Digital Strategy within the Equipment Lifecycle

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SmartEquip

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ERA Convention 2025
"Navigating Transitions In Rental", Dublin, June 4-5
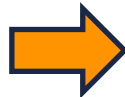
Introduction

30 years of chasing lifecycle efficiencies

- **1995-2000**   **Caterpillar Rental Services Network:** South America, then EMEA
- **2000-**   **SmartEquip:** North America, Europe, Japan & APAC

A. What?

Improve Equipment Lifecycle Economics

- **Reduce Total Cost of Ownership (TCO)**
    - Acquisition Cost vs. Disposition Returns
    - Spare Parts Costs
    - Maintenance, Repair, Service Labour Costs
- **Increase Turnover**
    - Availability, Uptime, Rental Rates

B. How?

Digital Solutions

- *Steepen* the Efficiency Curve
    - Do the same, but **better**

- *Shift* the Efficiency Curve
    - Do things you **could not do before**

Introduction

MAXIMISING FINANCIAL YIELD ON ASSETS

Why "Within the Lifecycle?"

A. What?

Improve Equipment Lifecycle Economics

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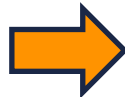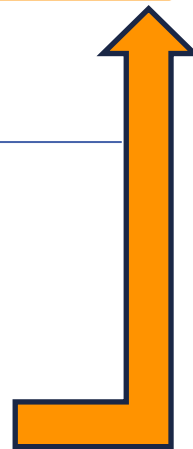

Why Lifecycle?

MAXIMISING FINAN

A. What?

Improve Equipment Lifecycle Economics

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EUROPEAN RENTAL ASSOCIATION
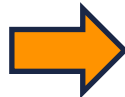
Introduction

MAXIMISING FINANCIAL YIELD ON ASSETS

Digital Strategy Within the Lifecycle!

A. What?

Improve Equipment Lifecycle Economics

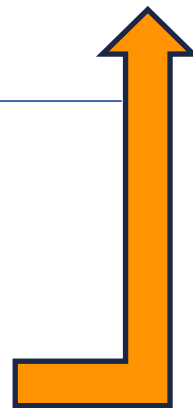- **Reduce Total Cost of Ownership (TCO)**
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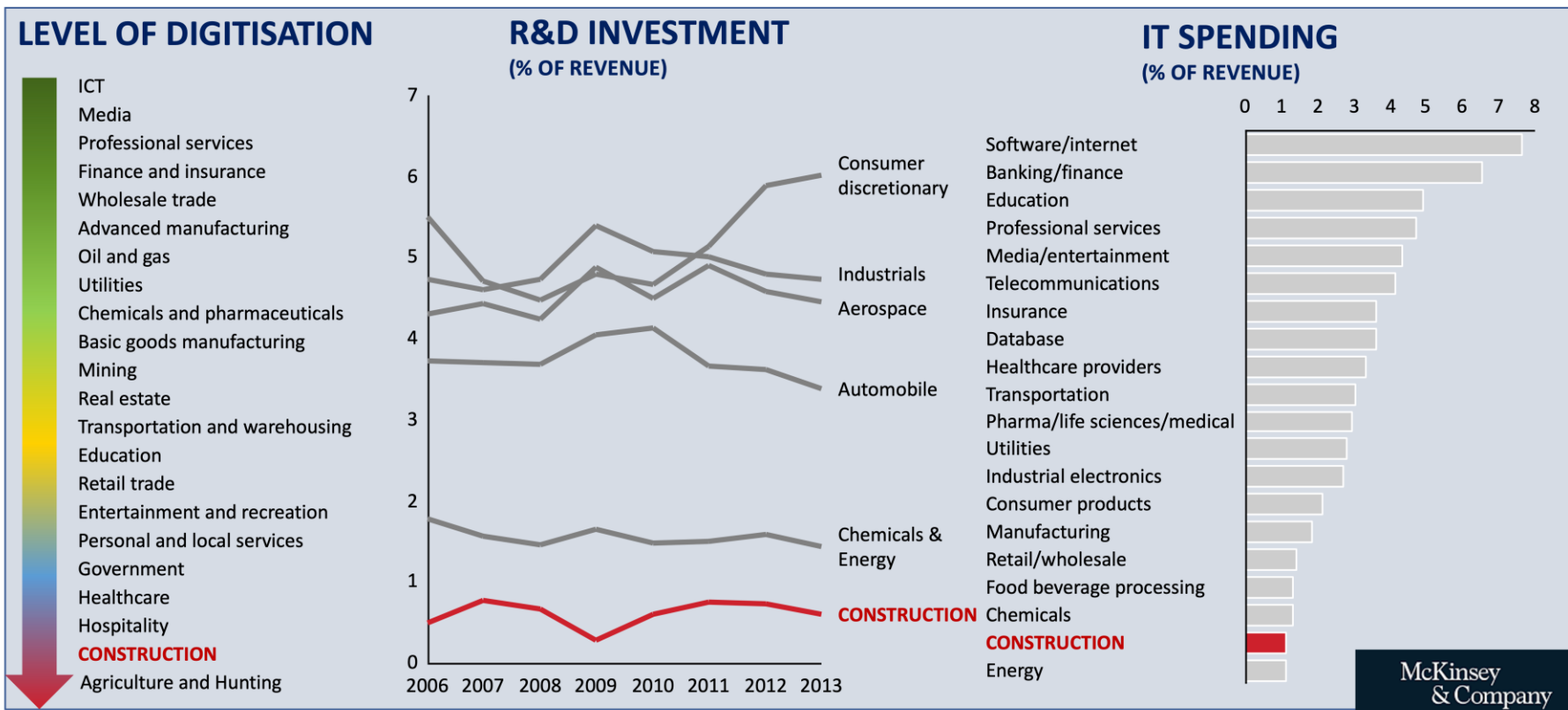   - Do things you **could not do before**

Today

1. Framing Solutions: Equipment & Ownership Lifecycle

2. Digital Targets: Prioritising Solutions within the Lifecycle

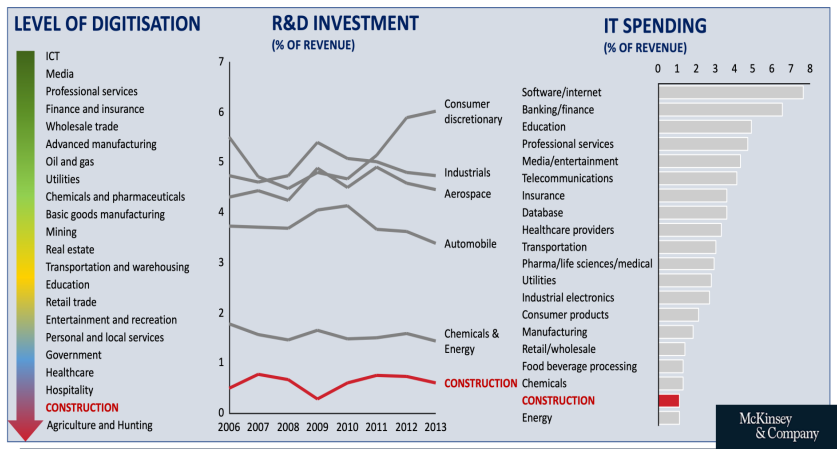**3. Three Generations of Digital Evolution:**
- **Automation**
- **Workflow Innovation: Following the Equipment Lifecycle ("Going Horizontal")**
- **"Outsourced" Innovation: Artificial Intelligence**

Digital Readiness?

LEVEL OF DIGITISATION

- ICT
- Media
- Professional services
- Finance and insurance
- Wholesale trade
- Advanced manufacturing
- Oil and gas
- Utilities
- Chemicals and pharmaceuticals
- Basic goods manufacturing
- Mining
- Real estate
- Transportation and warehousing
- Education
- Retail trade
- Entertainment and recreation
- Personal and local services
- Government
- Healthcare
- Hospitality
- CONSTRUCTION
- Agriculture and Hunting

R&D INVESTMENT
(% OF REVENUE)

- Consumer discretionary
- Industrials
- Aerospace
- Automobile
- Chemicals & Energy
- CONSTRUCTION

2006 2007 2008 2009 2010 2011 2012 2013

IT SPENDING
(% OF REVENUE)

0 1 2 3 4 5 6 7 8

- Software/internet
- Banking/finance
- Education
- Professional services
- Media/entertainment
- Telecommunications
- Insurance
- Database
- Healthcare providers
- Transportation
- Pharma/life sciences/medical
- Utilities
- Industrial electronics
- Consumer products
- Manufacturing
- Retail/wholesale
- Food beverage processing
- Chemicals
- CONSTRUCTION
- Energy

McKinsey & Company

EUROPEAN RENTAL ASSOCIATION

ERA Convention 2018, "TOMORROW'S CUSTOMERS", Vienna, 23 and 24 May

Digital Readiness?

LEVEL OF DIGITISATION — **R&D INVESTMENT** (% OF REVENUE) — **IT SPENDING** (% OF REVENUE)

ERA Convention 2018, "TOMORROW'S CUSTOMERS", Vienna, 23 and 24 May

McKinsey & Company

12 Years Ago

CLOUD

IT'S EASIER TODAY!

1. You no longer need to build digital infrastructure

2. Your employees & customers are already highly "digital"

3. Remaining challenges:

   a) **Solution design**

   b) **Change management**

Today

1. **Framing Solutions:** Equipment & Ownership Lifecycle
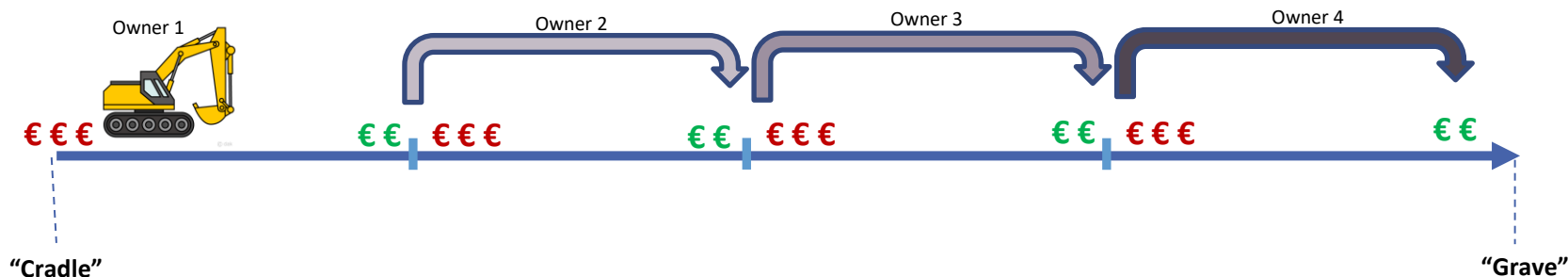
2. **Digital Targets:** Prioritising Solutions within the Lifecycle

3. **Three Generations of Digital Evolution**
   - **Automation**
   - **Workflow Innovation: Following the Equipment Lifecycle ("Going Horizontal")**
   - **"Outsourced" Innovation: From Automation to Inference to Intelligence**

The Equipment Lifecycle

1. Acquisition and Disposition

1. Economics of Transactions (TCO)

€ € € = Cost of acquisition

€ € = Returns on disposition
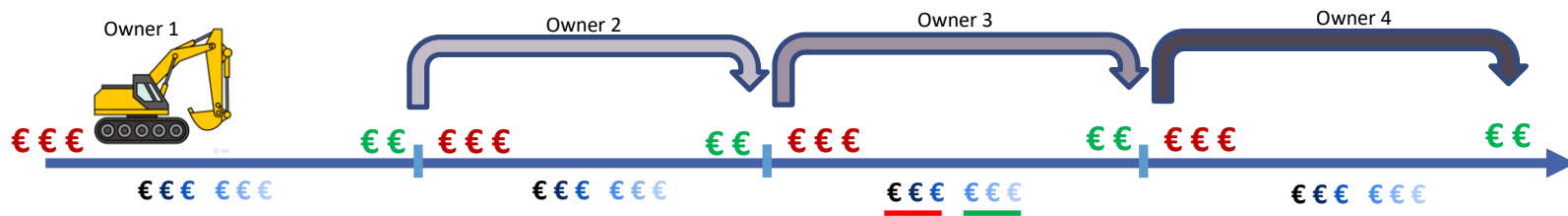
€ € € - € € = Part of TCO ("book ends")

Optimise TCO:
1. *Optimise* € - €
2. *Optimise* transaction costs

Digital Targets

The Equipment Lifecycle

1. Acquisition and Disposition

2. **Fleet Management**

2. **Economics of Fleet Management (TCO)**

A. Reduction of Lifecycle Costs	B. Increase of Lifecycle Returns
• Drive down **service costs** ----▶	• Drive up **time utilisation**
• Drive down **parts costs**	• Drive up **financial utilisation**
• Drive down **operational overhead**	

Digital Targets

Digital Targets

The Equipment Lifecycle

1. Acquisition and Disposition

2. Fleet Management

Managing the ownership lifecycle

= Prioritising digital solutions within the lifecycle

Setting your Digital Targets

Today

1. Framing Solutions: Equipment & Ownership Lifecycle

2. Digital Targets: Prioritising Solutions within the Lifecycle

Setting your
Digital
Targets

3. Three Generations of Digital Evolution

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ASSOCIATION

Prioritising Digital Solutions

Prioritising Solutions within the Lifecycle

A. Lifecycle Costs

TCO

Acquisition
Parts
Service
Disposition
€
Total Cost of Ownership

Digital Targets

Digital Solutions

A **Digital Solutions: Acquisition & Disposition**

- Valuation Services
- Listings Services
- Market Information Services (Rental Rates & Equipment Value)
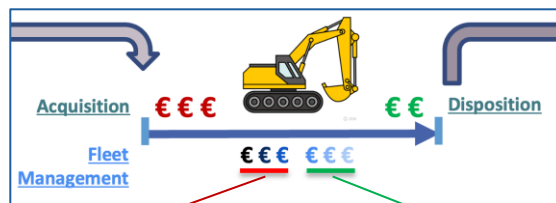
B **Digital Solutions: Fleet Management**

- Service Technician Support
- Spare Parts Inventory & Transactions Solutions
- Machine Performance Monitoring & Analysis
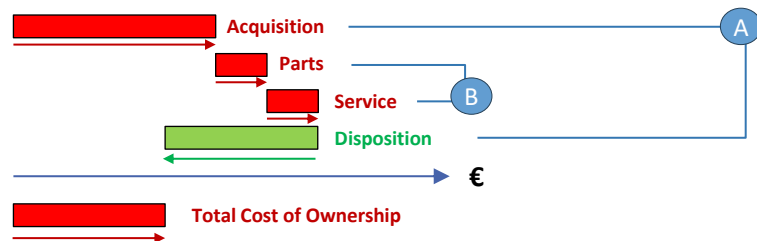
What is the Business Case?

Prioritising Digital Solutions

Prioritising Solutions within the Lifecycle

A. Lifecycle Costs

B. Lifecycle Returns

Digital Solutions

TCO

Acquisition — A

Parts

Service — B

Disposition

€

Total Cost of Ownership

Returns Drivers

- **Uptime & Time Utilization**

- **Financial Utilization**
  (= 'uptime with pricing')

Digital Targets

- Rate Optimization Data Services
- Digital Marketing & CRM
- Predictive Analytics / Preventative Repair
- Telematics/IoT
- Building Information Management System (BIM)
- Opportunity-driven service automation
- Multi-Enterprise Integrations (EDI +++)
- Etc.

What is the Business Case?

Prioritising Digital Solutions

What **drives** the Business Case?

A. Lifecycle Costs

- "Universal" Service Technician Shortage?
- Average Equipment Age?
- Equipment Complexity and Fleet Mix?
- Duties, Tariffs and other Supply Chain Obstacles?
- TCO Ratio of Rental vs. Acquisition / Disposition

B. Lifecycle Returns

- Digital Readiness of your Employees & Customers
- Extent & Maturity of Data-Driven Management Practice

The equipment lifecycle is universally identical

The underlying variables are universally the same

The values of those variables vary by company, strategy, & region

Therefore, the business case varies by company, strategy, and region

# Today

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2. Digital Targets: Prioritising Solutions within the Lifecycle

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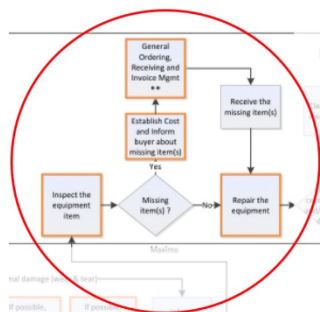- o <u>**"Outsourced" Innovation**</u>: From Automation to Human Innovation to Artificial Intelligence

Three Generations of Digital Evolution
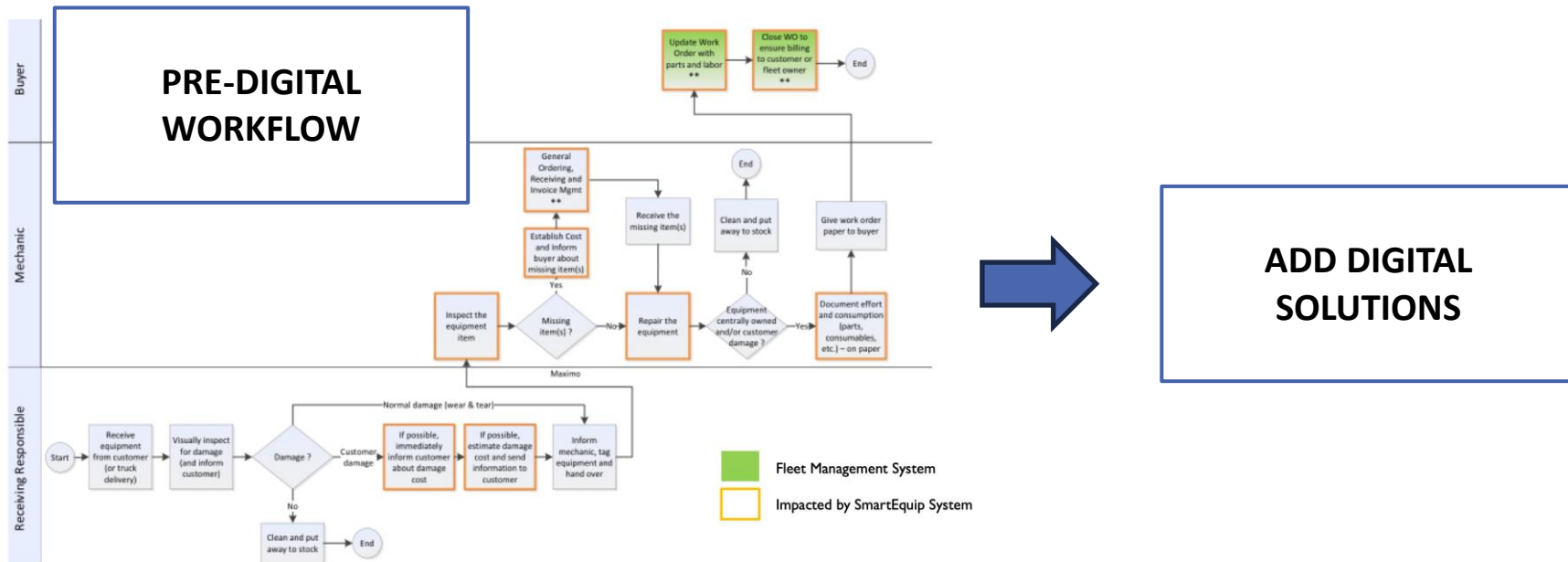
1. Automation: Do the same, but "better"

PRE-DIGITAL WORKFLOW

ADD DIGITAL SOLUTIONS

Three Generations of Digital Evolution

1. Automation: Do the same, but "better"

| ACTIVITY	RESOURCE NEEDS	Cost (in minutes)		SmEq Improv. Pot.		Post-SmEq Cost	
		LOW	**HIGH**	**low-end**	**high-end**	**LOW**	**HIGH**
1. MAINTENANCE, REPAIR, PARTS, AND SUPPLY FOR FLEET (per repair purchase)							
-Diagnosis	*Need service documentation*	10	120	20%	80%	8	24
-Identify needed item	*Need OEM-presented parts documentation*	included	included			included	included
-Check availability in internal stock	*Need access to inventory information*	5	30	0%	90%	5	3
-Find strategic supplier(s)	*Need access to preferred vendor information*	1	30	0%	90%	1	3
-Identify pricing	*Need access to negotiated pricing rules*	included	included			included	included
-Establish availability	*Need access to preferred vendor system*	1	30	0%	90%	1	3
-Place order	***Need access to preferred vendor system***	5	15	50%	90%	2.5	1.5
-Fill out purchase order	*Need to duplicate-enter internal system*	30	30	95%	95%	1.5	1.5
-Receive order	*Need to enter in internal system*	10	10	0%	0%	10	10
-Update inventory	*Need to update inventory*	included	included			included	included
-Perform repair	*Need service documentation*	30	240	20%	20%	24	192
-Fill out work order	*Need to duplicate-enter internal system*	20	45	75%	75%	5	11.25
-Receive invoice (in Contempus)		2	15	0%	0%	2	15
-Check against purchase order	*Need to compare documents manually*	included	included			included	included
-Approve/reject invoice (3-way match)	*Need to access internal financial system*	10	10	0%	0%	10	10
		124	575			70	274.25
improvement:						54	300.75

BEFORE → **AFTER**
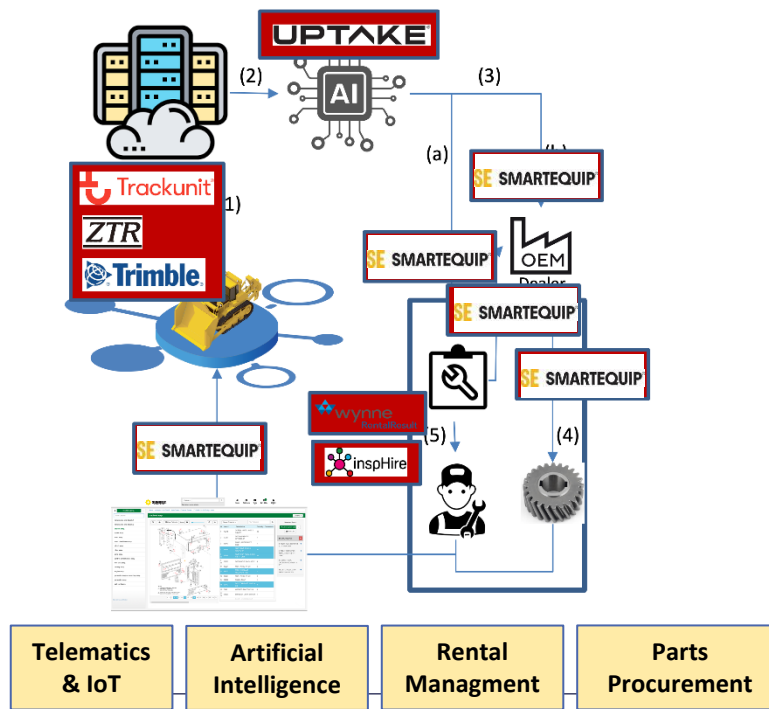
Three Generations of Digital Evolution

2. Workflow Innovation: Following the Equipment Lifecycle

Generation 1: Digital point solutions
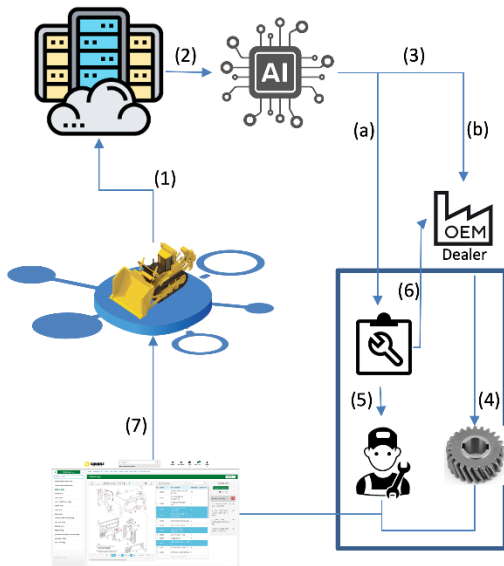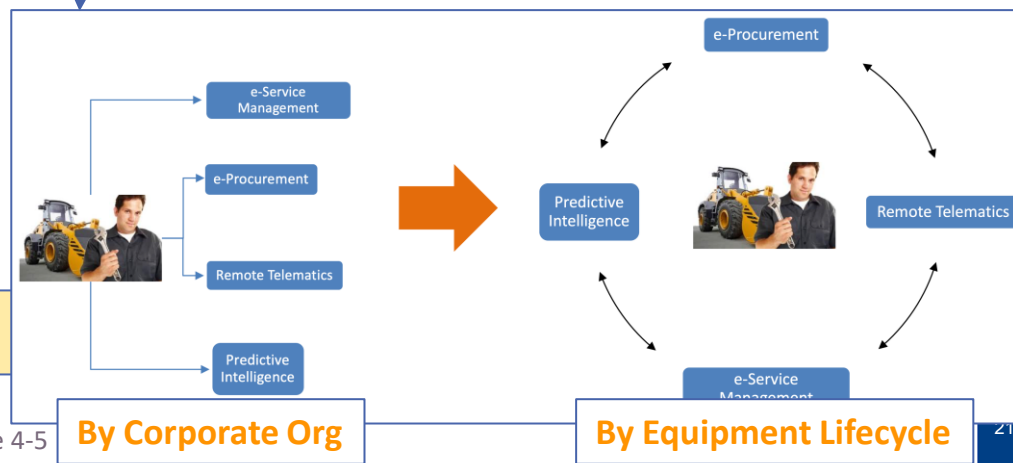
Three Generations of Digital Evolution

2. Workflow Innovation: Following the Equipment Lifecycle

Generation 1: Digital point solutions

Generation 2: Workflow innovation
(a) Re-assessing point solutions (e.g. work order)
(b) Solution-to-solution workflow

Three Generations of Digital Evolution

3. "Outsourced" Innovation: from **Automation** to **Human Innovation** to **Artificial Intelligence**

1. **Automation:**   **Digital solutions** perform what **humans** used to do manually, but **better/faster/cheaper**
2. **Innovation:**   **Humans** design new best practice because **digital solutions make them possible**
3. **Intelligence:**   **Digital solutions** design new best practice for us, **because they are becoming smarter than us**

AI Today:
- **Analytical insights:**   IoT data on **performance parameters**; **parts & service** consumption; etc.
- **Data structuring:**   "**On the fly**", with **no need to "normalize" data** across systems & organizations

AI Forthcoming:
- **Defining and quantifying and solving the problems – within the equipment lifecycle**

Digital Strategy within the Equipment Lifecycle

1. Define and prioritize digital projects **within the Equipment Lifecycle**

2. Business case: think **globally** about the lifecycle and **locally** about variable estimates

3. **Then** establish **hierarchy of digital priorities**

4. Don't evaluate them in isolation (point solutions) but as **integrated workflow solutions**

   a. **Gen 1: Automate prior manual work**…

   b. **Gen 2:** … but then also **use digital platform to re-innovate workflow**

   c. **Gen 3:** … and now (with AI) begin to **re-innovate workflow all over again, but still against the equipment lifecycle**

5. Find and empower both an **AI-friendly "architect"** and a **human-friendly change management leader**

Thank you, Michel!