A survey about development interests in industrial robotics

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Abstract— **In this contribution the first results of a European wide survey on companies development interests in the area of industrial robotics are presented. The survey was conducted during training courses organised by the Robott-Net consortium for robot enthusiast in four different locations in Europe. 139 specialist from 73 industrial companies with an interest in robotics participated in this survey. The results show that companies are researching and looking for robotic automation solutions which are easy to use and reconfigurable. The biggest barrier for automation using robotics perceived by the participants is the lack of available technology. Another outcome of the survey is a ranking of the processes which companies want to automate using robotics.**

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I. Motivation and Problem Definition

Lack of technology transfer between universities and companies is a major problem in the EU [1]. Many new technologies are developed in universities and research institutes but are never transferred into a viable product. This means that opportunities for growth and job creation are missed. It could also lead to loss of knowledge generation as the economic interest in the area of development ceases to exist. This innovation gap called European ”Valley of Death” can be found in every European technology sector, also in robotics. To improve technology transfer universities and research institutes need to become more entrepreneurial and target their research at topics which yield economically exploitable results [2]. In robotics research we therefore need information about the development needs and plans of companies to develop appropriate technologies or knowledge.

II. Related Work

The most comprehensive study about the market for industrial robotics is published annually by the International Federation of Robotics [3]. The statistical data in this report is provided by robot suppliers. However, it does not contain reliable information about companies' expectations for future developments in robotics. Especially end-users of robotic technologies are not well represented in the report as most data is provided by robot suppliers. Another survey focuses on human perception of robots [4]. This survey plays an important role as it reflects the public opinion and predicts how a product with new robotic technology will be received. Nevertheless, this study does not provide information about which technologies are currently needed by the industry. In fact reliable information about robotic research development of companies is rare.

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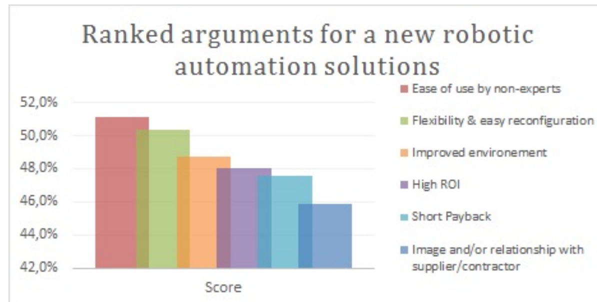

Fig. 1. Diagram with the ranked results for the section ”arguments for buying a new robotic automation solution”

III. Own Approach and Contribution

In order to gather data from companies interested in robotics we used training courses held during the Robott-Net project. The Robott-Net project focuses on developing methods for technology transfer in the area of robotics. Part of the project is organising 16 two-day training courses for managers and technicians to inform about robotics and improve networking with commercial research partners. Eight training courses have been held up-to-date in Denmark, Germany, Great Britain and Spain. During the training courses 139 specialists from 73 different companies with an interest in robotics answered questions about automation with robotics in a questionnaire.

In the main part of the questionnaire the participants could give points to topics on a scale from 1-5. The topics were grouped into different sections, the sections being ”automation topics”, ”arguments for a new robotic automation solution” and ”barriers for automation”. A ranking of the topics in each section was prepared. Figure 1 shows the exemplary ranking for the section arguments for buying an automation solution.

References

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