

INDUSTRY 4.0 PANEL DISCUSSION



Wim Evenhuis

- Voorzitter VNSG focusgroep industry 4.0

Frank Luyckx

- Secretaris VNSG focusgroep industry 4.0

INDUSTRY 4.0 - TECHNOLOGY



1



Mechanization
Steam engines
Water/steam power
New manufacturing
Iron production
Textile industry
Mining and metallurgy
Machine tools
Steam factories

2



Technological
Electrification
Production line
Mass production
Globalization
Engines/turbines
Broad adoption
of telegraph,
gas, water supply

3



Computer /Internet
Digital manufacturing
PLC/Robotics
IT and OT
Digitization
Automation
Electronic/digital
Networks
Digital machines

4

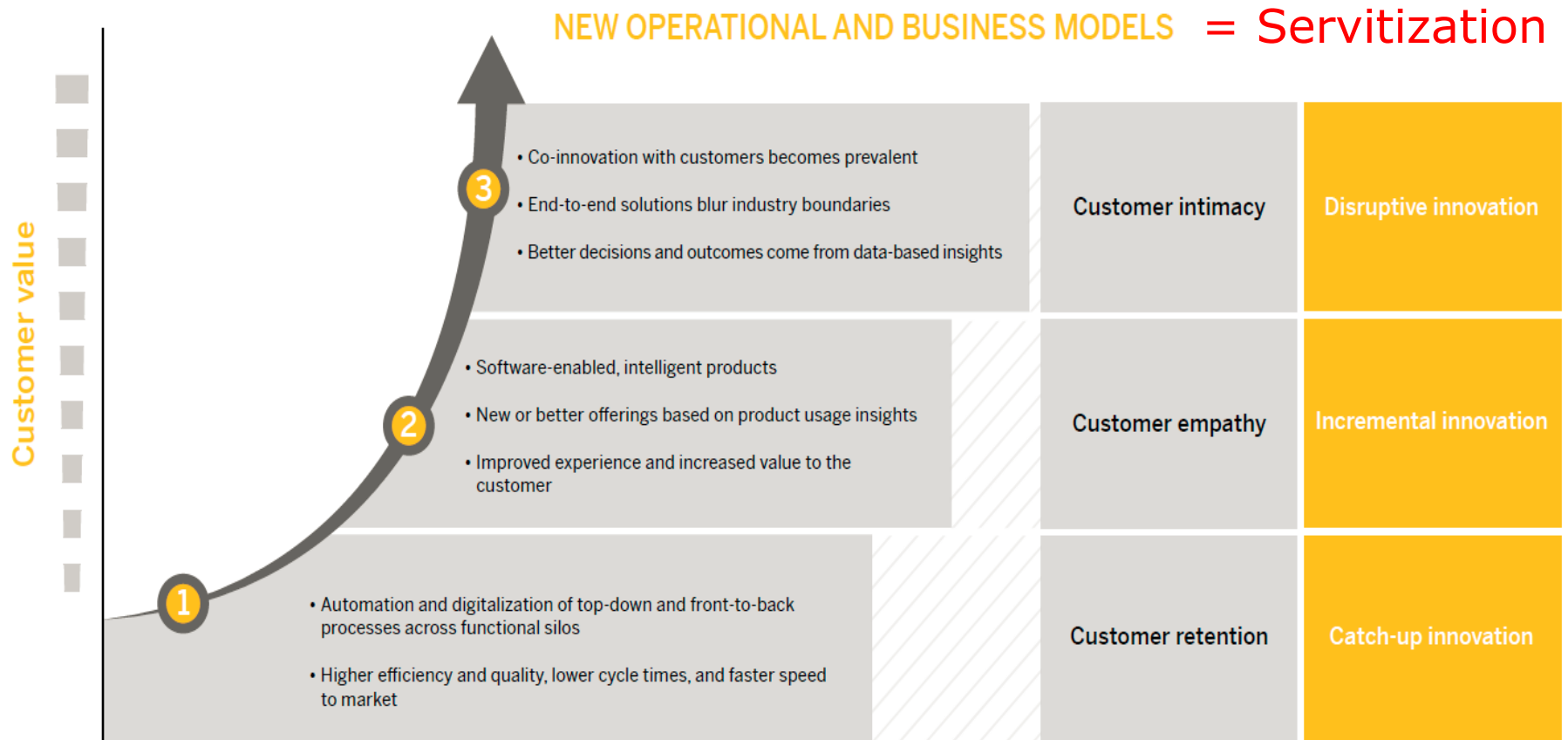


Convergence IT /OT
Autonomous machine
Advanced robotics
Big Data/Analytics
Internet of Things
Digital ubiquity/Cloud
Smart factory
Machine learning & AI
Cyber Physical

INDUSTRY 4.0 – BUSINESS VALUE ? (SAP WHITEPAPER)



Figure 2: A Model For Going Beyond Industry 4.0



INDUSTRY 4.0 STRATEGIC OBJECTIVES



Strategic Business Objectives

Customer centricity

Rethink the business model from the customers perspective

Servitization

Provide value added and operational services with usage based billing

Serving the segment of 'One'

Provide **configurable**, adaptable and personalized product offerings

Digital SMART products

Transform products into intelligent and data generating platforms

SMART Factory and Digital supply chain

Flexible reaction to changes in demand, supply chain and resources

Process capabilities

1. Customer co-innovation
2. Product innovation based on usage
3. Designs based on partner input

1. Data platforms offer AI services
2. Usage based billing
3. Asset info shared with partners

1. Modular product concepts
2. Parts similar across products
3. ETO available during configuration

1. Integrated product engineering
2. IoT data distribution & **digital twin**
3. AI analytics & communication

1. Aligned manufacturing & design
2. Product data & configuration quality
3. Integrated MRP & MES planning

IMPACT INDUSTRY 4.0 THEMA'S OP DE BEDRIJFSF PROCESSSEN



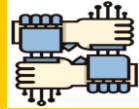
Business model → **TOM supported - project portfolio**



Industrial platform services



Smart partnership collaboration



Forecast to demand



Integrated business planning

Smart Channel collaboration



Industrial business services



Supplier

Spend Analysis (SSA) by Product category



Source to pay

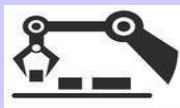


Smart 3D printing



Intellectual assets

Design to operate



Smart factory



Digital twin

Market to cash



Smart configurators



Servitization

Customer

Live Time Value (CLTV) by Customer segment



Risks & Security services



Blockchain



Accounting to profitability



Pay per use



Application Integration services

BI	BOM	BPM
EDW	PPM	APM
DATA	ITSM	API

Enterprise architecture → **ITSM supported - application portfolio**



@luyckx

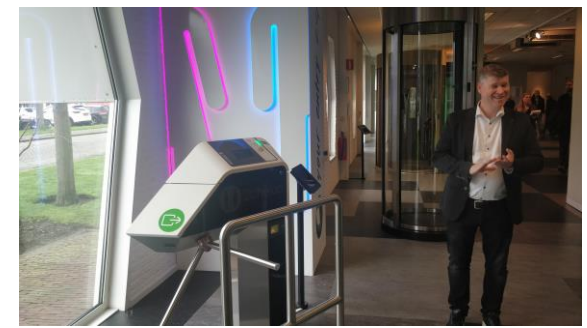
VNSG INDUSTRY 4.0 MEETINGS



3D printing bij RDM



Smart factory bij VOPAK



2theloo poortjes bij Boon Edam



VNSG on-line



Digital twin bij ASML



Servitization bij Miele



- Intelligent assets and digital twin - Shell
- Digital manufacturing cloud platform - Signify
- De financiële functie van de toekomst - NS
- Journey to the intelligent enterprise - Miele
- Smart asset management - ERIKS
- How edge services enable industry 4.0 - SAP

ELK BEDRIJF HEEFT ANDERE INDUSTRY 4.0 THEMA'S



Business model → TOM supported - project portfolio



Industrial platform services



Smart partnership collaboration

Forecast to demand

Smart Channel collaboration

Industrial business services



Integrated business planning

Supplier

Spend Analysis (SSA) by Product category



Source to pay



Smart 3D printing

Intellectual assets

Design to operate



Smart factory



Digital twin

Market to cash



Smart configurators



Servitization

Customer

Live Time Value (CLTV) by Customer segment



Blockchain

Accounting to profitability



Pay per use



Application Integration services

BI	BOM	BPM
EDW	PPM	APM
DATA	ITSM	API

Enterprise architecture → ITSM supported - application portfolio



@luyckx

1 Welke industry 4.0 thema's zijn relevant voor uw bedrijf ?



Market to Cash

- 1 Smart channel collaboration (C4)
- 2 Smart variant configurator (VC)
- 3 Servitization
- 4 Pay per use (BRIM)

Source to pay

- 5 Smart Partner collaboration (ARIBA)
- 6 Smart 3D printing
- 7 Smart entitlement management (EMS)
- 8 Blockchain

Design to operate

- 9 Smart Integrated business planning
- 10 Smart Factory
- 11 Digital twin
- 12 Smart profitability analysis

ECO-system platforms

- 13 Business network services (AIN)
- 14- Industrial Edge services (IoT)
- 15- Cloud Application services (BTP)
- 16- Risk & security services (SOS)

Enterprise architecture

- 17 Industry 4.0 servitization business model
- 18 Industry 4.0 project portfolio
- 19 Industry 4.0 servitization architecture
- 20 Industry 4.0 application portfolio

2 WAT IS DE STATUS VAN DEZE THEMA'S BINNEN UW BEDRIJF ?



- A. er is een Industry 4.0 visie waarin alle thema's zijn genalyseerd en een Industry 4.0 roadmap is beschikbaar
- B. Meedere industry 4.0 thema's zijn gestart en een program manager zorgt voor de afstemming tussen de thema's
- C. Enkele Industry 4.0 thema's zijn gestart en worden geleid door verschillende project managers
- D. Industry 4.0 thema's worden onderzocht maar er zijn nog geen projecten gestart
- E. andere te weten

3. WAT ZIJN DE UITDAGINGEN OM INDUSTRY 4.0 THEMA'S TOT EEN SUCCESS TE MAKEN ?



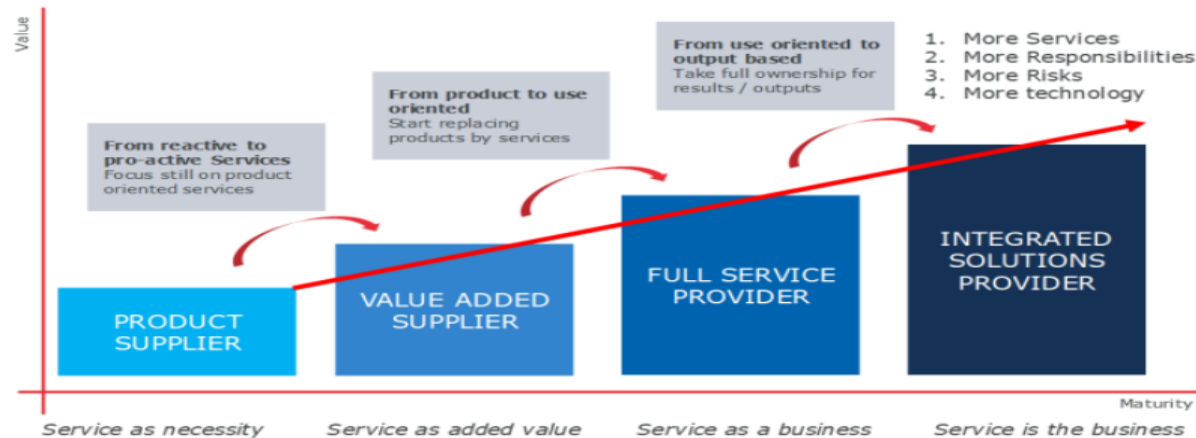
Meerdere antwoorden mogelijk;

- A Stakeholder & change management
- B Management urgency to resolve business issues
- C Onvoldoende maturity van het huidige applicatie landschap (S/4)
- D Geen goede ROI case te maken
- E Andere te weten

SERVITIZATION MATURITY CHECK & YEARLY ROUNDTABLE



Servitization maturity model



VNSG Servitization round-table; Companies are struggling with their servitization roadmap

Frank Luyckx on LinkedIn



Strukton

Miele

PHILIPS

ASML

Lamb Weston
SEEING POSSIBILITIES IN POTATOES

VERBINDT. VERSTERKT.



September 2020	Usage based billing – pay per use
Maart 2021	SAP ECO platforms & business networks
Juni 2021	Servitization roundtable (deelname nog mogelijk)

VRAGEN ?

