

## The untapped value of innovation in Supply Chain 4.0

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WE EMPOWER COMPANIES
TO INNOVATE TODAY
TO BE READY FOR
TOMORROW





WE IDENTIFY INNOVATION
OPPORTUNITIES AND FOSTER
COLLABORATIVE INNOVATION
PROJECTS THAT STIMULATE THE
DEVELOPMENT OF A SUSTAINABLE,
COMPETITIVE, AND DIGITAL
ECONOMY



### Digital Transformation Department

Digitalization et data management expertise

Support companie in their digital transformation and in the management of their data assets towards a sustainable development







Acceleration of the Digital Transformation of Luxembourg's Industry towards Industry 4.0

 Provide unique competences in High Performance Computing and promote it's utilization in industry, academia and public administration

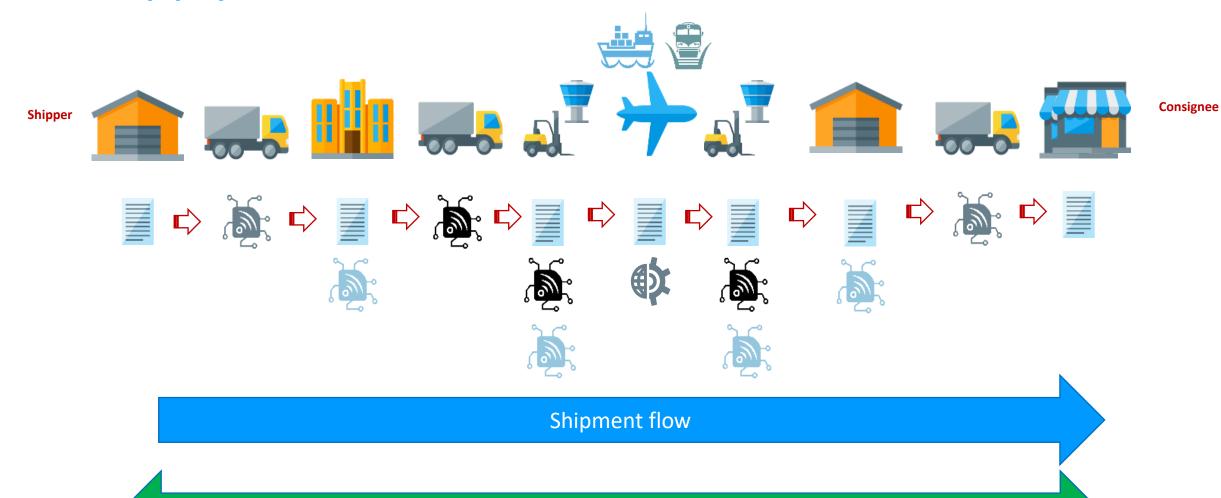
 Shaping the future European sovereign cloud infrastructure & contribute to a coherent approach towards sectorial data spaces







### **Supply Chain**







Information flow

### Industry 4.0 – Digital+Smart+Connected

1800 Industry 1.0	1900 Industry 2.0	1970s Industry 3.0	Today	
			2015+ Industry 4.0	2030+ Digital ecosystem
The invention of mechanical production powered by water and steam started the first industrial revolution	Mass production, with machines powered by electricity and combustion engines Introduction of assembly lines	Electronics, IT, and industrial robotics for advanced automation of production processes  Electronics and IT (such as computers) and the Internet constitute the beginning of the information age	Digital supply chain  Smart manufacturing  Digital products, services, and business models  Data analytics and action as a core competency	Flexible and integrated value chain networks  Virtualized processes  Virtualized customer interface  Industry collaboration as a key value driver
Source: Strategy& analysis PwC.All rights reserved.				





### Industry 4.0 – Digital+Smart+Connected = Innovate

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### The Path to Digital Transformation



#### **DIGITIZATION**

The process of making information available and accessible in a digital format.



#### DIGITALIZATION

The act of making processes more automated through the use of digital



#### DIGITAL TRANSFORMATION

The process of devising new business applications that integrate all the digitized data and digitalized applications.

Source : YOKOGAWA 🔷





### The Typical Digitalization Landscape



Management

Suppliers



**Support Functions** 

**Customers Management** 



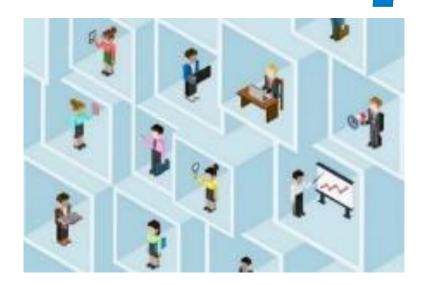




### Interconnected Supply Chain - Shifting the Focus

#### **From Internal**

- Processes
- Resources



#### To External

- Processes
- Relations







### Shifting the Focus - WHY?

Up to **65 percent of the value** of a company's products or services is derived from its suppliers.



#### Supply Chain Collaboration benefits

- Up to 35% cost reductions
- Up to 50% lower carbon footprint
- Increased forecast accuracy (up to 25%)
- Up to a 20% reduction in inventories
- Improved SLAs for delivery accuracy (in some cases up to 98% or above)
- Up to a 10% reduction in administrative workforce ... plus improved service levels and customer satisfaction.





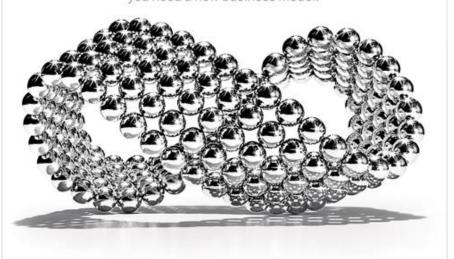


48 Your Approach to Hiring Is All Wrong 74 What Western Marketers Can Learn from China 130 Cross-Silo Leadership





When you can interact with your customers 24/7, you need a new business model.



### Supply Chain Drivers Evolution

#### The 5 classical drivers of supply chains



#### The 7 consumer drivers of supply chains







### How to Succeed in a (Supply) Chain

### In a supply chain

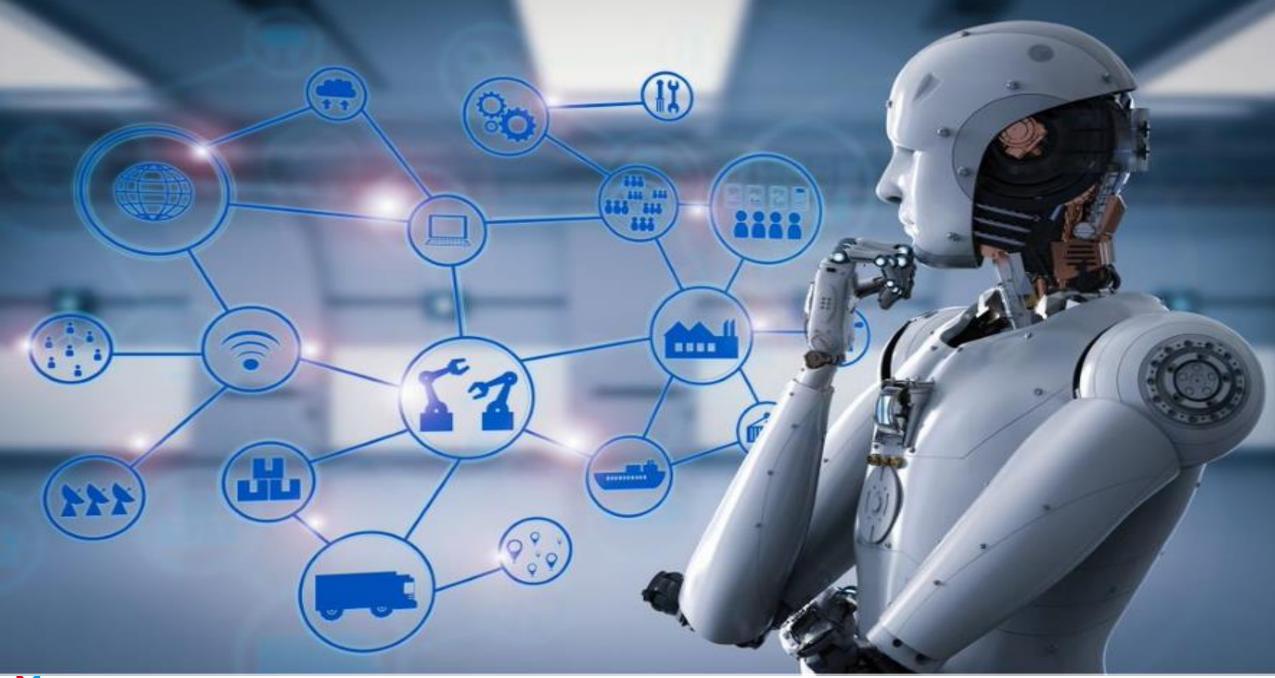
Customer's promise can't be achieved alone

Efficiency can't be achieved alone

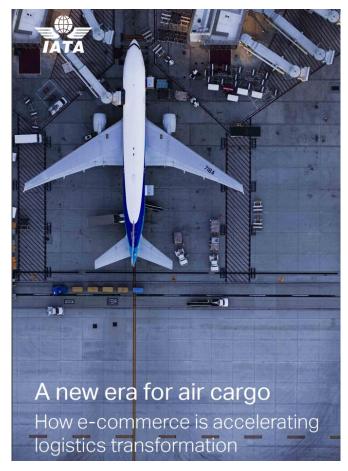
Sustainability goals can't be achieved alone



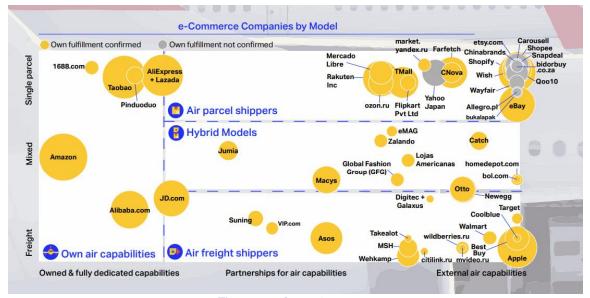




### e-Commerce Drives the Supply Chain







Three transformation areas

#### Digitalization

Digital logistics platforms, integrating partners for speed and efficiency

Data-driven digital ecosystems embedded in a logistics value chain

ONE Record, an end-to-end digital logistics chain where data is easily and tranparently exchanged

#### Speed

Fast delivery, creating a global network

Partnership with airlines on specific routes

Smart order consolidation (multiple parcels into one shipment) bringing greater delivery efficiency

#### Automation

Innovative technologies, including autonomous transportation

Internet of Things (IoT), data analytics and blockchain

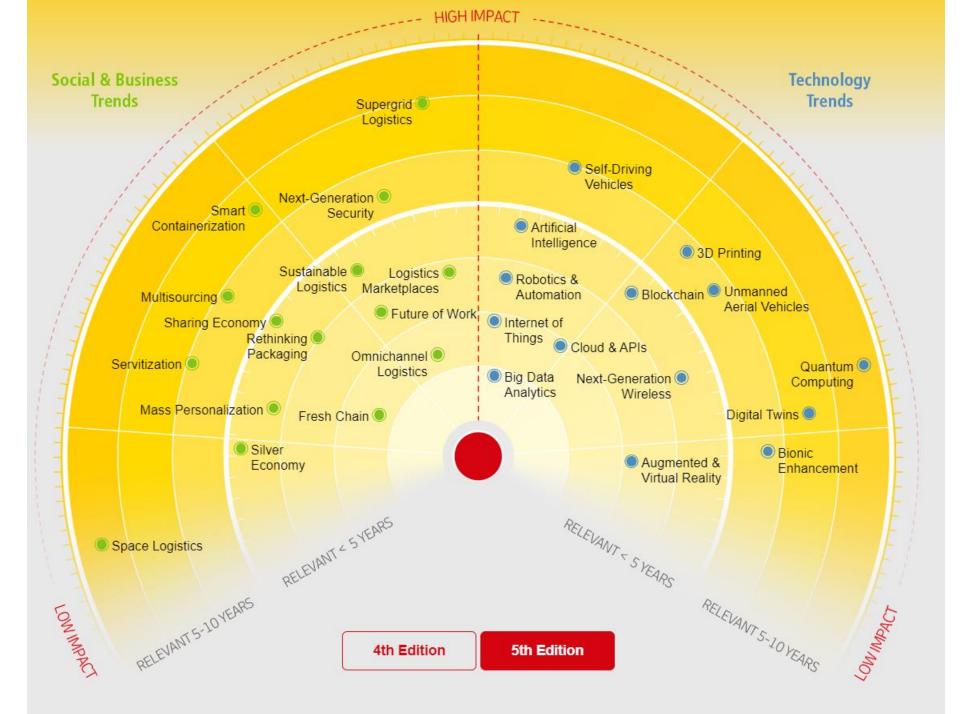
Operational efficiency in the warehouse driven by robotics and e-Hubs



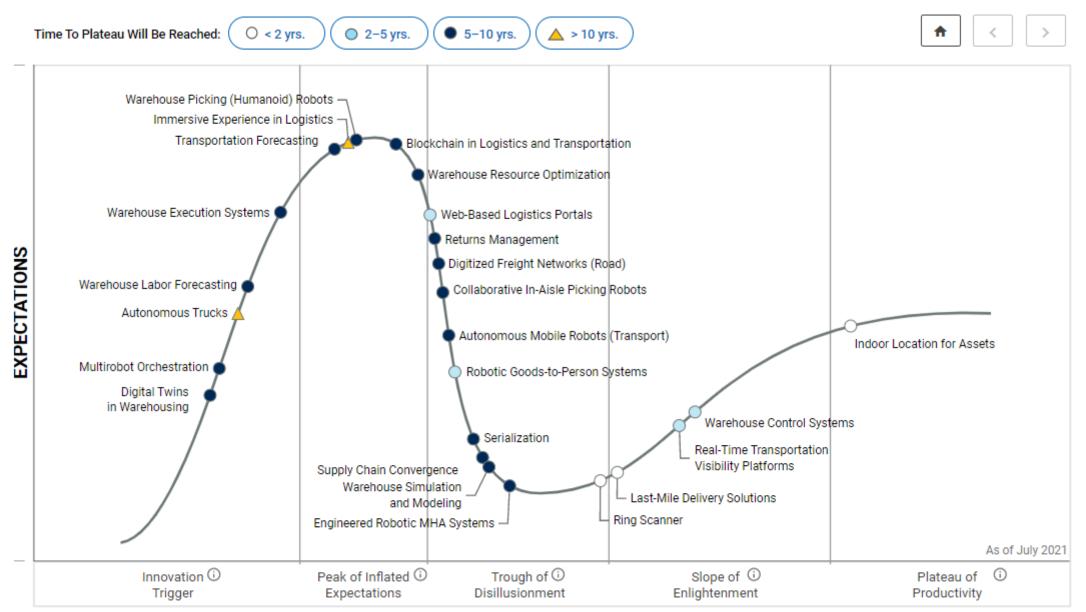
















### Digital Transformation = Embrace Change





















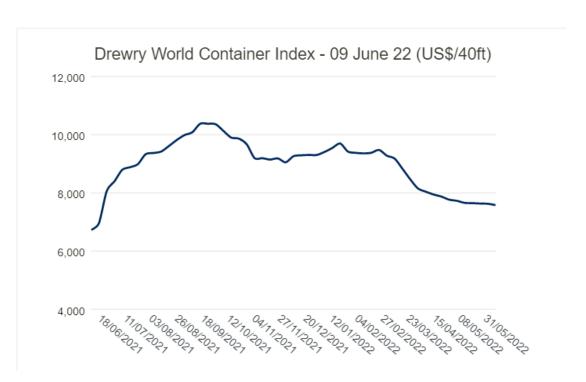


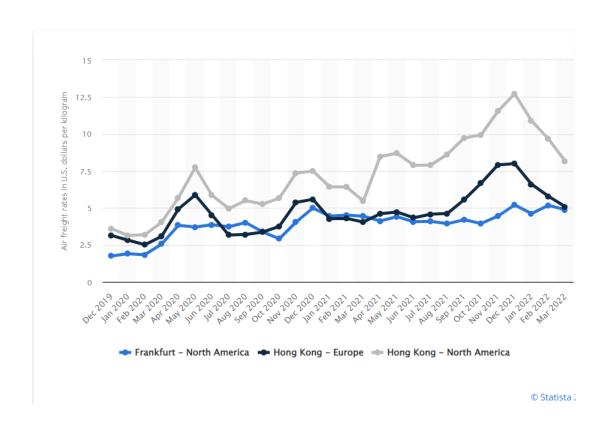






# From Customer Market to Supplier Market back to Customer Market









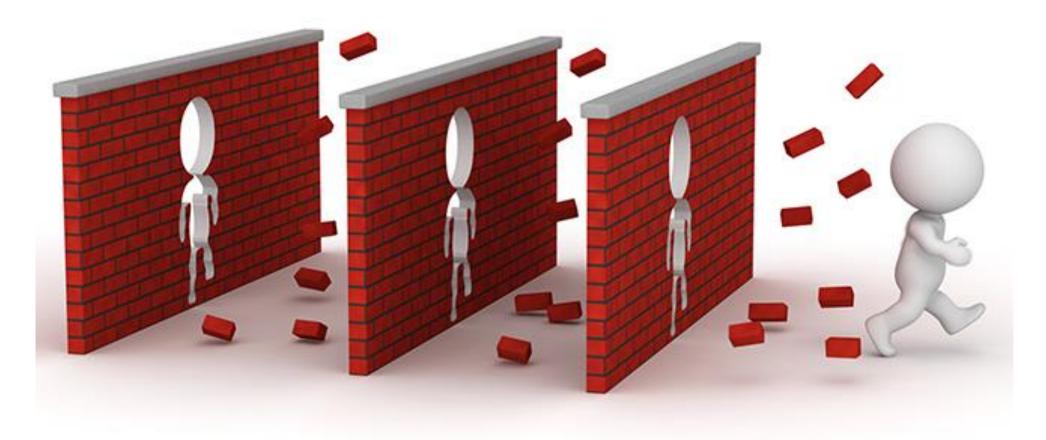


### Peter Hinssen





### **Success Stories?**







#### Automotive – Integrated Supply Chain

#### **Unbundling The Automobile** V2V/V2X Communication ADAS/ **Car Automation** VENIAM Savari Connected Car nuTonomy & NAUTO REMOTO Airbiquity TTTech .:: RoboCV Vehicle Cybersecurity drive ai Adas Works **AutoBot** KYMETA CohdaWireless ARGUS Automile **TRUVOLO** Robot of Everything C cario Flutotalks @ CONVI Karamba Security OXBOTICA (comma.ai) AUTOMATIC Zbie **Engine Efficiency Auto Repair** (CVZ W Warmshame FAYETTE FABRICATION **Mower** ClickMechanic HONK A Pinnacle Engines achatespower ///Agility autobutler.dk PITSTOP Tires Sensor **MLDL** Hardware QUANERGY Aperia Navigation/Mapping LeddarTech<sup>®</sup> INRIX BirdsEye **□**Mack TRILUMINA Swift **Q PathSense** INTELLIGENCE MapmyIndia **Driver Safety** Zendrive navdy navmii MAPKIN **Battery Storage** SMARTDRIVE Drive Safer as CelluDRIVE Created by Boston Quantum Scape solid energy envia AUGARY @exploride **CB**INSIGHTS www.cbinsights.com lytx. BELIEFE DESCRIPT. Heads UP!



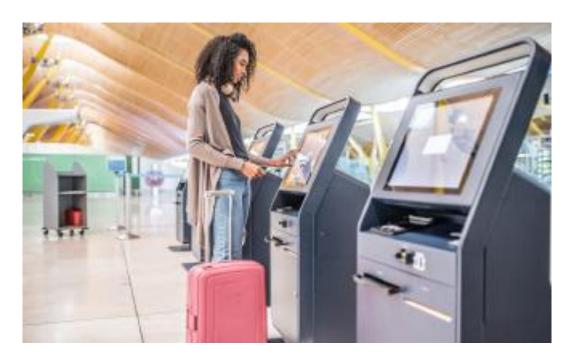
### Finance – Digitalization & Digital Exchanges





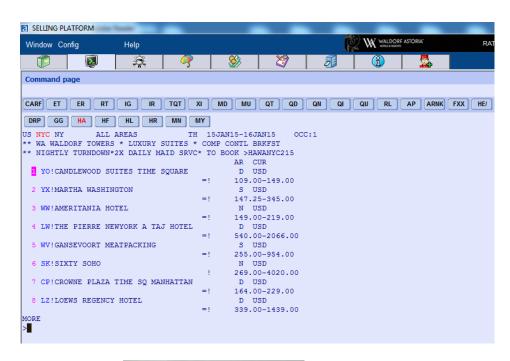


### Travel – Front and Back









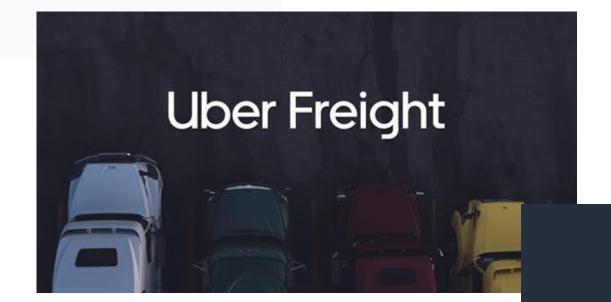












flexport.









### How can we help your Digital Transformation?

#### Type of aid schemes

#### **Innovation aid**

### Innovation aid for SMEs (art. 7)

- Constitution of IP assets
- Secondment of highly qualified personnel
- Innovation advisory and support services
- External advisory services

#### SMEs

#### **Project driven**

- R&D aid schemes (art. 3-5)
- Feasibility studies (art.6)
- Process and organisational innovation (art.9)

#### SMEs and large enterprises

#### **Open Innovation**

- Research infrastructures (art. 10)
- Investment aid for innovation clusters (art. 11)
- Operating aid for innovation clusters (art. 12)

SMEs / large enterprises / public research institutes

#### Growth

Young innovative enterprises (art. 8)

Small enterprises



### Summary

Supply Chain 4.0 is the premise of a future digital ecosystem based on virtualization & collaboration

Prioritize on external digitalization to transform your contribution to the supply chain

The customer experience in B2C has set the bar for the B2B

Digital transformation can only be achieved with innovation.



# Thank you!

#### Arnaud Lambert

Director

Digital Transformation

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