

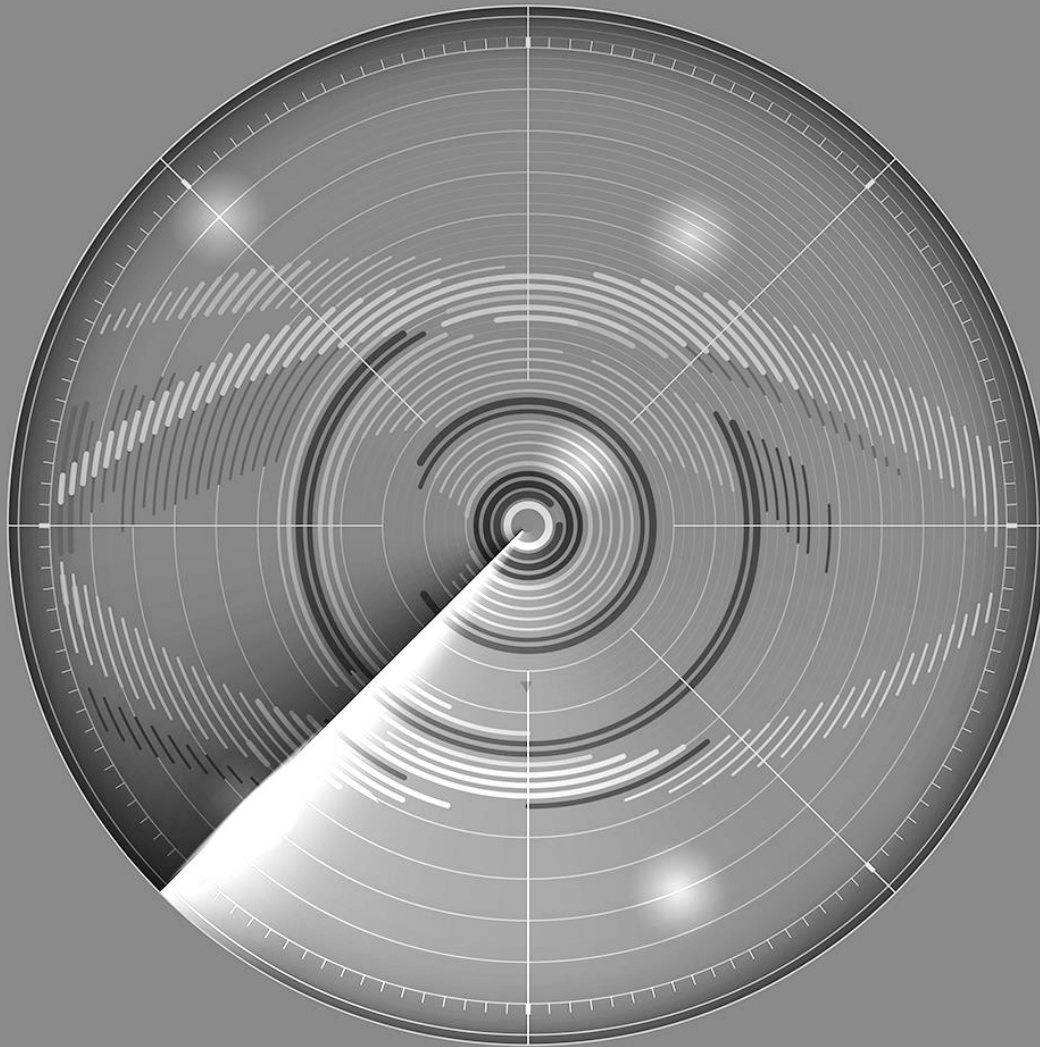


Powered by
DHL Trend Research

SHAPING THE FUTURE OF LOGISTICS

Mei Yee PANG
4th April 2019

2019 DHL Technology Conference



THE WORLD IS **CHANGING...**



ASIA PACIFIC

Smart Consumers embrace digital

Sharing economy

China – World's largest sharing economy in 2017

17x

Europe

40%

CAGR over the past 3 years

US\$ 650 BILLION

China

Source: Sharing Economy Research Institute; State Information Center of China, New York Times; PwC, Frost & Sullivan

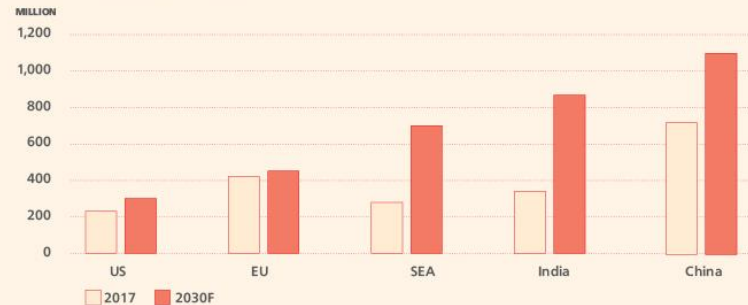
94%

of Chinese internet users willing to participate in sharing economy

Source: Nielsen; Forbes; Amcham

Mobile first

Smartphone users, 2017 & 2030F



Source: Statista; The Diplomat; China's State Council Information Office

Digital platforms



Source: Go-Jek; Frost & Sullivan



Source: Grab

... AND SUPPLY CHAINS NEED TO EVOLVE

Digital Freight Shipping



Sensors & Asset Tagging



Inventory Management



Blockchain



Food Supply Chain



Supply Chain & Logistics Analytics



Trucking Marketplace & Fleet Management



Warehousing



Enterprise Resource Planning



E-Commerce Logistics



Autonomous Trucking



Last-Mile AV & Drones



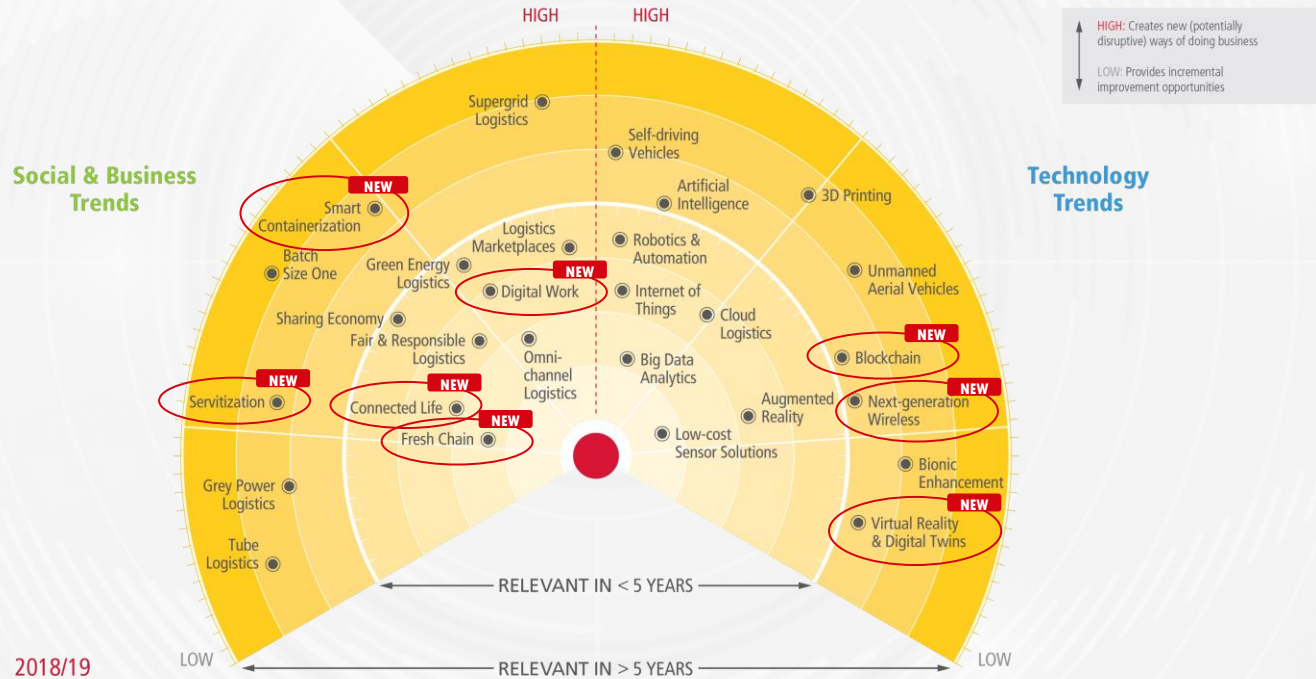
Last-Mile Delivery Services



Source: CB Insights 2018



THE DHL LOGISTICS TREND RADAR 4.0



INNOVATION VALUE CHAIN

1

Trend Radar



2

Trend Report



3

Innovation Center Exhibit



4

Proof of Concept



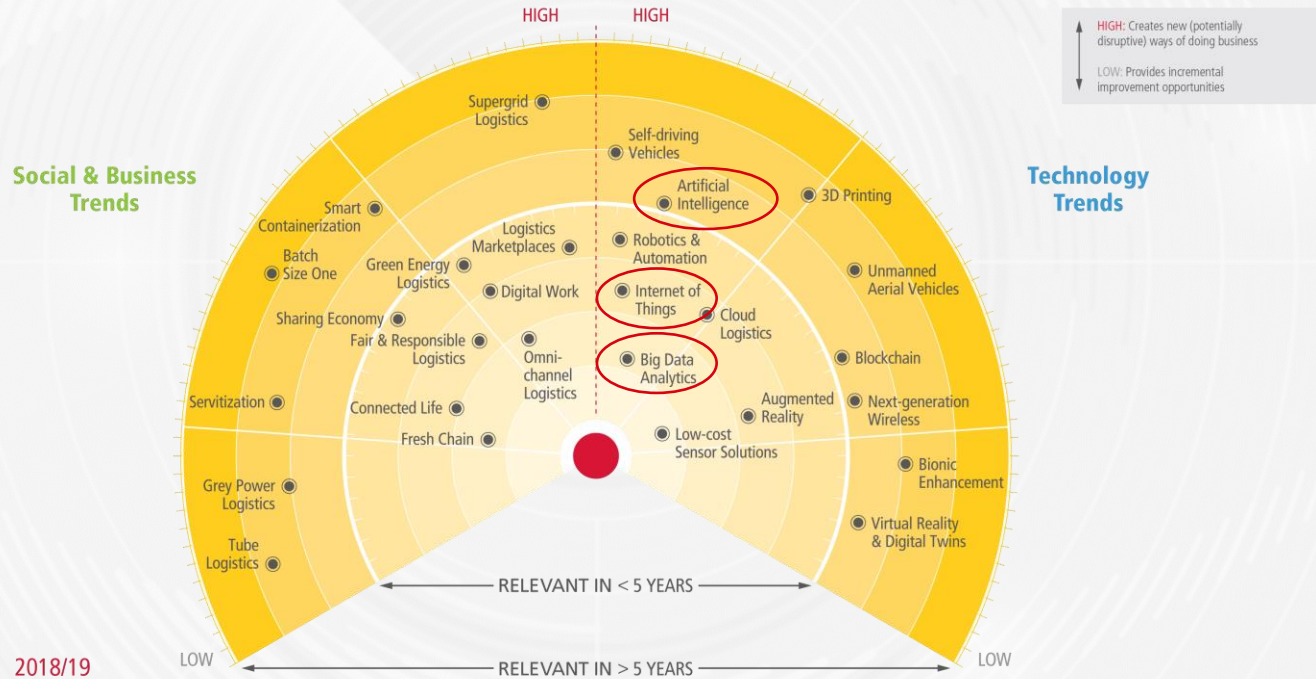
Commercialization



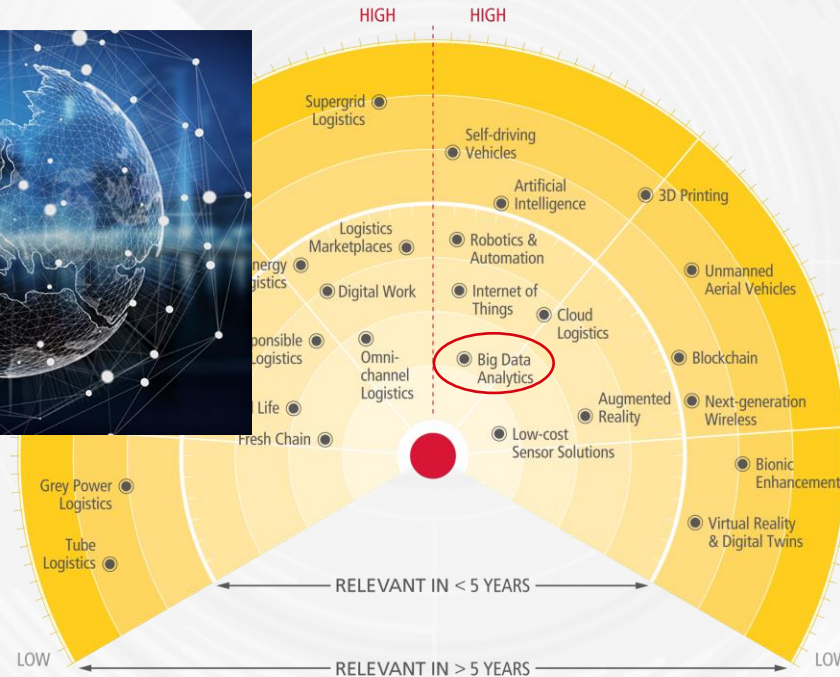
Initiate Global Accelerators



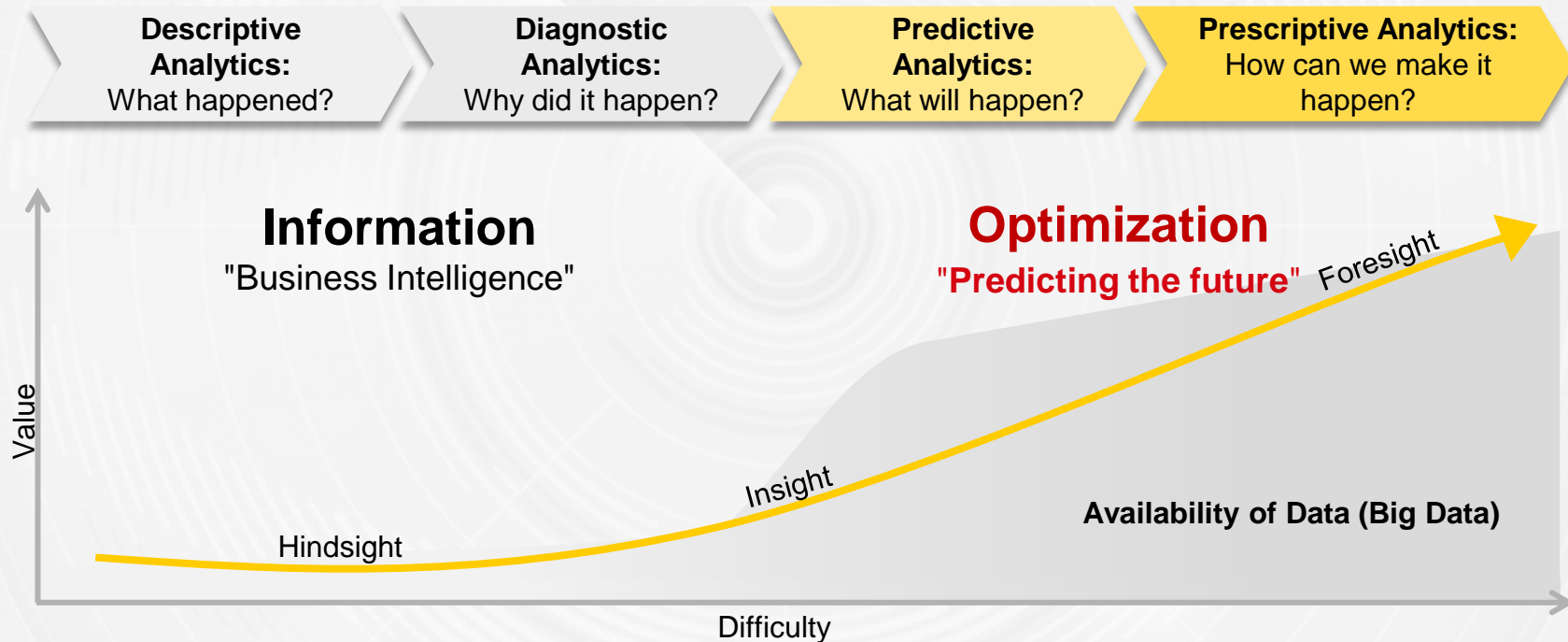
THE DHL LOGISTICS TREND RADAR 4.0



ADVANCED ANALYTICS CAPABILITY CREATED JUST FOR YOU!



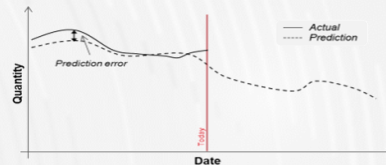
VALUE CREATION THROUGH DATA ANALYTICS



DEMAND & INVENTORY 360 DIAGNOSTIC TOOL



+10% Forecast
Accuracy Improvement



€ 4.6M (37%)

Working Capital Savings

23%

Storage Space Reduction



						
Name	Home Brew	20 Litre	Pony Keg	Slim 30	Import / Micro	Full Keg
Dimensions	23"h x 9"w	24"h x 10"w	14"h x 17"w	24"h x 12"w	21"h x 17"w	24"h x 17"w
Litres	18 Litres	20 Litres	30 Litres	30 Litres	50 Litres	58.7 Litres
Imp. Oz	634 oz	704 oz	1056 oz	1056 oz	1760 oz	2065 oz
Weight	49 lbs	58 lbs	87 lbs	82 lbs	139 lbs	161 lbs
Height with Coupler	29"	30"	20"	30"	26"	30"

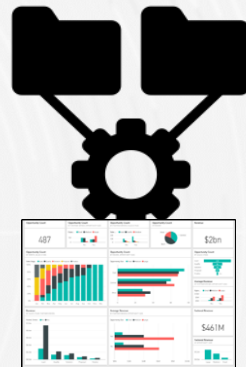
AUTOMATED INSIGHTS GENERATION



- 4 man day effort
- 400 lines transformation instructions
- >250k rows excel data to process
- Cannot analyze long periods of past data; Excel limitations

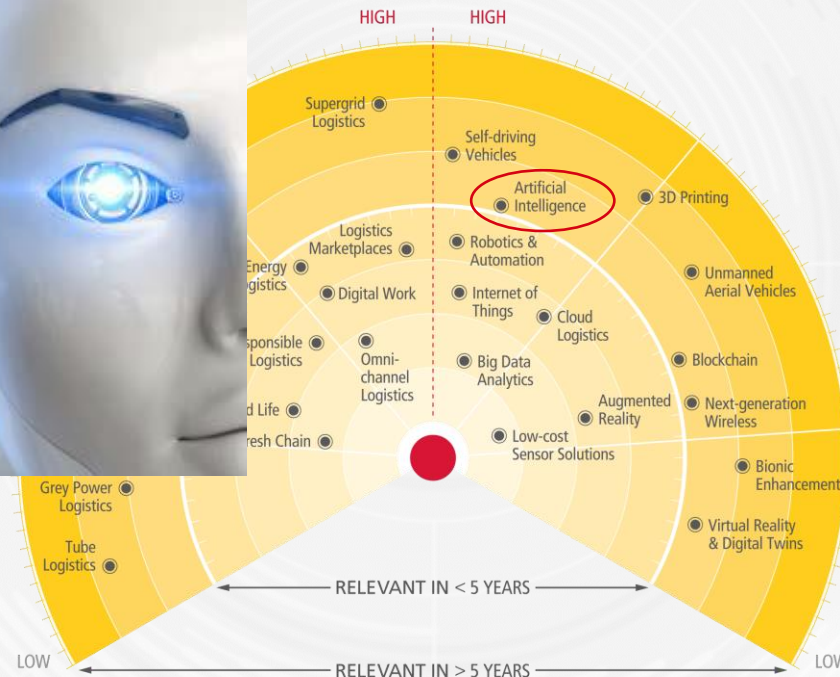
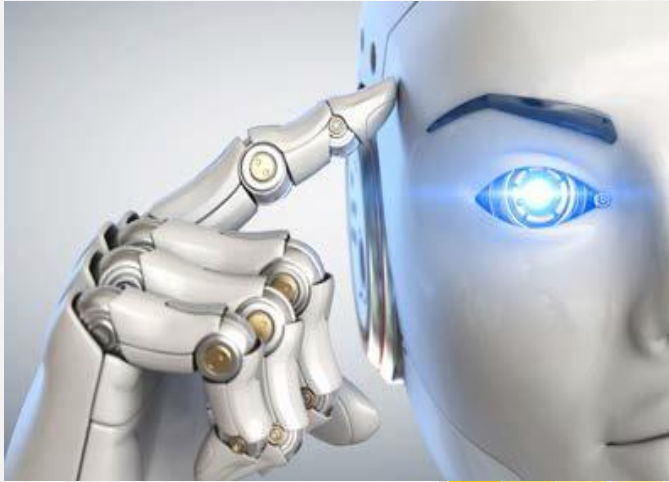


10 man
days



- 5 minute process
- Advanced dashboards for increased visibility across supply chain
- Enable predictive analytics

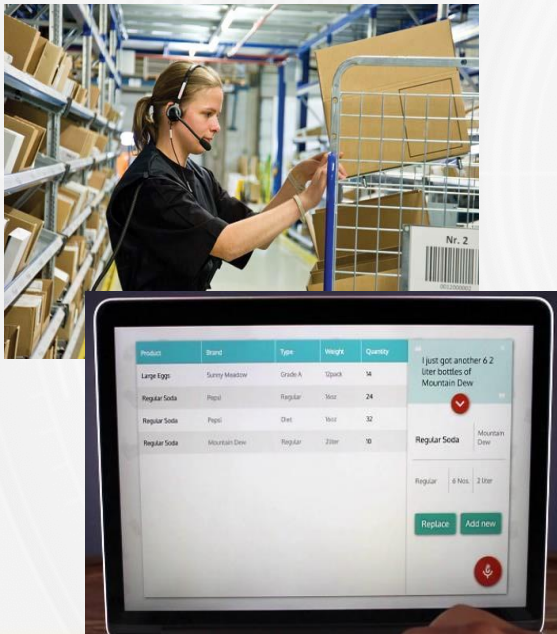
NEW **FOCUS** TOPIC – ARTIFICIAL INTELLIGENCE



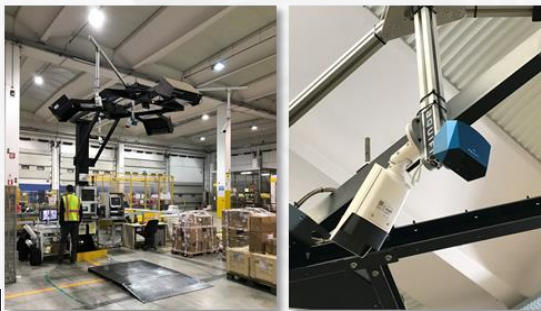
2018/19

AI IN LOGISTICS: SPEAKING, SEEING & THINKING

Conversational WMS



Visual Quality Control



Visual Technical Assistance



VISUAL TECHNICAL ASSISTANCE: POWERED BY AUGMENTED REALITY



1



Speed

- End to end technical process within single AR powered platform
- Easy onboarding of new staff

2



Consistency

- Higher quality of services across staff
- Consistent documentation of jobs

3



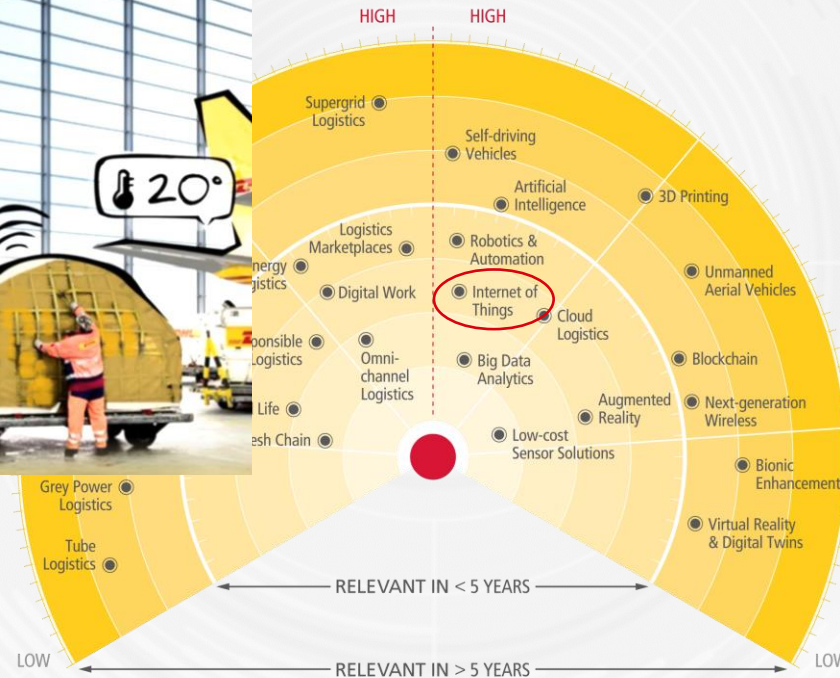
Self-Learning

- 3D Image recognition
- Intelligent troubleshooting

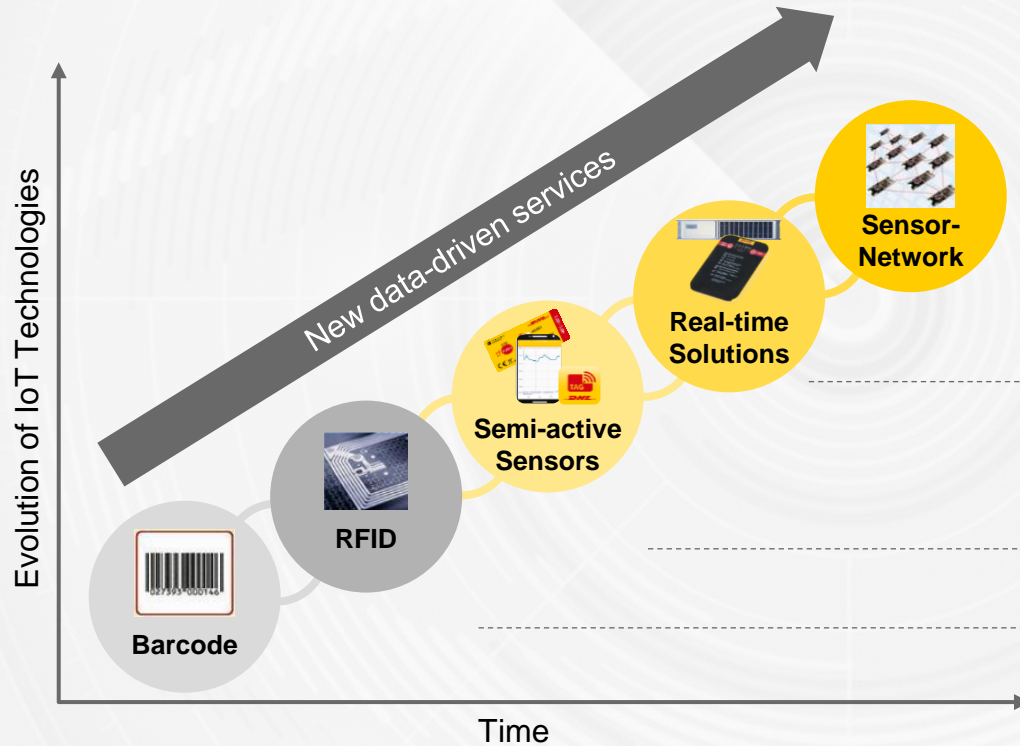
AI IN LOGISTICS: AUTONOMY



NEW ACCELERATOR – INTERNET OF THINGS



NEW DATA-DRIVEN SERVICES



IoT Solutions @ DPDHL

- DHL Ocean Thermonet: GSM
- Agheera GPS Solar: GSM
- DHL Air Thermonet: NFC/RFID
- Pharma Express: NFC/RFID
- DHL-MyiD: RFID

NEW USER **EXPERIENCE** WITH BYOD



FROM 2G-ONLY TO 3G-ENABLED TO FUTURE SENSOR NETWORKS



RAIL & OCEAN FREIGHT TRACKING FROM EUROPE TO CHINA



General Information

- Client: DHL Global Forwarding – **Pharmaceutical Company**
- Use case: **Ocean Freight**
- Shipment: **Europe to China**



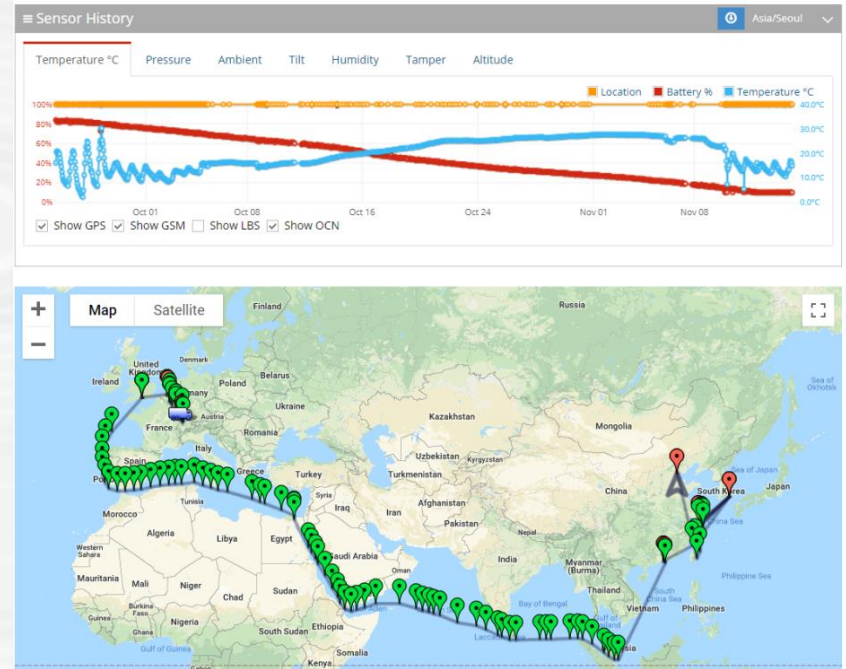
Objectives

- Objectives: **Multi-Modal** end-to-end **Visibility** and shipment **monitoring**
- Notifications/alerts: **Waypoints**, **Temperature** and **delays**



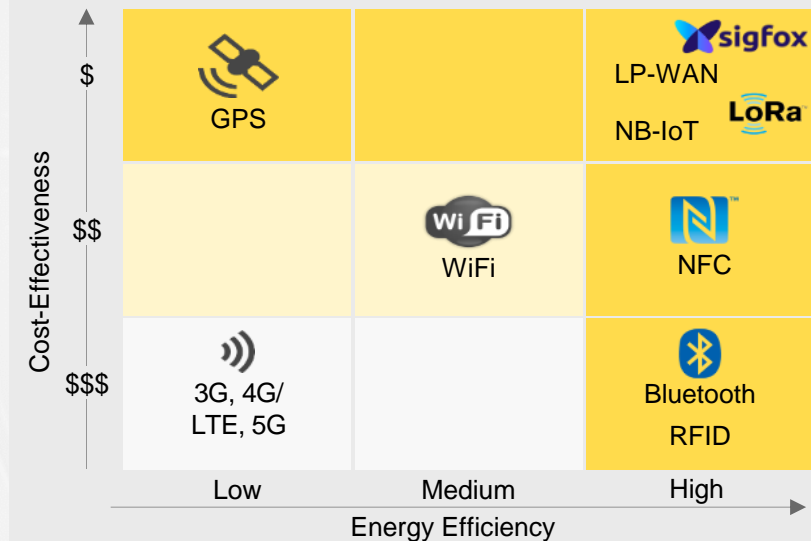
Particularities

Automated **Shipment Creation**, in-transit **tracking** and battery-saving **Ocean Mode**



PROMISING LOW-POWER-WIDE-AREA-NETWORKS

Overview



Availability



Sigfox

Industrialized nations and (Air)Ports



LORA

Industrialized and emerging markets



NB-IoT

Europe, China and South Africa



2G/3G/LTE/4G

Global

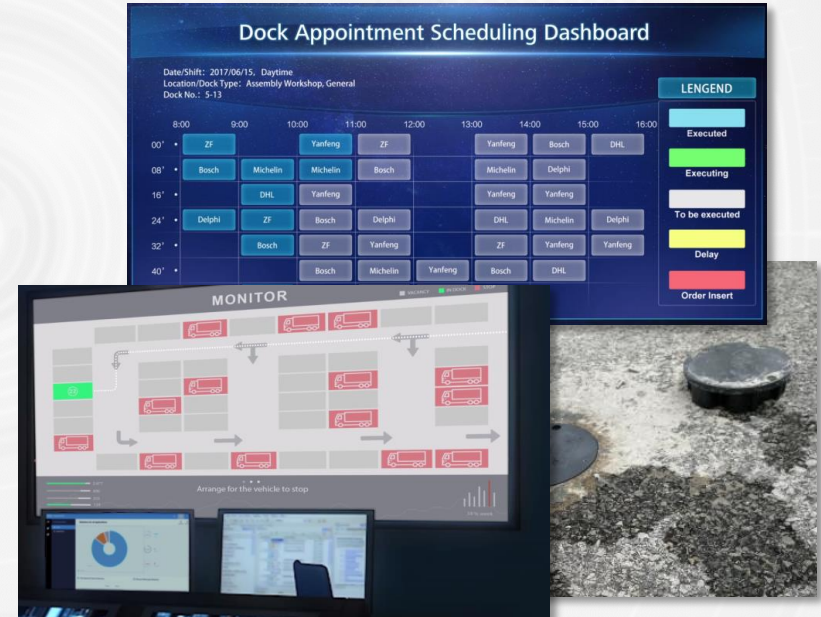
1) Standard for local and metropolitan area networks

DIGITAL YARD MANAGEMENT IN PARTNERSHIP WITH HUAWEI



Use case:

- Leading car manufacturer plant in China
- Traffic jams and lack of space at the inbound docks
- No visibility on the inbound process for a plant operating on JIT philosophy



OPEN INNOVATION APPROACH



**ALL OUR TREND REPORTS ARE AVAILABLE FOR DOWNLOAD:
WWW.DHL.COM/INNOVATION**

OUR INNOVATION CENTERS – GLOBAL PRESENCE

We are looking forward to welcoming you



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