implementing the plan of the same name. Symop published its Manifesto for productive investment in 2016 through which it proposed to the public authorities 5 strategies for shaping and building the industry of the future. www.symop.com

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