IndustryX Talk EU

Human-Centered AI: Data-Driven Transformation in Manufacturing

20th - 21st November 2025
Barcelona, Spain

DAY ONE

08.15 - 08.50	**REGISTRATION**
08.50 - 09.00	**WELCOME & CHAIRPERSON'S OPENING REMARKS FOR DAY ONE**

09.00 - 09.30

How Industry 5.0 will take the Manufacturing Workforce to the Next Level of Plant Operations
- People-centric approaches to digitalization initiatives have revolutionized the way companies drive efficiency and optimize collaboration in 24/7 plant operations. Where Industry 4.0 focused on technology and automated machines Industry 5.0 will put people back at the heart of manufacturing enabling interactive plant operations
- How digitalization initiatives have proven to increase shift communication and plant performance
- Why a people-focused approach is key for successful manufacturing

09.30 - 10.00

Achieving highest operations excellence by digitally enhancing the capabilities of our people and assets
- Our future mill vision and approach puts the humans at the center supported by new ways of working, remote operations, digitalization, competences and capabilities
- Our "Quality Advisor" solutions are a prime example of innovation and collaboration. They offer tailored solutions for various production areas and set new standards in quality control and monitoring
- From Proof-of-concept to company wide scale-out, only solutions which are of value are selected and productized
- A particular focus is on the development of "Advisor" solutions into "Closed-Loop" applications
- This has not only increased efficiency but also revolutionized the human-machine interface. We have learnt how important it is to optimize the interaction between humans and machines to achieve the best possible results

10.00 - 10.30

Lighthouse Project for an Industrial Data Platform
- Designing and implementing data platform to improve data availability to business analysts
- Improve maintenance strategy for manufacturing equipment
- Optimize and Modernize architecture of their infrastructure of how to make data available to different applications and users
- Results and a look at what next

10.30 - 11.20	**COFFEE BREAK & MEETINGS**

11.20 - 12.10

Roundtable Discussions: For 4 to 10 participants to discuss and debate on one of the selected topics:

1. Human Centric Digitalization
2. Data driven Digital Transformation
3. Artifical Intelligence/GEN AI
4. Leadership & Digital Transformation Strategies
5. Lean Strategies/Lean 4.0/Continous Improvement
6. Workforce Development and preparation

12.10 - 13.10

One to One Meetings & Investment Areas
- Industry 5.0
- Manufacturing Data Cloud
- Manufacturing Data Lakes
- Advanced Data Analytics For IIoT and Smart Manufacturing
- Engineering Edge Solutions
- Artificial Intelligence (AI) and Machine Learning (ML)
- Gen AI
- Hybrid Cloud
- Hybrid MES
- ERP Modernization
- Digital Twin
- AI Driven Digital Twins
- Edge Computing
- OT Security
- Industrial Augmented Reality
- The Human Centric Approach
- Change Management
- Sustainability
- Connected Worker Platforms
- AI Driven Digital Twins
- Operational Excellence / Continuous Improvement
- Smart Factory

12.10 - 12.40

AI powered Operational Excellence: Best Practices to do with less at scale.
- With rapid technological advancements and disrupted supply chains, it's crucial for pharma manufacturers to transform operations, become more resilient, reduce costs, and improve efficiency and sustainability
- How digitalization, AI, and digital twins are enabling manufacturers to achieve these goals and drive change in the industry
- It doesn't only take the right technology to generate substantial value in manufacturing operations and scale the benefits from AI across plants, the right processes and organization are equally important to scale successfully.
- Successful customer projects from predictive maintenance, reduced failure rates to process optimization.

12.40 - 13.10

A Manufacturer's Data Cloud Journey
- Data Cloud Platforms to forge faster IT/OT Integration
- Edge to Cloud data visibility across manufacturing
- Accessible data and easy-to-use AI to optimize production and shop-floor operations at scale
- Eliminate Data Silos and enable great collaboration to drive agility and flexibility

13.10 - 14.00	**NETWORKING LUNCH**

Please note: agenda and speakers are subject to change

Global Manufacturing Strategies

	Human and Machine Collaboration	**Shop Floor User Cases**
14.10 - 14.40	**How the manufacturing workforce takes an Industry 5.0 approach to the next level of plant operations** • Human centric digitalization • Key Elements of our strategy • Core Challenges • How we ensure user acceptance • Why we as the production drive the digitalization at the forefront	**Digital Transformation towards Industry 5.0** • Towards Industry 5.0 – Sharing ideas on next steps • Digital Building Blocks. – Sharing AI Use Cases • Key learnings from successes and failures • Lean, Green & Digital - How to connect the dots?
14.40 - 15.10	**Leveraging the Human Factor to optimize Smart Manufacturing Transformations** • The Pros and Cons of "Copy and Paste" strategies • Organisational structure and the influence on Smart Manufacturing Transformation • The importance of Human Capital development in terms of future work qualifications and skills • Leadership lessons from the bridge of a Starship • You will never fail if you either succeed or learn, how getting it wrong will always provide new learning opportunities	**How is AI Digitalization on the Shop Floor** • Why AI is a crucial component in the digitalization process? • How have we identified & qualified use-cases? • Finding the right AI method to support each use case • The design and development process for AI solutions • Key considerations for deploying AI solutions in a real-world environment • The benefits of AI-assisted digitalization and its stakeholders • Future for AI implementation

15.10 - 16.00   **COFFEE BREAK & MEETINGS**

16.00 - 17.30	**One to One Meetings & Investment Areas** • Industry 5.0 • Manufacturing Data Cloud • Manufacturing Data Lakes • Advanced Data Analytics For IIoT and Smart Manufacturing • Engineering Edge Solutions • Artificial Intelligence (AI) and Machine Learning (ML) • Gen AI • Hybrid Cloud • Hybrid MES • ERP Modernization • Digital Twin • AI Driven Digital Twins • Edge Computing • OT Security • Industrial Augmented Reality • The Human Centric Approach • Change Management • Sustainability • Connected Worker Platforms • AI Driven Digital Twins • Operational Excellence / Continuous Improvement • Smart Factory

16.00 - 16.30	**Revolutionizing Manufacturing with AI and Generative AI** • GEN AI as a Game Changer • Generative AI's Role in the Smart Factory of the Future • Scale up and Specific Use Cases- Harnessing the power of AI and Advanced Data Analytics to boost manufacturing productivity • Adopting an Iterative approach to GEN AI in Manufacturing • Aligning long term goals, integration & employee engagement to deliver sustainable business outcomes for the future • What are the productivity and business gains? • Will it deliver a measurable ROI?
16.30 - 17.00	**Transforming OT Data into Actionable Insights and Strategic Advantage** Exploring the data-driven revolution, where manufacturers are inundated with information from IoT devices, sensors, and automated systems. It addresses the challenges of managing high-volume, varied, and fast-moving data and demonstrates how data orchestration, AI, and edge computing can turn these challenges into operational advantages. How to leverage data as a strategic asset for efficiency and informed decision-making. Key topics include: • Data in Manufacturing: The 3Vs - Volume, Variety, and Velocity • Key Challenges: Data storage, bandwidth, latency, and data flow management • Solutions: Observability for system insights, predictive maintenance, and OT/IT integration • Future Trends: Edge computing, data optimization, and AI-driven processes
17.00 - 17.30	**Human-machine collaboration – the key to success** • Upcoming trends and their influence on the way we manufacture and their impact on productivity. • Why is in times of digitalization human-machine collaboration key to success? • Importance of technology adoption and trained employees to support transformation towards digitalized factories.

17.30 - 18.00	**Empowering Connected Workers: Use Cases, Methodologies, and Driving Adoption** • Corporate strategy to accelerate digital manufacturing • Change management at the core of the transformation • Consistency at scale in a holistic and connected shopfloor • Technology and tools at the service of front line employees • Data acquisition and visualisation to support excellence in routines

18.00   **CHAIRPERSON'S CLOSING REMARKS AND END OF DAY ONE**

18.15   **COCKTAIL RECEPTION**

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Global Manufacturing Strategies

DAY TWO

09.00 - 09.10   **CHAIRPERSON'S OPENING REMARKS FOR DAY TWO AND SUMMARY OF DAY ONE**

09.10 - 09.40

Empowering a Human-Centric Industry for the Twin Transitions
- Is Industry 4.0 enough? Or shall we know start talking about Industry 5.0
- 3 key pillars of the EU framework on Industry 5.0
- Human Centricity approach by promoting talent, diversity and empowering our workforce by deploying resilient, flexible and adaptable technologies for a more sustainable evolution.
- Community of Practice - sharing best practices

09.40 - 10.10

Unleashing the Power of Machine Learning and Artificial Intelligence
- This case study explores approaches to leveraging AI and machine learning to improve productivity on your shop floor?
- What are some practical applications of AI and machine learning that can help you upgrade and improve your manufacturing processes?
- How can the system learn and improve the algorithms to fix itself?
- Is it possible to develop built-in AI capabilities to improve your asset performance?

10.10 - 10.40

A Sustainable Innovation Framework Based on Lean Six Sigma (LSS) and Industry 5.0
- As we venture into the era of Industry 5.0, marked by unprecedented levels of connectivity and collaboration between humans and machines, Lean Manufacturing stands out as a cornerstone for success
- Industry 5.0 places a renewed emphasis on the human element, integrating advanced technologies to augment human capabilities. Lean principles, with their focus on empowering employees and fostering collaboration, align perfectly
- By integrating LSS into a human-oriented discipline, we can achieve a harmonious blend of more humane processes and a conducive result-driven environment with this paradigm shift.
- Case study to demonstrate the practical application and outcomes of LSS 5.0 tools
- Implementation and results

10.40 - 11.10   **COFFEE BREAK & MEETINGS**

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11.50 - 12.20

Robotics as a Valuable Source of Data and Information for Improved Uptime
- Data vs. Information.
- Information that can be provided by robotics
- Availability of data as a precondition for valuable information
- How can data be used?

12.20 - 12.50

Cyber security in Smart Factories: Securing the digital thread
- A Smart Factory is not just about capturing and analysing every single data point you can
- Be strategic on the key data points, where they reside (e.g. Edge or Cloud), how they are structured and ensure they are suitably protected (e.g. firewalls, classifications)
- As digitisation and automation in manufacturing increases, so does the risk of being compromised
- In this session we explore the cyber implications of gathering more data and connecting more assets and the actions needed to reduce such risks

12.50 - 13.20

Big Data Analytics for Smart Manufacturing
- The integration challenge - linking physical and cyber capabilities
- Learn how to take advantage of the evolution of big data and analytics by looking at other industries
- Defining data quality and why it is so important
- Incorporating subject matter expertise in analytics for realising effective on-line manufacturing solutions
- Further enable analytics by linking big data with smart manufacturing concepts such as digital twin

13.20 - 14.10   **NETWORKING LUNCH**

Global Manufacturing Strategies

14.10 - 14.40

Unleashing the Power of AI, Reimagining Smart Manufacturing
- Digital Transformation Strategies for manufacturing
- Unlocking value in manufacturing through AI
- A collection of AI applications we are using in the manufacturing process
- A systematic guide to effectively implementing industrial AI applications at scale

14.40 - 15.10

Data-driven digital transformation - User Case
- The Digital Strategy Framework Technologies AO
- Global Digital Quality Strategy for multiple sites
- How can we create new Digital Value Propositions?
- Creating and executing a Digital Operations strategy along Technologies for multiple sites globally
- Getting the basics right: the right people and standardising of processes

15.10 - 15.45

Open Panel Discussion

Humans and machines: Are manufacturers ready to embrace a connected industrial workforce?
- How will digital labour in manufacturing transform the skill mix and focus of tomorrow's workforce?
- Pursuing a clear implementation strategy by investing in the collaborative robots and augmented reality devices that enable connectivity, upgrading IT infrastructures to ensure that connectivity is secure
- Training and hiring your workforce to make it a conduit rather than a barrier to the productivity improvements promised by Smart Manufacturing
- Workforce readiness - Engaging the Industry, policy makers, educators and Institutions for harmonious collaboration

15.45   **CHAIRPERSON'S CLOSING REMARKS**

15.50   **COFFEE &REFRESHMENTS/CLOSE**

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