A Taste For Innovation

Hosted by: Keith Chambers, Vice President, Operations Management Software, AVEVA

17 September 2019 | AVEVA World Summit 2019
Session Speakers

Keith Chambers
VP, Operations Management Software, AVEVA

Responsible for strategic direction, commercialization and offer development. Over 20 years' experience in the automation, software and MES business.

Frank Antonysamy
VP, Global Markets Leader of IoT and Engineering Services, Cognizant

Seasoned Fortune 500 executive focused on driving business transformation by connecting an enterprise’s business problems to the power of experience, intelligence and IoT.

Vicente Olivo-Espinosa
Director, Information Solutions, Maple Leaf Foods Inc

Has responsibility on Supply Chain Management and Manufacturing Operations. Extensive expertise in Plant Automation programs.

Annette Hamann
Corporate VP, Integrated Business Solutions and Head of Consulting & Enterprise Architecture, Henkel

Experienced in development of strategic enterprise architecture vision, implementation of product domain management and end-2-end application lifecycle management.
Session Speakers

1. Keith Chambers, AVEVA
2. Frank Antonysamy, Cognizant
3. Vicente Olivo-Espinosa, Maple Leaf Foods
4. Annette Hamann, Henkel
Digital Transformation in the Food, Beverage and Hybrid Industries

Keith Chambers
September 2019
Global Trends Driving Change

The Big Idea

We are all part of the Food & Beverage Value Chain, it’s the one industrial segment that we all have in common. As our world changes physically and socially these changes have a direct impact on all of us.

The imperatives of profitability, sustainability and food safety are inexorably connected within Food & Beverage manufacturers. As we create digital technology to help them transform their business’s we are also enabling them to meet the challenge of ensuring food security amid population growth and resource constraints.
Market Drivers Impacting Manufacturing Today

Digital Business Opportunities/Threats are Driving Rapid Transformation

- Changing Consumer Taste
- Raw Materials Availability and Price
- Capex and Opex Constraints
- Regulations and Consumer Trust
- Workforce Dynamic
Food & Beverage Manufacturers are Facing Rapid Transformation

Digital Business Opportunities/Threats are Driving Rapid Transformation

Progress through the Digitalization Curve

Source: AVEVA Market Insights
Key Elements of a Digital Strategy

Digital Imperatives to unlock value

- Empower Your Employees
- Optimize Your Operations
- Transform your Offerings
- Adopt New Business Models
- Engage Your Customers

Cost Management
Reduce Total Cost Basis 5 to 30%

Revenue Growth
Increase Revenue up to 25%

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Digital Imperatives Require a New Operational Architecture

An Industry 4.0 Approach

The Digital Twin converges operations, maintenance and engineering data into a digital replica of the smart factory.

Work transforms to be error proofed, mobile and social, with extended reality technology enabling digital to physical translation of information.
The Digital Twin

Combining engineering, operational and asset information and solutions

• The digital twin provides the core of the operational architecture, providing a cloud/edge that integrates
  • Agnostic engineering data management tools
  • Preventive, conditional, predictive and prescriptive; risk based asset performance management solutions
  • Demand agility through integration with supply chain and demand sensing systems.
  • Operations, performance and quality management solutions fully integrated with smart and connected machines
  • Seamless contextual access to data across the operations, maintenance and engineering domains. Contextual data available in corporate data lakes and data warehouses for business analytics and data science
Transformation of Work

Technology is revolutionizing how work is performed across the plant

- Mobility brings actionable data and work tasks together at the point where work happens
- AI, using machine and reinforced learning brings insight, predictive and prescriptive decision support
- AR/VR accelerates mastery of operations and maintenance tasks
IIoT and its convergence with OT

Enabling Use Cases around Data Collection, Digital Services and Analytics

Bringing together the connected world and the smart factory

• Foggy Architectures allow technical flexibility in deployment
• Connectivity extending through the supply chain
• Data collection that enable big data analytics and AI
• Adding value to existing operational technology
Thank You

Questions? Enter them into the app
Session Speakers

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The Challenge
Manage the IT-OT efficiently to unlock the value

IT-OT landscape is diverse, complex and with infusion of IoT devices (Industry 4.0) there is a need for an integrated managed services model to drive down costs and business outcomes.

- High operational costs to manage IoT & OT landscape
  - Standalone tools | Multi-vendor ecosystem | No central command

- High time to root cause and recovery
  - Lack of an integrated view | Limited collaboration across ecosystem

- Lack of cross platform service levels
  - Vendor specific SLAs | Limited control to drive business outcomes

- Poor productivity and performance
  - No standardized benchmarks across sites or across lines within a site
The Transformation
4 main effects Industry 4.0 has on business

1. Customer Expectation
   Customers are at the epicenter of the economy

2. Product Enhancement
   Products are enhanced with digital capabilities

3. Collaborative Innovation
   Customer experiences, data-based services, asset performance requires new forms of collaboration

4. Organizational Forms
   Emergence of global platforms and other new business models

Source: World Economic Forum <The Fourth Industrial Revolution: what it means, how to respond>
The Approach
Connect > Visualize > Analyze > Actionize

Value Realization
Lower Costs (TCO)  Higher Uptime & Availability  Improved Customer Experience  Higher Resource Productivity  Supply Chain Efficiency

Connect
Edge Control | Apps | Edge Analytics | Services
Connectivity (IoT Edge gateways)

Visualize
IoT Device Management  OT System & Network Monitoring  Connectivity & Gateway Management  IoT Platform Management  IoT Security & Firewall Config., Monitoring, Audit

Analyze
Predictive Maintenance  Process, Product & Yield Analytics  Inventory Analytics  Energy Analytics  Asset Analytics

Actionize

Plants (1)
PLC/SCADA/DCS
Line 1

Plants (n)
PLC/SCADA/DCS
Line 1

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An OEM Success

Objectives

• Create a global platform to deliver new connected car applications and services
• Develop a connected services program that would create opportunities for new service revenue as well as leverage captured telematics data of cars and drivers to improve product quality and services.

Outcomes

• Connected Car Program
• One Platform
• Rapid Scaling
• Faster GTM
• Localized Development
A Packaging Solutions Manufacturer Success

Objectives

• Adopt knowledge-based services to become more service-oriented in its offerings, and grow beyond products

Outcomes

• Consumable utilization and replenishment ▲ 9%
• Service parts revenue ▲ 12%
• Savings in inventory carrying cost ▲ 12%

• Savings from product obsolescence costs ▲ 5%
• Scaled eight pilot sites
• Customer onboarding from 2 mths to 1 wk

100 assets each, 200-plus concurrent users and 10,000 connected machines
Key Takeaways

1. Leverage information to understand and predict equipment performance
2. Build end-to-end systems and capabilities
3. Harness the power of Advanced Analytics (AI/ML)
4. Unify siloed IoT initiatives
Thank You

Frank Antonysamy
Cognizant VP and Global Markets Leader of IoT and Engineering Practice
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Questions? Enter them into the app

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“The most sustainable protein company on earth is digital”

Vicente Olivo-Espinosa, Director, Information Solutions
AVEVA World Summit
First... some context on who we are

Canada’s leading branded protein company, with sales exceeding $4 billion and employing more than 11,000 people, we are:

- Canada’s largest prepared meats and poultry producer
- Vertically integrated to facilitate strategic supply scale and enable Raised Without Antibiotics (RWA)
- Top 10 pork producer in North America, largest in pork raised without antibiotics
- Leading refrigerated plant-based protein player in the U.S.
- Leader in sustainability including sustainable meat
Our six core strategies fuel our vision

RAISE

THE

IN

GOOD

FOOD

Lead in sustainability
Invest in our people
Make great food
Broaden our reach
Build a digital future
Eliminate waste
THE VISION

FIRST 3 PILLARS

MLF DIGITAL ECOSYSTEM

New Ways of Working

New Ways of Running Operations

New Ways of Engaging Consumers

FEED

FARM

PROCESSING

DISTRIBUTION

RETAIL

CONSUMER
Able to do my work and collaborate from anywhere on any consumer grade device and tool with no paper.

Minimize travel requirements without impacting the quality of my relationships or work.

Obtain answers at my fingertips to questions asked in natural language.

Capable of making fast, fact based and proactive decisions with real time insights.
Efficiency on the Plant Floor

Viewing Work Orders real time on the floor on one screen vs 4 Screens on ERP

Real time yield variances and progress on Work Orders

Increasing process quality with the availability of accurate and up to date PSOPs on the floor

Real time alerts & notifications on variances and missed quality checks thus reducing re-works and on-hold time

Correcting issues on the shop floor as soon as they happen
New Ways Of Running Operations

AGRIBUSINESS IN 2020

SHERLOCK HOLMES
Operations Leader

Integrated commercial, supply, quality and operations insights through digital solutions.

Interactive agile plant operations and supply chain performance dashboards available real-time.
SafeFlight - Digital Transportation Monitoring System (DTMS) is an Internet of Things (IoT) based solution to monitor temperature & humidity conditions in our poultry trailers and provide feedback to Drivers, Lairage Monitors, Procurement Staff and Transport companies so that they can take required actions.
PRIYA PATEL
Operations Leader

Highly trained & standardized workforce working safely and efficiently using interactive digital solutions.

World class performance on equipment downtime through connected operations, predictive maintenance and technology enabled technical team members.
Implement a scalable and cost effective technology solution to address strategic operational priorities:

- **Line Management** – OEE to Maximize Asset Utilization
- **Operating Rhythms** – Production Progress, Short Interval Controls, Downtime Annunciation and Response
- **Performance Metrics** – Near Real Time Digital Dashboards
- **Plant Analytics** for Sustainable Continuous Improvement

**OBJECTIVE REVIEW**

Manufacturing Process Automation with Digital Line Performance Visualization

- Line side HMI, TV + Mobile tools for near real time Awareness and Response, driving Operational Excellence on the production floor

**Production Order Progress**  **Line Status, OEE, Waste**  **Production Efficiency**  **Downtime Analysis**
SARITA & OMAR
Working Professionals

Elevate my **product personalization** through connection to health data so that lifestyle and activity can generate **custom protein optimization**.

Expect **transparency**, to know about the values of the company I am buying from and engage in **real-time two way dialogue** in order to influence as a consumer.

Expect MLF to know my **buying behaviors** and consumption levels to **automate product replenishing**.
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Henkel’s Digital Transformation

Dr. Annette Hamann
Corporate Vice President IT Enterprise Architecture and Process Consulting
What guides us
Henkel 2020+ Strategic Priorities

- Accelerate Digitalization
  - Drive Digital Business
  - Leverage Industry 4.0
  - eTransform Organization

- Drive Growth
- Fund Growth
- Increase Agility
Digital – Deep dive
Drive Digital Business

Re-ordering models

B2B-Platform

Omni-channel excellence
Digital – Deep dive
eTransform organization

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<tr>
<th>Technology</th>
<th>Digital Insights &amp; Analytics</th>
<th>Digital training &amp; skills</th>
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[Images of technology, digital insights, and training activities]
Digital – Deep dive
Leverage Industry 4.0

Plan

Source

Make
Digitalization Strategy of Adhesives Production Plants

General Idea
Digitalization Strategy of Adhesives Production Plants
Smart Factory Network

~140 Production plants worldwide

Clustering by automation level

Template Development with single implementations

Montorness, Hannover, Düsseldorf
How the journey continues

Think Big but start small

High focus on Requirement Specification and Use cases

Continuous template optimization
Thank you!

Questions? Enter them into the app

This material has been visually improved with the help of our team at the Graphic Design Center in SSC Manila. To know more about this service, please visit http://graphics in the Henkel portal.
Panel Discussion

• Frank Antonysamy, Cognizant
• Vicente Olivo-Espinosa, Maple Leaf Foods
• Annette Hamann, Henkel
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ABOUT AVEVA

AVEVA is a global leader in engineering and industrial software driving digital transformation across the entire asset and operational life cycle of capital-intensive industries.

The company’s engineering, planning and operations, asset performance, and monitoring and control solutions deliver proven results to over 16,000 customers across the globe. Its customers are supported by the largest industrial software ecosystem, including 4,200 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 4,400 employees at 80 locations in over 40 countries.

aveva.com

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