How Emerging Technology is Changing Supply Chain Management

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Your Presenters

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**Profile Summary**

- Nitish is an experienced supply chain leader with over 25 years of industry and consulting experience - across manufacturing, mining, power and utilities, oil and gas industries.

- Supporting clients achieve business and performance improvements through supply chain transformation, cost reduction programs, category management practices, contract management improvements, supplier management programs, and continuous improvement.

**Jamie Siu**  
*Director, Operations, Procurement and Supply Chain, Operational Excellence*  
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**Profile Summary**

- Jamie has over 13 years of blended consulting and industry experience in the areas of Supply Chain and Procurement transformation, operational excellence and Lean, business process improvement, and project management across multiple countries, sectors and categories.

- She leverages her Supply Chain and Procurement and Operational Excellence and Lean experience to help clients identify a focused area of improvement opportunities with sustainable benefits and savings.
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01. Journey to Industry 4.0
Progress from Industry 1.0 to 4.0

- **First Industrial Revolution**
  - Introduction of mechanical production equipment using steam engine (late 1700s)

- **Second Industrial Revolution**
  - Mass production based on division of labor, and use of electrical energy (early 1900s)

- **Third Industrial Revolution**
  - Use of electronics and IT to automate production (1960s/1970s)

- **Fourth Industrial Revolution**
  - Internet, mobile computing etc. (post 2000)
Industry 4.0 allows conventional industries to adopt digital technologies

Embedding of Industry 4.0 in the technological evolution

Waves in technological evolution

1990s
Onset of digitization

2000s
Disruptive Digital Technologies

2015
Industry 4.0

2020
Digital Ecosystem

Key new developments of each phase

1990s
- Digitization of products
- Automation of processes
- CIM/CIP systems
- First online business models

2000s
- First digital solutions and isolated applications
- Selected digitized and automated processes
- Digital functional silos

Today
- Digitized products & services
- Vertical and horizontal integration New Business Models
- Data analysis & action as a core competency

2020s
- Flexible and integrated value chain networks
- Virtualized processes
- Virtualized customer interface
- Industry collaboration as a key value driver

Key Drivers and Enablers

- New Economy
- Mobile Networks
- Connected Capabilities
- Data Analytics
- Internet of Things/Services
- Intelligent Algorithms

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02. Digital Levers for Procurement
Six digital levers in the context of Procurement

1. Digitization of processes
   - Example: Digitization of sourcing & P2P processes
     - Improve efficiency of purchasing processes
     - Increase process compliance
     - Improves reporting
   - Impact: Improve efficiency of purchasing processes

2. Innovative Procurement data utilization
   - Example: Spend analytics
     - Increase knowledge of supplier market and customer needs
     - Makes procurement more proactive
   - Impact: Improve knowledge of supplier market and customer needs

3. Digital supplier management
   - Example: Digital engineering
     - Improve collaboration with supplier
     - Reduce risk
   - Impact: Increase collaboration with supplier

4. Enriched Procurement value proposition
   - Example: Digital Procurement platform (B2B Marketplaces)
     - Increase negotiation power
     - Reduce Proc. cost
     - Contribute to revenue growth
   - Impact: Increase negotiation power

5. Digital category & service Procurement
   - Example: New categories
     - Anticipate and adapt Procurement service to Innovative IT solutions and startups ecosystem
   - Impact: Anticipate and adapt Procurement service to Innovative IT solutions and startups ecosystem

6. Procurement 4.0 capabilities
   - Example: Digital Procurement training
     - Acquisition of new talents / data scientist
   - Impact: Set up a sustainable Procurement function Digital driven

Included in this presentation
Digital technologies will boost Procurement’s value creation mainly through collaboration & analytics

Example of “Collaborative Approach” Process: Procurement with OEMs and EPC

*Engineering, Procurement and Construction Management
Source: Strategy& Analysis
Digital supplier management will improve collaboration and efficiency while reducing risk.
A digital Procurement platform provides Procurement services to key suppliers and customers

- Procurement platform to provide service to suppliers and customers (data, raw materials, services, etc.)
- Digital consolidation of product requirements and data along the supply chain
  - Bundle effects by higher purchasing volume
  - Ensured high quality and cost control
- Leveraged buying power through combined representation
- Digitized commission model to provide supplier and sub-supplier as a customer
- Purchaser as a Commission Agent of each supplier to provide products and services
- Example: Amazon Supply, Alibaba, Globalsources, Ariba, Xchanging...
03. Preparing for the future
Today’s Challenges

1. **Market pressures**
2. **Cost pressures**
3. **Complexity and risk**
4. **Customization**
5. **Technology**

Balancing internal and external challenges

Looking forward, successful businesses will...

- **Go beyond just data, generate insights** – Use data analytics to understand customers, market trends, track usage patterns, predict failures etc.

- **Improve, standardize, and automate** processes to reduce internal cost to serve

- **Contract effectively** to get best value and manage risk in the changing digital landscape

- **Embrace technology to support business** e.g. application of sensors, drones, machine learning, 3D printing etc.

- **Develop right skills internally and explore partnerships** to meet new digital needs
What can you do to prepare for the future?

01 Vision
Identify what you need to do, how technology can help. Include in your corporate strategy.

02 Capability
Build an innovation culture and skills to apply emerging technologies

03 Plan
Develop a technology roadmap to support the “Going Digital” vision
Thank You