



EngTalk

**Excellence in Engineering
& Factory Management**

**18th - 19th November 2019
Berlin, Germany**

DAY ONE

07.45 - 08.30	REGISTRATION	
08.30 - 08.40	WELCOME & CHAIRPERSON'S OPENING REMARKS FOR DAY ONE	
08.40 - 08.55	<p>Taking the Lead – agile and sustainable: General trends in large industrial plant engineering</p> <ul style="list-style-type: none"> • Key figures for large-scale plant construction • Order intake by industries, regions and countries • Competitive environment: China on the advance • General trends in companies: Digitization, Services, Sustainability • Outlook 2020 <p>Klaus Gottwald, Market Information Manager VDMA</p>	
08.55 - 09.30	<p>The Industry 5.0 Concept: Creating Factories of the Future – Bringing Back the Human Touch</p> <ul style="list-style-type: none"> • The “Connected Workforce” – Robots and humans working together being routine in manufacturing by 2020 • Putting the human touch back in production through the collaborative man and machine workforce • Ability to customise, adding the creative human element • Creating new and better roles for the human workforce in the digital era <p>Robert Le Dortz, Global Early Management Master Pillar Leader Nestlé</p>	
09.30 - 09.55	<p>Factories 4.0 – Exploring Key Factory Engineering Trends in the Age of Digitisation and Connectivity</p> <ul style="list-style-type: none"> • Modernizing and Optimizing Existing Facilities Infrastructure to make them compatible with digitalization technologies? • Key issues and trends shaping the future of engineering • Additional Capacity and Working Smarter with Existing Assets • Automating factory performance and next steps in order to compete with the other markets? <p>Berny Ham, Site Engineering Manager Duracell</p>	
09.55 - 10.55	COFFEE BREAK & MEETINGS	
10.55 - 11.30	<p>Integrated Project Teams – How to avoid disconnect between ENG and OPS</p> <ul style="list-style-type: none"> • What makes a good project? • Roadblocks to successful collaboration • The Kellogg capital Project Management Office • How to obtain successful integrated project teams <p>Toon Muylkens, Project Management Office Leader Kellogg's</p>	
11.30 - 12.30	<p>One to One Meetings</p> <ul style="list-style-type: none"> • Capital Expenditure Projects • Quality Engineering • Smart Factories / Industrial IoT • Safety and Security • Virtual Reality (VR) / Augmented Reality (AR) • Big Data Analytics • Smart and Predictive Maintenance • Facilities Management • Energy Efficiency / HVAC • Factory Extension / Facility Layout Design & Analysis • Concept Designs, Planning Approvals and Procurement • H&S Standards / Site Surveys • Facility Construction / Plant & Equipment Specification 	<p>11.30 - 12.00</p> <p>Large savings available in the compressor room</p> <ul style="list-style-type: none"> • More than 10% of industrial electricity consumed in compressor room on average • Legacy technologies are very energy-consuming, insert oil to compressed air and/or require a lot of maintenance • New 100% Oil-Free direct drive turbo technology saves money, electricity and the environment by using the most reliable technologies available. • Zero risk of air contamination gives security and quality for operation with flexible compressed air production • Instead of owning compressors we can supply Touch-Free™ Air as a service • Touch-Free, Oil-Free, Care-Free <p>12.00 - 12.30</p> <p>An Executive Discussion on Building the Workforce of the Future</p> <ul style="list-style-type: none"> • Understanding the human element of manufacturing and supply chain performance amidst the ongoing technological transformation • Transitioning the system-based foundations of stability, reliability, and predictability found in the manufacturing plant through the supply chain • Shifting the organizational mindset from incremental improvement to breakthrough using zero-loss thinking and a tiered management system • Weaponizing the supply chain to serve as a base for competitive advantage and financial results
12.30 - 13.20	NETWORKING LUNCH	

Please note: agenda and speakers are subject to change

Plant Performance & Optimisation

12.30 - 13.05

Application of Value Oriented Maintenance in Ageing Facilities

- Define a proactive maintenance strategy depending on facility condition and age in a GMP environment
- Tools implemented to systematically analyse our maintenance program
- Collaboration with external maintenance partner to ensure common objectives
- How success looks like and how is it measured

13.10 - 13.45

Lean Excellence & Big Data with TPM Benefit to Business

- Create one goal for all departments/functions in operational supply chain
- Clear picture of total losses in area's
- Choose the right improvement tools
- Change in Culture by doing and living TPM
- An example of Predictive process control via big data

Volkswagen AG

13.50 - 14.25

Cost Effective Calibration Intervals Using Weibull Analysis

- Reliability model that takes into account the uncertainty of operating environments
- Provide a major safeguard in controlling uncertainty growth and reducing the risk of system performance
- Guidelines and techniques that permit optimising intervals with respect to both life cycle support costs and costs due to suboptimal system performance
- Focus on mathematical reliability modelling methods and to calibration history data management requirements

Simulation & Modelling

Extracting Value from a Concurrent Engineering Model

- Move from sequential simulation to concurrent engineering environments for plant designs
- Use analytics and activated/integrated workflows
- The analysis of energy efficiency in the design process
- Modelling and safety analysis
- Improve product planning to increase operational efficiency with activated modelling

Buonaventura Marcogiuseppe, Director Group Manufacturing Strategy Planning **Beretta Holding Group**

Human engineering & digitalization - combining shopfloor performance data and motion-time-system results for quick decision making

- Data driven decision: Combining shopfloor performance data and motion-time-system results for quick decision making and factory (network) capacity planning
- Ergonomics / human engineering & digitalization:
 - Designing flexible work environment using 3D modeling data
 - Piloting motion capture systems

Marco Weigand, Head of Industrial Engineering and Business Excellence **Siemens**

How Digitalization supports left-shifting of design validation in railway engineering

- Example: Testing
 - Testing on trains is time consuming and expensive (high inventory costs)
 - Presentation of the Train 0 as tool to left shift fault detection
- Example: Industrial Design
 - Early design validation with customer of the physical design
 - Validation of the Design for Manufacturing with Production

Peter Schmidt, Head of Engineering **Bombardier**

14.25 - 15.15

COFFEE BREAK & MEETINGS

14.25 - 16.45

One to One Meetings

- Capital Expenditure Projects
- Quality Engineering
- Smart Factories / Industrial IoT
- Safety and Security
- Virtual Reality (VR) / Augmented Reality (AR)
- Big Data Analytics
- Smart and Predictive Maintenance
- Facilities Management
- Energy Efficiency / HVAC
- Factory Extension / Facility Layout Design & Analysis
- Concept Designs, Planning Approvals and Procurement
- H&S Standards / Site Surveys
- Facility Construction / Plant & Equipment Specification

15.15 - 15.45

One Manufacturers Journey on Improving Total Waste Management Systems to achieve

- Reduction of CO2 emissions and water footprint by 40%
- Long term continuous improvement & OpEx program
- Pursur change through water technologies and technical innovation
- Recovering co-products and reducing waste
- Improve the working environment through H&S and environmental management

15.45 - 16.15

Maximise the Sustainability, Reliability and Quality Objectives with Compressed Air System Assessment

- Sustainability: Reduce waste and increase operating efficiencies for improved environmental footprint and energy efficiency
- Reliability: Increase the uptime and predictability of operating costs with customised solutions and digitalisation
- Quality: Deliver Air Quality needs through cross industry best practices

16.15 - 16.45

Computerized Maintenance Management System (CMMS) and Standardization between plants

- Maintenance & calibration excellence programme
- Optimise the life cycle performance of plant assets
- Critical analysis and maturity matrix assessment
- Find the right balance between maintenance costs and asset performance
- CMMS deployment

16.50

CHAIRPERSON'S CLOSING REMARKS AND END OF DAY ONE

16.55

NETWORKING DRINKS



DAY TWO

09.00 - 09.05 CHAIRPERSON'S OPENING REMARKS FOR DAY TWO AND SUMMARY OF DAY ONE

09.05 - 09.40 Global Maintenance Strategies and Investment Plans

- How to harmonize KPIs, Processes & Standards in a globally operating company?
- How to structure budgets and investments plans?
- How to develop sustainable cross-learning programmes?
- What KPIs need to be monitored for measuring success of efforts?

Mark Veasey, VP Global Engineering **DHL**

09.40 - 10.15 Integrated Digital Factory, the key enabler for Mondelez's Supply Chain Excellence

- Overview of IL6S, Mondelez Supply Chain excellence program
- Presentation of Mondelez Integrated Digital Factory system
 - System architecture
 - OEMs' integration
 - Displays and reports
- Experiences and results
 - Lad Krabang gum & candy factory, Thailand
 - Sri City chocolate factory, India
 - BIC biscuits factory, Bahrain
- Perspectives
 - Raise consumers' critical to quality KPIs to a Sigma 6 level
 - Enable the Automatic Process Control of critical to process parameters

Francois Marechal, Associate Director Engineering **Mondelez International**

10.15 - 10.50 MRO 4.0 with Predictive Maintenance Solutions on Aircraft using Big Data

- The aircraft Maintenance Repair and Overhaul landscape
- How AF KLM Engineering and Maintenance has developed Prognos its solutions to predict failures on aircraft component using Big data
- How to help to Develop other innovations as part of The MRO Lab program

James Kornberg, Director Innovation **Air France KLM Engineering and Maintenance**

10.50 - 11.15 COFFEE BREAK & MEETINGS

10.50 - 12.45

One to One Meetings

- Capital Expenditure Projects
- Quality Engineering
- Ageing Facilities
- Smart Factories / Industrial IoT
- Virtual Reality (VR) / Augmented Reality (AR)
- Big Data Analytics
- Oil-free Air Compression
- TPM
- Smart and Predictive Maintenance
- Facilities Management
- Energy Efficiency / HVAC
- Factory Extension / Facility Layout Design & Analysis
- Concept Designs, Planning Approvals and Procurement
- H&S Standards / Site Surveys
- Facility Construction / Plant & Equipment Specification
- Production simulation software
- Process optimisation simulation

11.15 - 11.45

Using Condition-Based Maintenance (CBM) to Optimise Smart Manufacturing Operations

- Implement CBM to help reduce equipment downtime, improve data collection and improve overall equipment effectiveness. What's the cost?
- Assessing IT requirements for CBM deployment and equipment evaluation
- Data collection and analysis – capturing the right data through smart sensors and how it can be used
- Full plan rollout – Fully integrating all modules to monitor various critical equipment parameters
- Real time data analysis to mobile devices for real time decisions on the shop floor

11.45 - 12.15

Traits of Future Industrial Networking Solutions

- An inter-connected combination of intelligent production technologies
- Digitally integrated engineering and horizontal integration across the entire value chain
- Transfer large amounts of data in real-time
- Connect a large number of individual devices with the highest standards of data security
- Utilise more and more wireless technologies, both within the plant and for remote connectivity

12.15 - 12.45

Industrial Edge Analytics: Real-Time Insight in the Production Line

- Edge analytics in the production line
- Real-time OEE improvement
- Security risk reduction by keeping data on-premise
- Time series-based anomaly detection and preventive analytics
- Eliminate unsolved disruptions, reduce scrap, optimise plant performance

12.45 - 13.35 NETWORKING LUNCH



	Big Data & Industrial IoT	Smart Maintenance
13.35 - 14.05	<p>Electronic industrial manufacturing 4.0 AND 5.0: An existing reality</p> <ul style="list-style-type: none"> • Electronic Manufacturing at a glance • 4.0 vs 5.0: differences and similarities • Why do we need I4.0 and I5.0? • Implementing 4.0 and 5.0: a (not so) long journey • Quality, Flexibility, Competitiveness, Disruptiveness: being proactive in Europe <p>Andrea Moroni Stampa, CTO/Head of Engineering Hemargroup</p>	<p>Machine Learning and Smarter Ways to Make Data-Driven Decisions in Predictive Maintenance (PdM)</p> <ul style="list-style-type: none"> • Collect more data for more manufacturing process information and more insights about machine health • Reduce equipment failures or unexpected downtime based on the operational data available • Know the main failures to have a good idea about the data to collect and the sensors to install • Adopt practices to automate decisions, take actions in real time, improving repair scheduling, inventory management and inspection
14.05 - 14.40	<p>Integrating IIoT Technologies to Maximise Facility Operations</p> <ul style="list-style-type: none"> • Create an IIoT model by complete operations integration through valuable data insights • Choose when and where to begin integrating IIoT • What value is being created with integration of Operations and IT systems? • How can data analytics help make sense of existing data and the additional information created when previously disparate systems are connected? 	<p>Connecting Machines to Maintenance and Reliability Professionals through the Power of the Smart Factory</p> <ul style="list-style-type: none"> • Break the trade off: Leveraging the power of the smart factory • Getting to PdM • IIoT - Physical-to-digital-to-physical loop and related technologies • Build the foundation and the seven maintenance pillars: people, parts, documents, tools, equipment, technology and maintenance strategy and processes
14.40 - 14.55	COFFEE BREAK	
14.55 - 15.25	<p>Open Panel Discussion: The Coming War for Engineering Talent</p> <ul style="list-style-type: none"> • The saddle generation profile of engineering organisations • Brain drain threat (loss of knowledge and expertise) from retiring boomer engineers • Engineering Specialisation narrows the scope for hiring • Recruiting the next generation of the right engineers (immediate impact) • Competing to hire the next wave of engineers 	
15.25	CHAIRPERSON'S CLOSING REMARKS	
15.30	CLOSE	

