



Advanced Transportation
Manufacturing Summit Toronto

INTERVIEW WITH

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AIRBUS

Please tell us about the work that you're doing and the type of projects you're working on in the transportation manufacturing sector.

At Airbus Operations Ltd, Bristol, United Kingdom, I was the Process Improvement and Digital Lead for Filton Plant. Altogether, I implemented digital solutions in conjunction with lean manufacturing methods into the plant's three main production facilities, namely commercial, military, and additive manufacturing. Smart devices for real-time process tracking, augmented reality quality inspection, digital visual management, and AI smart flow solutions are examples of projects that I have led and deployed within each of the facilities. Achieving industry 4.0 was my priority and it was exciting to work with multi-functional teams to push the boundaries of what is possible.

What are some of the key impacts of new technologies on existing manufacturing practices?

New technologies have significant impacts on current manufacturing practices. The implementation of digital solutions allows users to monitor, control, and track machinery and equipment in real-time. They also create the possibility for robots and machines to communicate effectively with each other. Together, this eliminates waste, improves productivity, creates transparency across the production floor, and allows managers to have control of their facilities. The unique capabilities of certain technologies (ex. IoT, AR, VR, Blockchain) give rise to exponential annual benefits when applied correctly. This not only improves the efficiency of production but changes employee behaviour. It opens up more opportunities for employees to innovate, collaborate, and test new ideas.

What are some of the key considerations for companies managing the shift to Industry 4.0 and intelligent manufacturing practices?

When shifting to Industry 4.0, there will be a mix of "turn-key" solutions, prototypes, MVPs, and devices that require configuration when new technologies are brought into production. Some areas of manufacturing are standardized, but many areas are specific to the industry and the company itself. For this reason, many solutions need to be adjusted, tested, and modified as they are deployed. It is important to account for this implementation time and ensure that the facility has the resources to aid in this transition. Additionally, it is important to look at the security strength of new devices, integration capabilities with pre-existing platforms, maintenance requirements, and available training for employees. Since the behaviour of the employees will change, new operating procedures and available support teams will need to be clearly outlined prior to deployment.

In what ways is workforce development becoming a key challenge for the industry at present, and how are companies looking to address these?

Skill shortages, training availability, and public perception of an industry can create challenges for workforce development. Preparing workers with the necessary skills for a job with career development opportunities is very important. However, rapid advancements in technology often create gaps in skill-level and lead to limited training opportunities. Many companies are looking toward proactive training platforms that prepare workers for understanding future technologies that will be acquired in the long-term. This proactive approach increases the overall skill-level of the workforce and helps departments to integrate more easily when new solutions are implemented.

What do you think enterprises should be doing at present to manage the risk of cybersecurity in increasingly complex manufacturing environments?

Cyber attacks are a growing threat in complex production facilities that have a high quantity of robots, smart devices, and cyber-physical systems operating simultaneously. To reduce the risk of such an attack, enterprises should conduct audits on a regular basis, use two-factor authentication, identify the major threats, and enforce a strong sign-off policy. Investments into platforms that have a track record of robustness and security strength must be a priority in this information era.

What was your motivation for joining this event?

Industry 4.0, cutting-edge technology and large-scale collaboration are deep passions of mine. Pioneering innovative solutions to global problems not only change the world but inspires others to make a difference. This event involves discussions surrounding the shift to a digitalized world and the impacts of such a move. Being able to collaborate and share experiences with some of the world's largest companies will allow new ideas and partnerships to be formed. I look forward to sharing my experience of Industry 4.0 and having in-depth discussions about how it can make the world a better place.