

# BAE SYSTEMES Industrial Workshop

**BAE SYSTEMS**

The University of Greenwich organised an Industrial Workshop, which was hosted at BAE Systems manufacturing site in Rochester on the 25th of September 2018. The event consisted of Industrial presentations from newly involved companies interested in Robotics, especially in the CoRoT project. The companies present were: Valkyrie Industries, Artemis Optical, Currock Engineering, MEP Ltd, Walker Precision Engineering and UTC Aerospace Systems. The key requirements identified during the workshop included: Robots As A Service Framework and the implementation of new technologies to increase flexibility in manufacturing processes. A follow up meeting was arranged between the University of Greenwich and Valkyrie Industries to capture further requirements, which will allow further research development for the project. The Industrial workshop provided a platform onto which the CoRoT solution was demonstrated to potential Industrial Collaborators. The delegates were keen on working with the CoRoT project to develop their own specific use case. The workshop allowed the companies to complete our Industrial Survey, a single survey was completed and there will be a follow up on the other five companies. Some of the main emerging technologies identified were the use of Haptic Technologies in the Manufacturing Industry to help in training workers. A recurring requirement from most of the companies were the development of a method of facilitating the sharing of technologies, experiences and ideas with Industrial clusters.

Requirements for Robotic Technologies & Automation	Emerging Technologies & future trends in flexible Manufacturing	Expectation of Non-Partner Companies from the CoRoT Project	Contributions from Research Organisation to Industry
Robots as a Service framework	Haptic Technology	Awareness of the State of the Art	Design for Automation Handbook
Flexibility	Developing a method of facilitating the sharing of technologies, experiences and ideas with Industrial clusters	Massive Open Online Course (MOOC) and training	Understanding the requirements from Industry
Short implementation period that minimises downtime	Integrating Supply chains; 24Hr working, lights out operation with Robotic systems	Analysis of company specific use case	Take part in Industrial visits
Autonomy and safety	Remote Management	Networking events	Technical training resources

Table showing different Ideas captured during Industrial Workshop

## **Industrial Workshop hosted at BAE Systems in Rochester UK**

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- Valkyrie Industries - *Use of Innovative Haptic Technologies in Manufacturing Systems*
- Artemis Optical - *A Mobile Robotic System for Multi-instrument Optical Test and Surface Mapping*
- MEP Ltd - *Beyond Making Everything Possible*
- Walker Precision Engineering - *Manufacturing Technology – The Future*
- UTC Aerospace Systems - *Automated Soldering Technologies & Future Solution Developments*
- BAE Systems - *Improving Assembly Tasks Using Robot Simulation in Aerospace Manufacturing*

Table 1 shows a summary of the different ideas captured during the second session of the Industrial Workshop.

<b>Requirements for Robotic Technologies &amp; Automation</b>	<b>Emerging Technologies &amp; future trends in flexible Manufacturing</b>	<b>Expectation of Non-Partner Companies from the CoRoT Project</b>	<b>Contributions from Research Organisation to Industry</b>
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*Table 1 showing the different ideas captured during session 2 of the workshop*



*Figure 1 showing the CoRoT project presented to the attendees*