

*“In my experience, it seems that it’s often easier for executives to spot disruptions occurring in **someone else’s industry** rather than their own, where their deep and nuanced knowledge can sometimes distract them from seeing the writing on the wall.”*

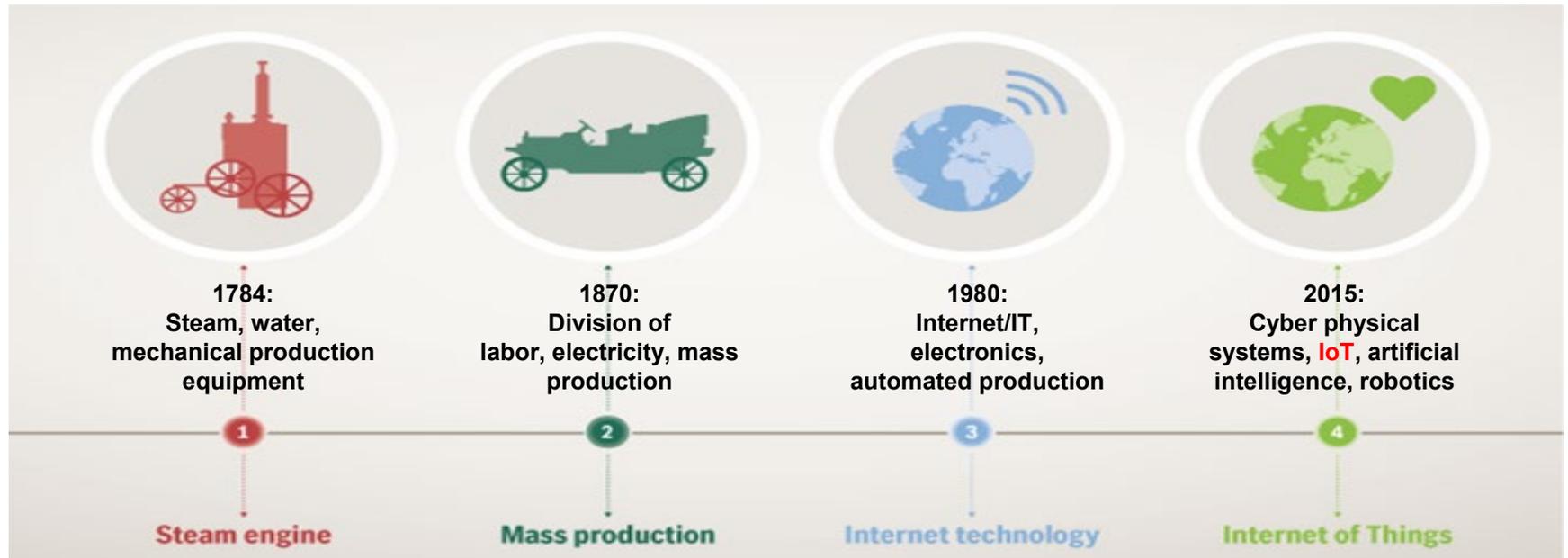
Clay Christensen’s 1997, *The Innovator’s Dilemma*



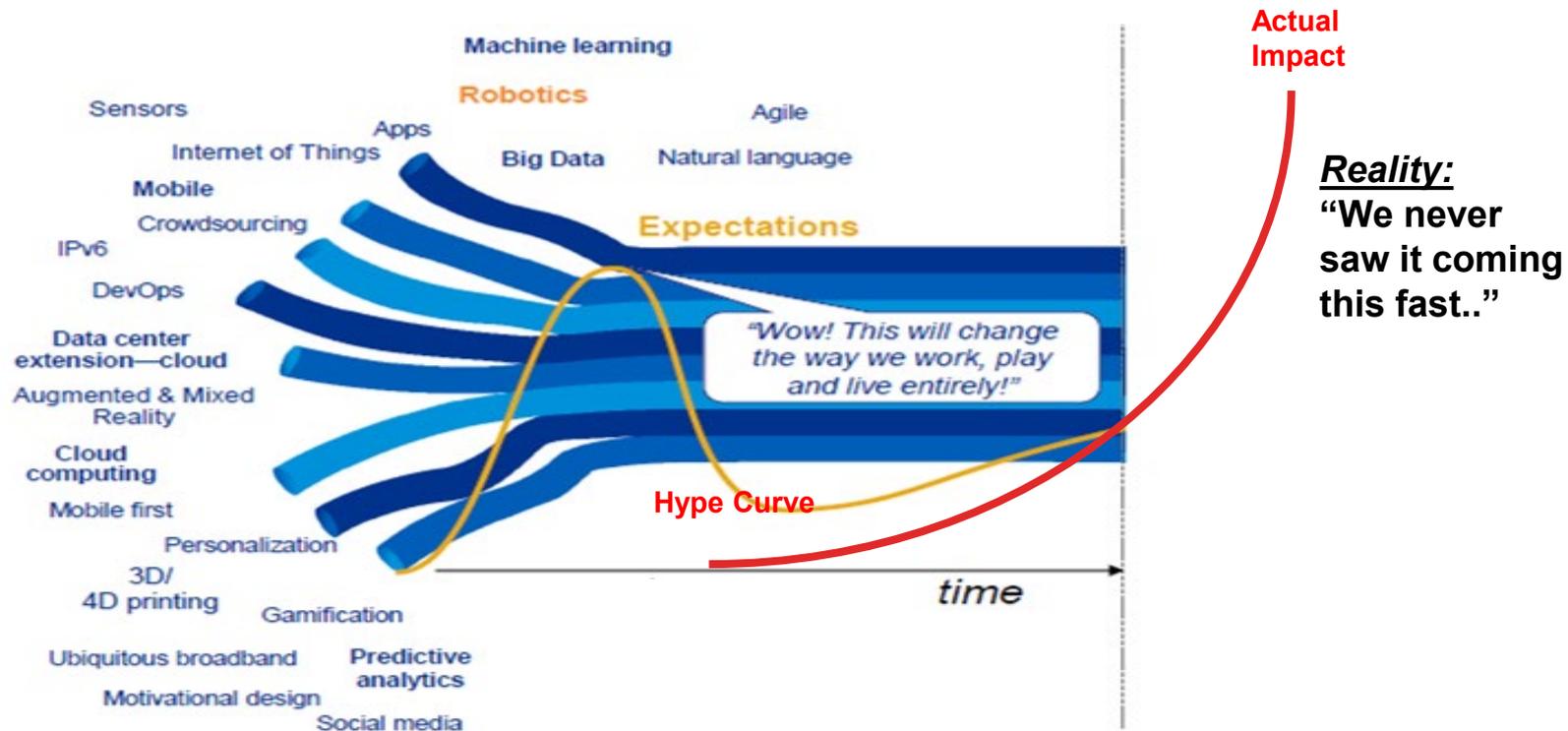
Leo Brand
CIO



The 4th Industrial Revolution: Internet of Things (IoT) will revolutionize all value chains

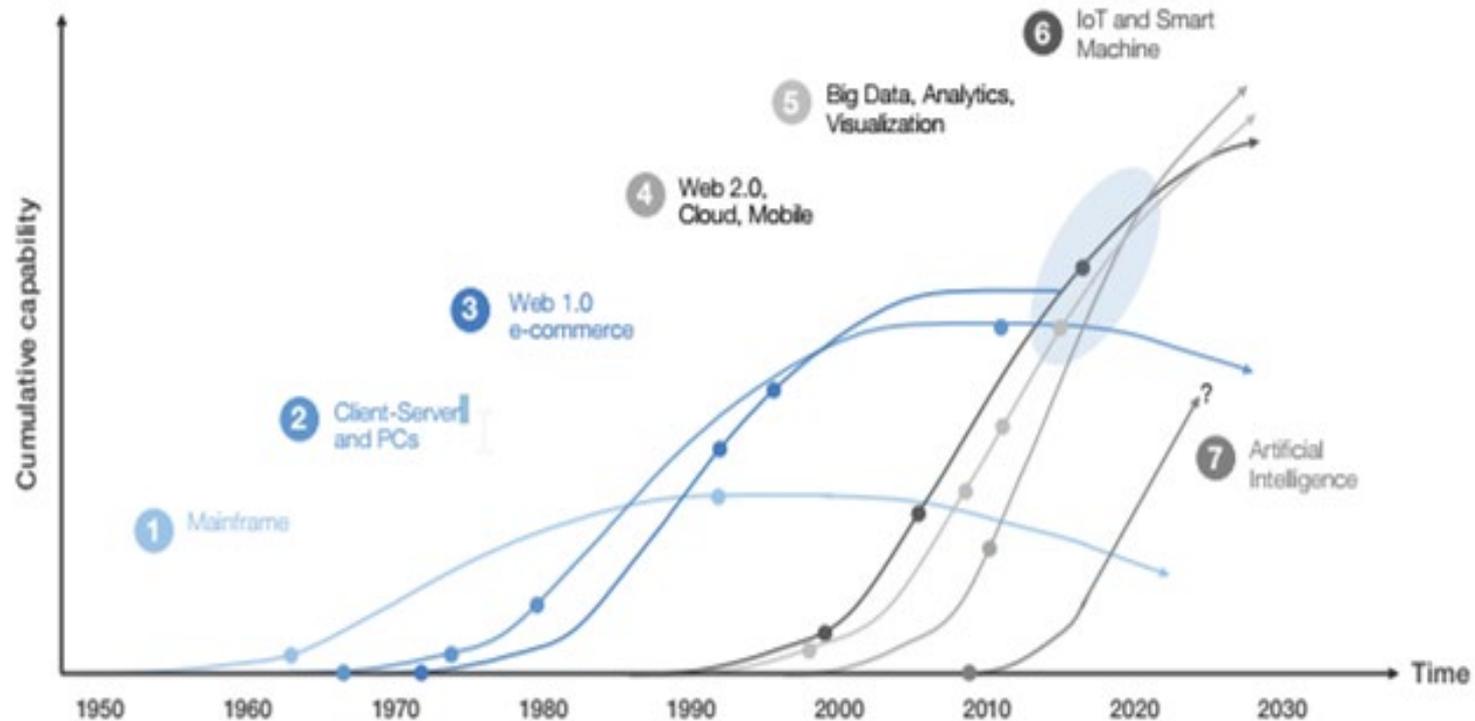


New digital technologies emerge almost every day, our expectations outpace their initial impact.... leading us to discard many technologies as “hypes”

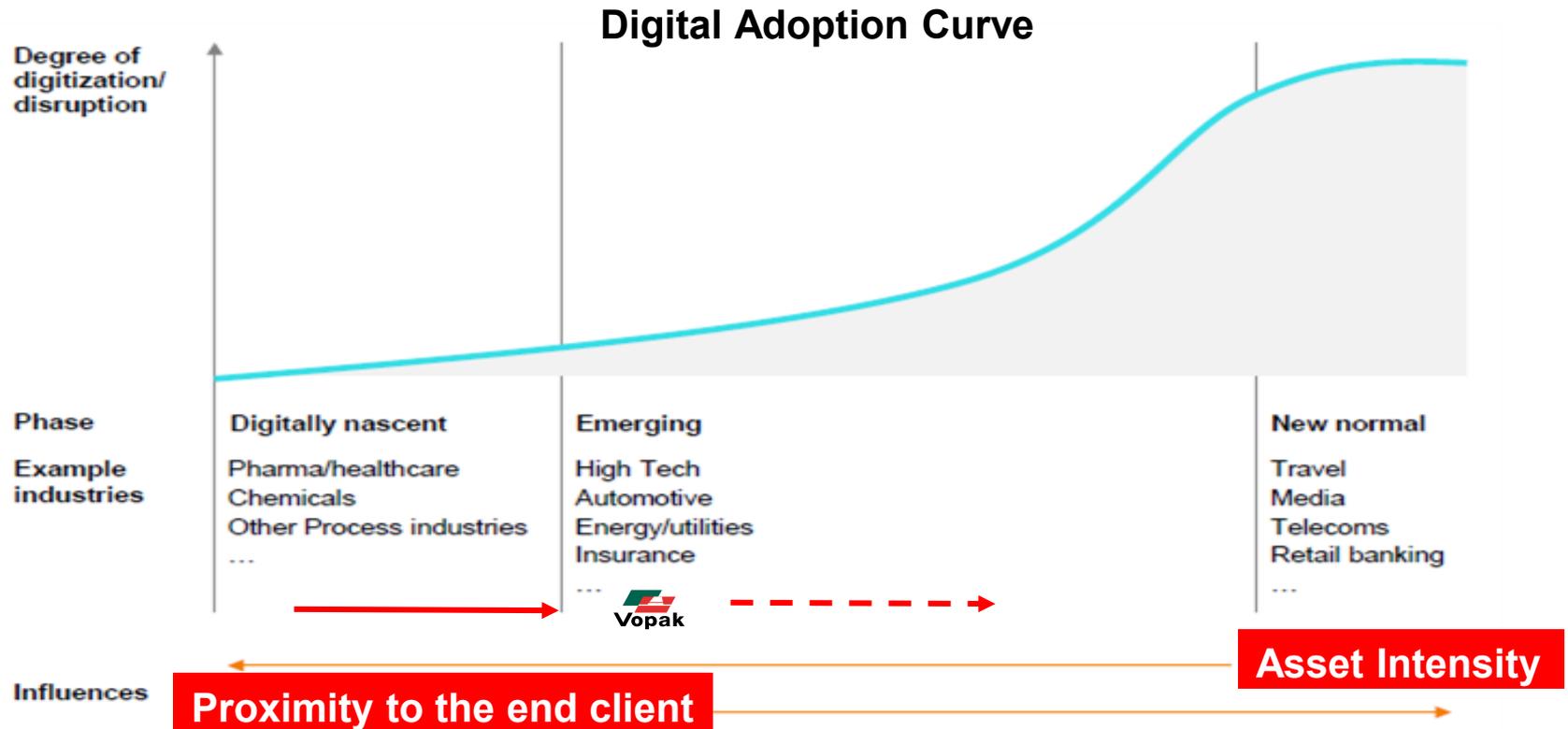


Reality:
“We never saw it coming this fast..”

Pace of change driven by technology



Where do industries stand on digital?



The changing role of IT

“IT does not matter”

Nicolas Carr, editor Harvard Business Review May **2003**

“Every Company is now a technology company”

Joe McKendric, Forbes April **2015**

“Every company is now a **software company.”**

U.C. Irvine, Harvard Business Review, April **2016**

“Artificial Intelligence (AI) is eating the software”



news



transport



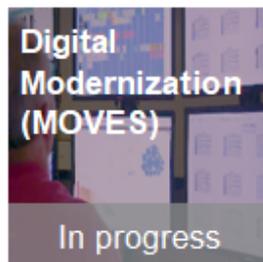
your industry
next

Digital Transformation: four paths

Digital Foundation: Architecture



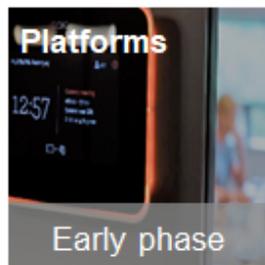
- Centralized cyber security program to protect our systems
- Significant reduction in response time to cyber attacks
- IT and OT



- Replacing and modernizing our company-wide IT and OT systems
- Developed own software for core processes and purchase standardize non-core processes (MOVES)
- Advanced analytics

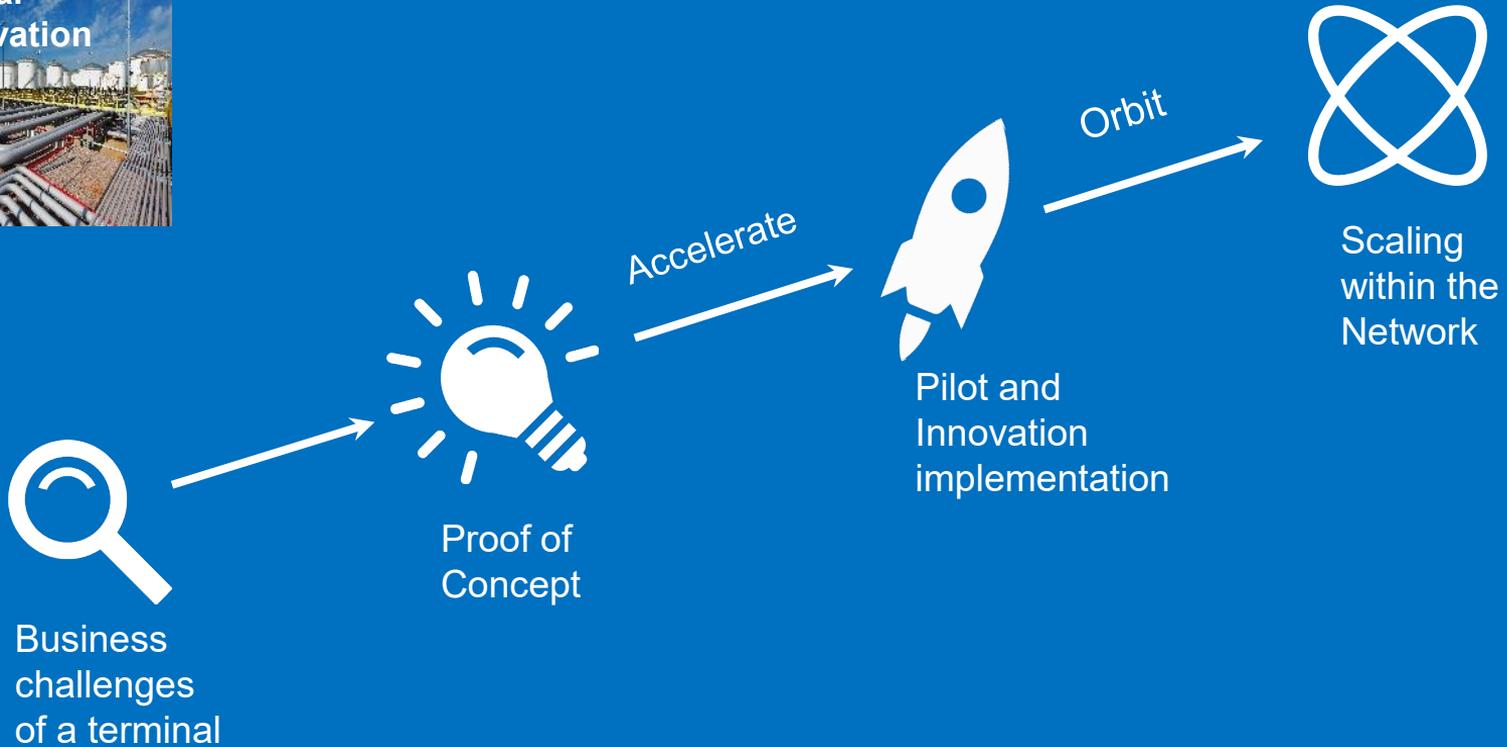


- Connecting our assets to generate real-time data with smart sensing
- Digitizing our maintenance
- Participate in new ventures relating to innovation



- Create digital platforms around smart terminals enabling efficient and reliable information sharing
- Engage in new ventures related to platform technology

5.0 Innovation approach

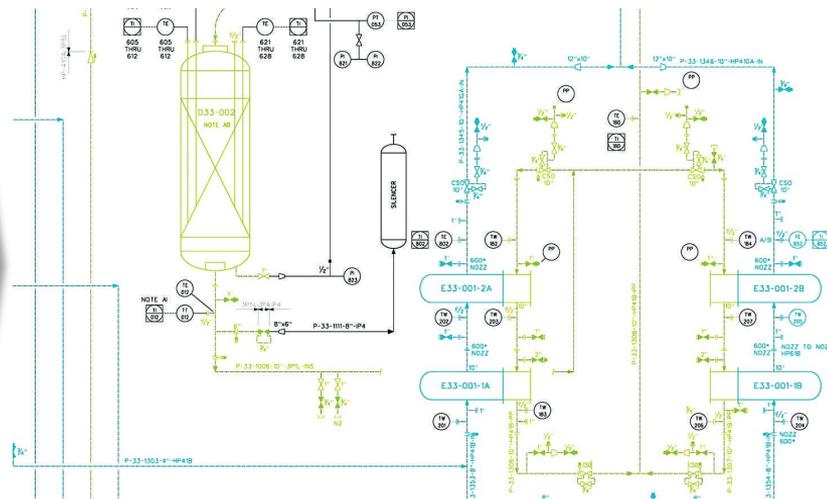


Digitizing Vopak's operational environment: from 3D scanning to a digital smart P&ID

From 3D scan (3 mm accuracy) to.....



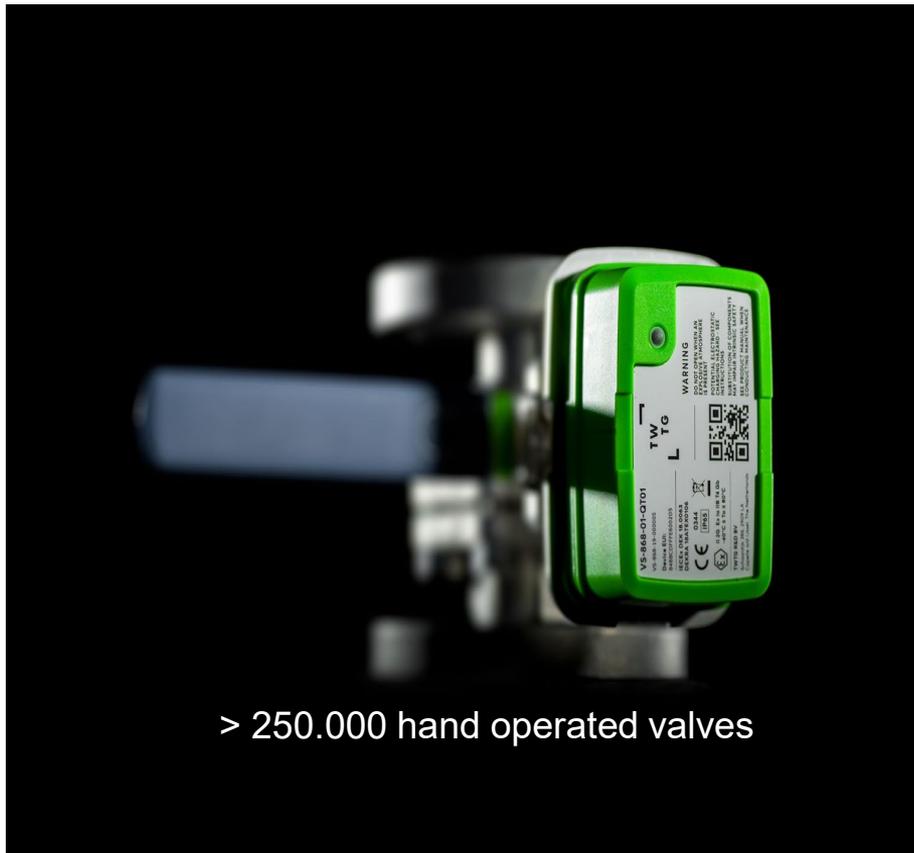
.....Digital **real time** P&ID



Creating the Digital Twin

Linked to Maintenance
Application Infor and Oracle
Cloud

And then there was I-IoT.



We use AI for improving safety and predictive maintenance

上海孚宝港务有限公司
Vopak Shanghai Logistics Co., Ltd.

Welcome | usermanager | 退出中文 | Sign out

usermanager (U...)
Online Camera : 32
Policy Camera : 32

Alarm
Status
Camera Status
Alarm List
Policy
System
AI PRIME

Camera Status

Channel NO.: Channel NO. Name: Name Location: Location

Online Status: All Policy Status: All Search

Camera	Channel NO.	Name	Location	Online Status	Alarm Status	Policy Status
	4	00&W3D02	(Berth W3)	Added	Alarm	OK
	3	00&L3D001	(Main approach sp...	Added	No Alarm	OK
	2	00&W2D02	(Berth W2)	Added	Alarm	OK
	5	00&W1D02	(Berth W1)	Added	No Alarm	OK

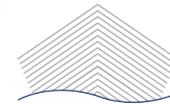
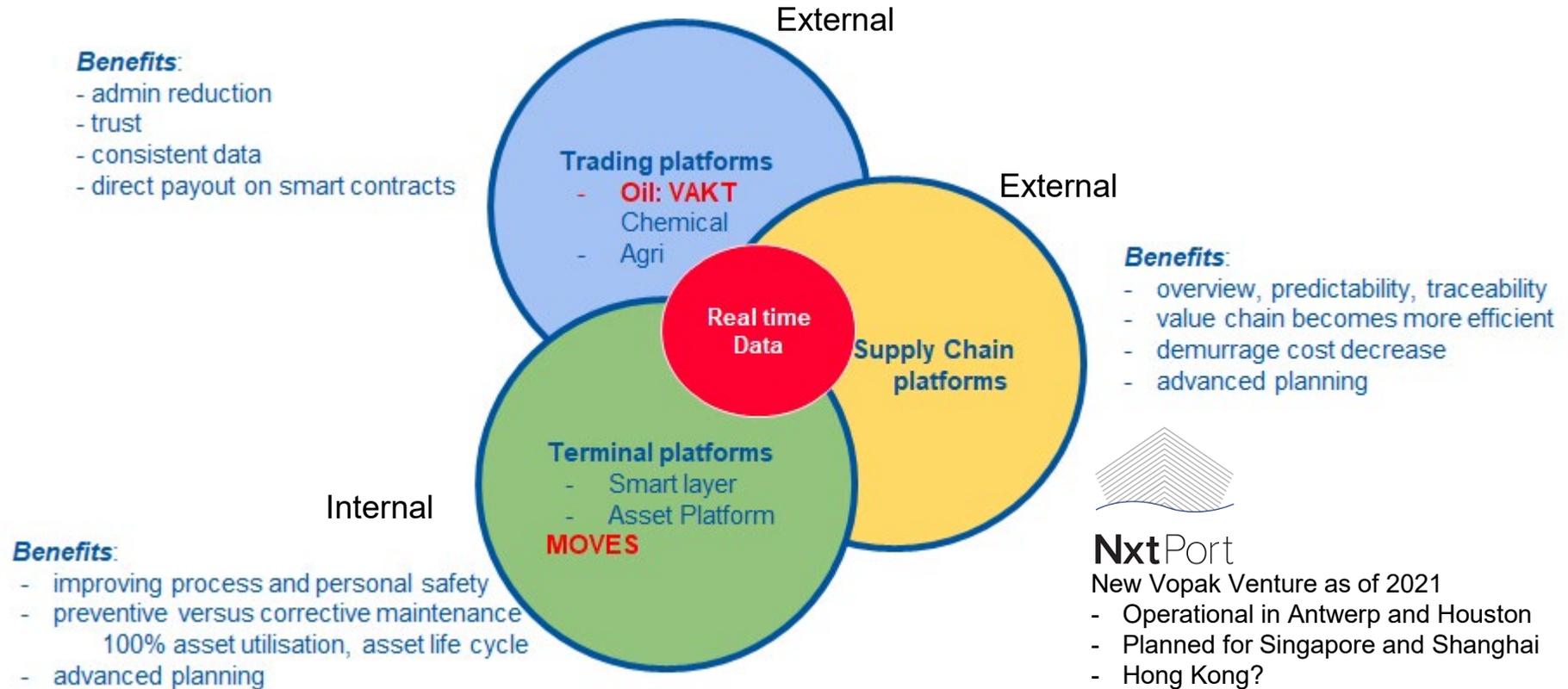
Real Time Alarm

2019年12月16日 星期一 09:13:53

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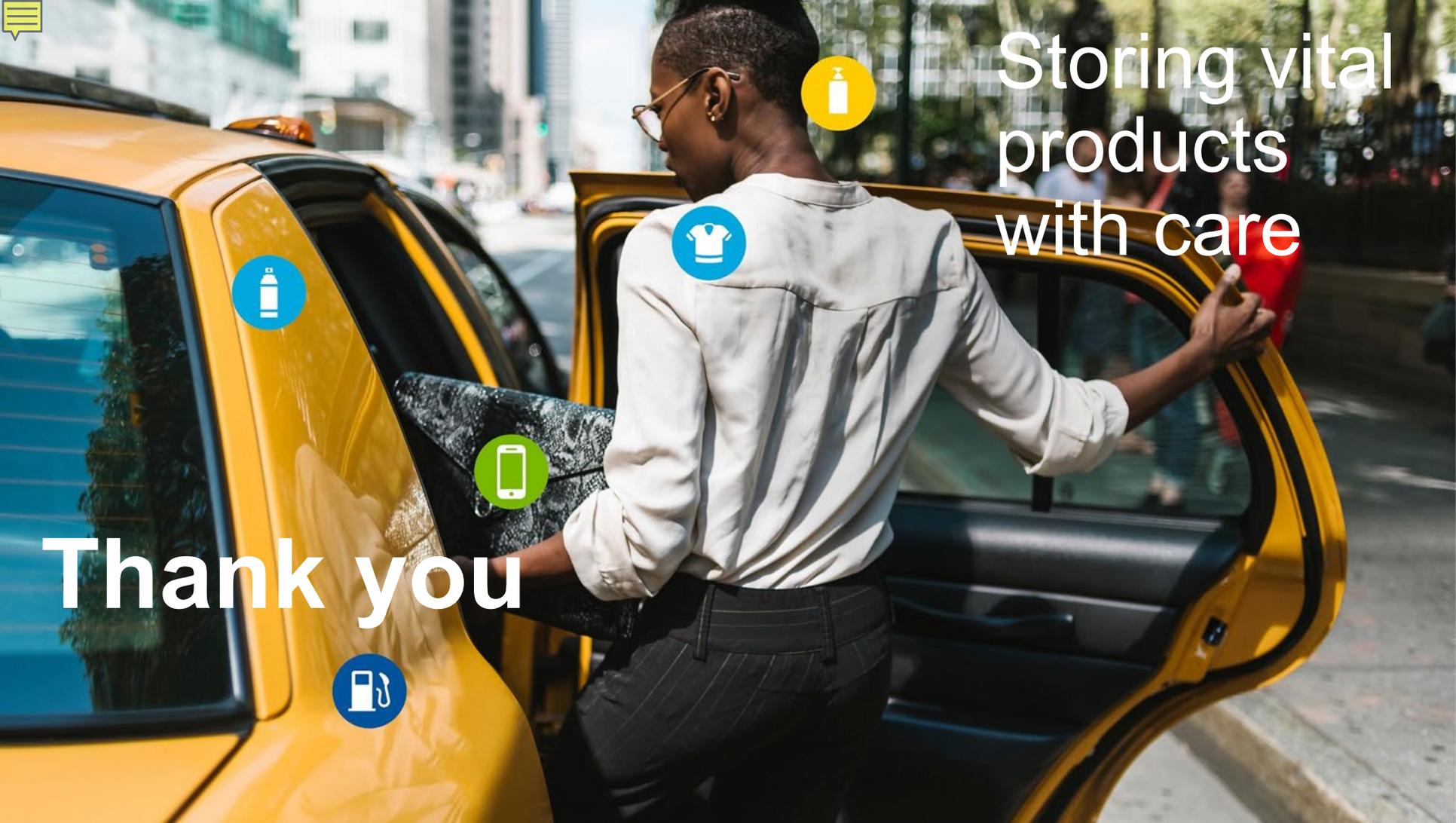
Platforms: capture the value of real time data



NxtPort

New Vopak Venture as of 2021

- Operational in Antwerp and Houston
- Planned for Singapore and Shanghai
- Hong Kong?



Storing vital products with care



Thank you