THE POWER OF GUIDANCE AND PRE-PLANNING – THE GOLDEN NUGGET OF INDUSTRIAL DIGITIZATION;

Why rules configuration is becoming a critical business capability and industrial firms continuously fail to realize its importance and complexity
SMART, CONNECTED THINGS CREATE OPPORTUNITIES TO DISRUPT AND TRANSFORM THE WAY COMPANIES OPERATE AND SERVE THEIR CUSTOMERS
HOW DID WE GET HERE?

The cost to connect these devices and the ability to compute more efficiently has enabled the convergence of physical and digital, ultimately driving 10B connected devices today. These connected devices are in turn enabling industries to reinvent themselves by transforming the way products are built, the product itself and the way the business operates.

10-YEARS OF TECHNOLOGY INNOVATION

- 70% Cost of Sensors

- 90% Size of Microchips

+ 400% Processing Power

+ 50% Battery Life

2B+ Global LTE Connections

CONVERGENCE OF PHYSICAL & DIGITAL

10B devices today, growing to 50B by 2022
TECHNOLOGIES LIKE IOT, AI AND ML ADD INCREMENTAL VALUE IN THE NEAR TERM AND TRANSFORMATIVE IMPACT LONG-TERM

**Operational Efficiency**
- Asset utilization
- Operational cost reduction
- Improvement worker productivity, safety and working conditions

**New Product & Services**
- New business models
- Pay per use
- Software based services
- Product / Service hybrids
- Data monetization

**Outcome-based Economy**
- Pay per outcome
- New connected ecosystems
- Platform-enabled marketplace
- Industry blur

**Autonomous Pull Economy**
- Continuous demand-sensing
- End to end automation
- Resource optimization and waste reduction

From Product to Service Outcome Pull
MICHELIN: FROM PRODUCT TO SERVICE TO OUTCOME

1. Disruption of manufacturing is unavoidable and it has started

2. The Product, smart and connected is at the core of the transformation

3. Industrial Consumerism is here

4. Industrial companies must start rotating to the New now, not tomorrow
Products will be re-invented and re-architected as hardware becomes a simple container with basic functionalities....
WE ARE ENTERING THE INDUSTRY X.0 ERA

Converging Information and Operational Technology

18TH CENTURY
INDUSTRY 1.0
Mechanical production powered by water and steam

20TH CENTURY
INDUSTRY 2.0
Mass production based on the division of labor and powered by electrical energy

1970 – RECENT
INDUSTRY 3.0
Electronics and IT for automation of production and front/middle/back office

TODAY
INDUSTRY 4.0
Cyber physical production systems

TOMORROW
INDUSTRY X.0
WHAT YOU NEED TO DO AND WHAT YOU GET

DO

• Invent new SMART, CONNECTED PRODUCTS AND SERVICES
• Transform business models and operations from PRODUCT TO SERVICE
• Become SOFTWARE AND EXPERIENCE companies
• Enable NEW ECOSYSTEMS

GET

• NEW REVENUE STREAMS from as-a-Service and Smart Connected Products
• PERSONALISED EXPERIENCES for both B2C and B2B

ACCELERATION & EFFICIENCY

• AUTOMATE core processes of R&D, Engineering, Production and Support
• Connect machines and sensors to DERIVE AND APPLY INTELLIGENCE to improve performance
• CONNECT AND ENABLE WORKERS
• Apply NEXT GENERATION PRODUCTION techniques

NEW SERVICES & EXPERIENCES

• REDUCED COST
• FASTER THROUGHPUT
• Greater AGILITY AND RESPONSIVENESS
• Better WORKER EXPERIENCES AND PRODUCTIVITY
INDUSTRY X.0 FRAMEWORK

GROW IN THE NEW
Changes in Customer expectations requires the re-invention of products, and the services that surround them

INNOVATION & GROWTH

TRANSFORMATION OF CORE
- DESIGN
- PRODUCE
- SUPPORT

TRANSFORM THE CORE
The lines between functions are blurring, with distinct focus on improving agility, cost, quality and customer responsiveness—all fueled by advancements in digital
ACCCENTURE DIGITAL SERVICE FACTORY

DIGITAL SERVICE FACTORY

Factory Outcomes: New Services & Experiences and/or Acceleration & Efficiency

Ideation

Incubation Prototyping

Industrialization (Business & Technology)
Offer / Service Packaging, Go-to-Market, OT/IT Integration, Production Architecture, Change Management, Rollout / Scale Planning, Run / Support & Upgrade, Value Creation Scorecard

PRODUCT X.0

ENGINEERING X.0

PRODUCTION & OPERATIONS X.0

DIGITAL WORKFORCE AND ENABLERS

VISION, STRATEGY AND GOVERNANCE

NETWORK OF IXO INNOVATION CENTERS

ECOSYSTEM OF PARTNERS

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NEW BUSINESS IS NOT IMMEDIATE

Current Business need to finance transformation to New Business

Making a wise pivot

• Mastering Agile Innovation
• Working in open collaborations
• Knowing and refining your core

What about Variation and Configuration??
Managing configuration and variation has been at the heart of industry and is a secret to Nordic success, it is a KEY capability.
AND INDUSTRY IS ABOUT 90% RE-USE

A WHEEL OF CHANGE

- Powered by new requirements
- We use what we have
- We add something new
- We create something innovative

Important:

Agile Innovation does not start with a white paper

Re-use is key to speed but keeps us stuck in “the Old”
AND MOST INDUSTRIAL COMPANIES ARE MANAGING VARIATION IN SILOS

Develop Offering
Optimize Product Portfolio

Manufacture and Supply Things
Optimize for Supply Chain

Sell Product
Optimize for Sales

Service Product
Never optimized

Run Service
Unheard of

We Hate Variation!!

Control Variation!!

You should love and EMBRACE Variation!!

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NEW TECHNOLOGY IS DRIVING

Benefit is hard to realize without sufficient structure
AND THE SOFTWARE INDUSTRY ARE FOLLOWERS

• Managing Variation is a capability all are claiming but no one is doing it well

• This will change as solutions ARE converging

• Variation is becoming a key capability to master
DIGITAL DISRUPTION WILL LENGTHEN THE TAIL

A necessity to compete

Digital Disruption
- Will force increasing localization and individualization
- Requires maximizing re-use WHILE simultaneously maximizing differentiation
WELL MANAGED VARIATION IS KEY TO COMPETE

A competitive advantage that will become a necessity

The winner is
• Fastest to Market
• Easiest to Sell
• Easiest to Manufacture
• Easiest to Source
• Easiest to Operate
• Easiest to Maintain
• Most open to partners
• Most innovative

Volume

Variants

Specific and Differentiated
Highest Value
Hi Mix

Standard and Commoditized
Lowest Price
Low Mix

Adressing Desirable segment with PRIFOT
THERE ARE NO SHORTCUTS

• Modular approaches
  • It is not only about a modular offerings or modularization
  • It is also about compatibility on the lowest level, also software
  • It is also about mixing compatible things to create new things
  • It is also about maximizing software to deliver function

• Strong governance and support
  • It is about a rules that everyone aligns to and acts with freedom under
  • It is about building towering competences
  • It is about gate keeping on new solutions
    – Does it make sense?
    – Does it fit into the whole?
    – Does it bring more value than itself?
    – Have we already done this?

• Lifecycle scope
  • It is about planning for Variation over the full Lifecycle
  • It is about a common nomenclature that supports Variation
  • It is about a tool chain that supports the full lifecycle

+ GO AGILE!
THANK YOU