



2015/2103(INL)

15.11.2016

OPINION

of the Committee on Industry, Research and Energy

for the Committee on Legal Affairs

with recommendations to the Commission on Civil Law Rules on Robotics
(2015/2103(INL))

Rapporteur: Kaja Kallas

(Initiative – Rule 46 of the Rules of Procedure)

PA_INL

SUGGESTIONS

The Committee on Industry, Research and Energy calls on the Committee on Legal Affairs, as the committee responsible:

- to incorporate the following suggestions into its motion for a resolution:
 - A. whereas robot-human teams could be 85 %¹ more productive than either robots or humans on their own; whereas, by enhancing capabilities of humans, robots will reduce the risk of human error,
 - B. whereas the Union holds a leading position in industrial robotics, with a share of more than 25 %² of supply and use and growth in the market is estimated to be 8 to 9% per annum, thereby making the sector an industrial strategy priority,
 1. Believes that robotics and artificial intelligence play a major role in improving the competitiveness and productivity of the European economy and could, in the medium term, have more impact on the competitiveness of non-manufacturing industries such as agriculture, transport, healthcare, security and utilities; calls on the Commission to promote an ambitious and cross-sectorial pro-innovation policy in robotics and artificial intelligence, facilitating integration of technologies in value chains, development of innovative business models, and shortening the time passed from innovation to industrialisation; asks the Commission to assess the need to modernise legislation or develop European guidelines to ensure a joint approach in robotics and artificial intelligence, essential for companies to scale up in the Union;
 2. Notes that third countries have recognised the strategic importance of robotics and are challenging the Union's global market leadership, for example through takeovers of Union manufacturers; calls on the Commission to devise an industrial strategy that addresses the role of strategically significant sectors such as robotics and sets out how the Union can retain jobs, growth, know-how and much of the value chain;
 3. Stresses that innovation in robotics and artificial intelligence and the integration of robotics and artificial intelligence technology within the economy and the society require digital infrastructure that provides ubiquitous connectivity; calls on the Commission to set a framework that will meet the connectivity requirements for the Union's digital future and to ensure that access to broadband and 5G networks is fully in line with the net neutrality principle;
 4. Strongly believes that interoperability between systems, devices and cloud services, based on security and privacy by design is essential for real time data flows enabling robots and artificial intelligence to become more flexible and autonomous; asks the Commission to promote an open environment, from open standards and innovative licensing models, to open platforms and transparency, in order to avoid lock-in in proprietary systems that restrain interoperability; stresses, in addition, that a high level of safety, security and privacy of data used for the communication of people with robots and artificial

¹ According to research from MIT following joint experience with Carmakers BMW and Mercedes-Benz.

² <http://ec.europa.eu/programmes/horizon2020/en/h2020-section/robotics>.

intelligence has to be ensured ; therefore calls on the Commission and Member States to integrate the security and privacy by design principles in their policies related to robotics and artificial intelligence, in the EU cybersecurity strategy and to include robotics and artificial intelligence in the discussions of the high-level advisory group on cybersecurity that will be established by the Commission;

5. Notes that data access is key to innovation in machine learning algorithms; calls on the Commission to implement an ambitious framework and strategy on open and free flow of data in particular with the “free-flow-of-data” initiative, in line with data protection legislation and a reformed intellectual property law; stresses that the “free-flow-of-data” initiative should clarify issues of data ownership, usability and access, which are important for the further development and use of robotics technology;
6. Calls on the Commission to increase its support in the mid-term review of the MFF for the Horizon 2020 funded SPARC programme, conduct forecast studies, promote open innovation as a strategic objective, and a collaborative environment between national and European institutions, the research community, standardisation bodies which attract talent, but also the private sector, between global companies, SMEs and start-ups which are key to innovation and opening up new markets in robotic technology on a global scale; stresses the role that private-public partnerships can play in this respect;
7. Stresses that the development of robot technology should focus on complementing human capabilities and not on replacing them; Stresses that growth in robotics and artificial intelligence will automate a significant number of jobs, reducing human exposure to harmful and hazardous conditions and transform lives and work practices, thereby requiring a long-term assessment and measures to ensure that social, environmental, ethical, liability and education aspects are properly addressed; considers in particular the need for digital skills, including coding, to be included in all the teaching and training from the early school years to life-long learning;
8. Believes that medicine robots continue to make inroads into the provision of high accuracy surgery and in performing repetitive procedures; considers that they have the potential to improve outcomes in rehabilitation, and provide highly effective logistics support within hospitals;
 - to incorporate the following recommendations in the annex to its motion for a resolution:
9. Considers that any future legislative initiatives covering on robotics and artificial intelligence after consultation with a diverse range of relevant stakeholders and based on a continuous dialogue, should provide legal certainty without stifling innovation in this fast-evolving technology field;
10. Believes that, together with end-users robotics engineers, the research community and other stakeholders the Commission should develop a code of ethical conduct aimed at guiding robotics and artificial intelligence development activities;
11. Considers that recommendations regarding licences should respect contractual freedom and leave room for innovative licensing regimes; cautions against the introduction of new intellectual property rights in the field of robotics and artificial intelligence that could

hamper innovation and the exchange of expertise;

RESULT OF FINAL VOTE IN COMMITTEE ASKED FOR OPINION

Date adopted	13.10.2016
Result of final vote	+: 54 -: 1 0: 3
Members present for the final vote	Bendt Bendtsen, Xabier Benito Ziluaga, José Blanco López, David Borrelli, Jerzy Buzek, Angelo Ciocca, Edward Czesak, Jakop Dalunde, Pilar del Castillo Vera, Christian Ehler, Fredrick Federley, Ashley Fox, Adam Gierek, Theresa Griffin, Hans-Olaf Henkel, Eva Kaili, Kaja Kallas, Barbara Kappel, Krišjānis Kariņš, Seán Kelly, Jaromír Kohlíček, Zdzisław Krasnodębski, Miapetra Kumpula-Natri, Janusz Lewandowski, Ernest Maragall, Edouard Martin, Angelika Mlinar, Nadine Morano, Dan Nica, Carolina Punset, Herbert Reul, Paul Rübig, Algirdas Saudargas, Sergei Stanishev, Neoklis Sylikiotis, Dario Tamburrano, Patrizia Toia, Evžen Tošenovský, Claude Turmes, Vladimír Urutchev, Henna Virkkunen, Martina Werner, Lieve Wierinck, Anna Záborská, Flavio Zanonato, Carlos Zorrinho
Substitutes present for the final vote	Michał Boni, Rosa D'Amato, Esther de Lange, Jens Geier, Benedek Jávor, Olle Ludvigsson, Vladimír Maňka, Marian-Jean Marinescu, Clare Moody, Maria Spyrali
Substitutes under Rule 200(2) present for the final vote	Salvatore Cicu, Albert Deß