

6 November 2019

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DIGITAL DRIVES PRODUCTIVITY

WE DISCOVER POTENTIAL

 FLSMIDTH

Accessing 137 years of installed base

- Connects products and plants to FLSmidth's digital infrastructure
- Seamlessly integrates with FLSmidth's control systems, making existing data and signals available
- Easy to retrofit



FLSMIDTH
ENABL'R

SiteConnect

Insights on the go

- **Full transparency** on machine, process, and plant KPIs, in real-time
- **Mobile notifications** when user-defined events occur, e.g. downtime and production shortage
- **Compare performance between assets and plants** to identify higher/lower performing equipment

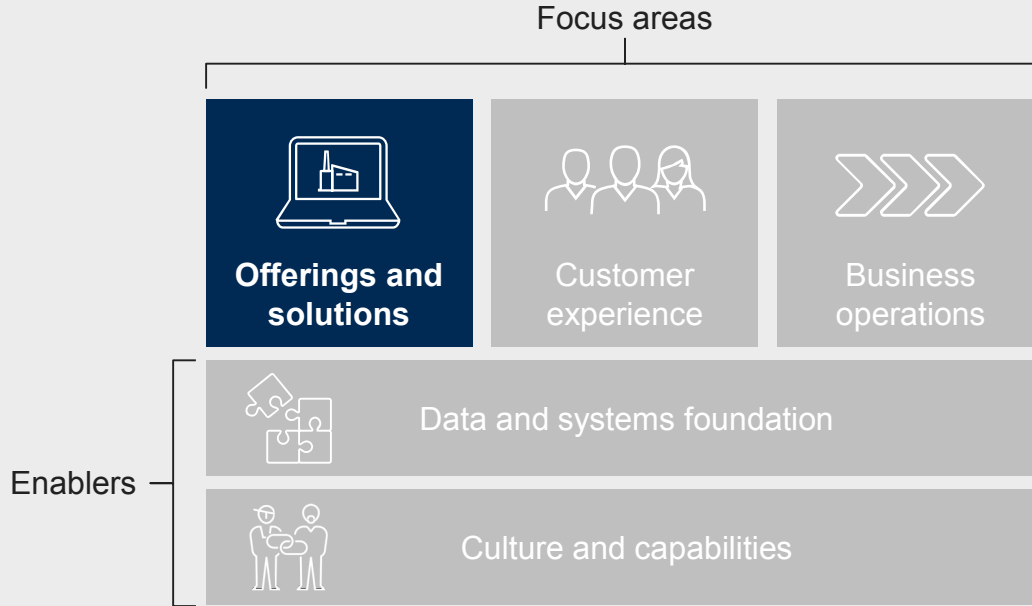


Key messages

- **Process optimisation** and **asset health** are key areas to drive **productivity** and **sustainability** for our customers – FLSmidth is enabling our customers to use this opportunity through digitalization
- FLSmidth is leveraging digital to **differentiate our premium offering** and **capture a larger part of the service business**
- We are driving **innovation in digital** and extending our access to new technology, talent and competences in Cement and Mining

Today's focus:

Our offerings and solutions

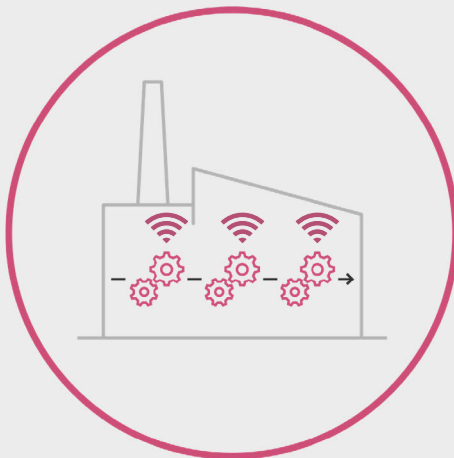


Our digital solutions target three levels

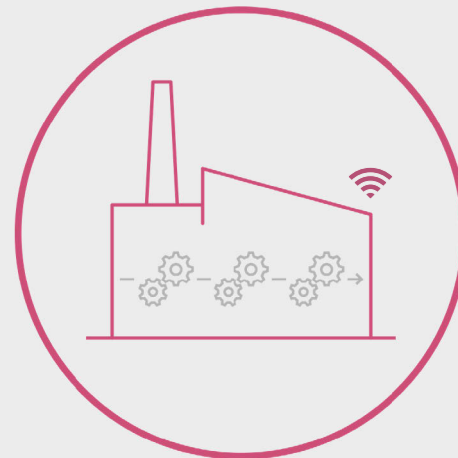
Product level



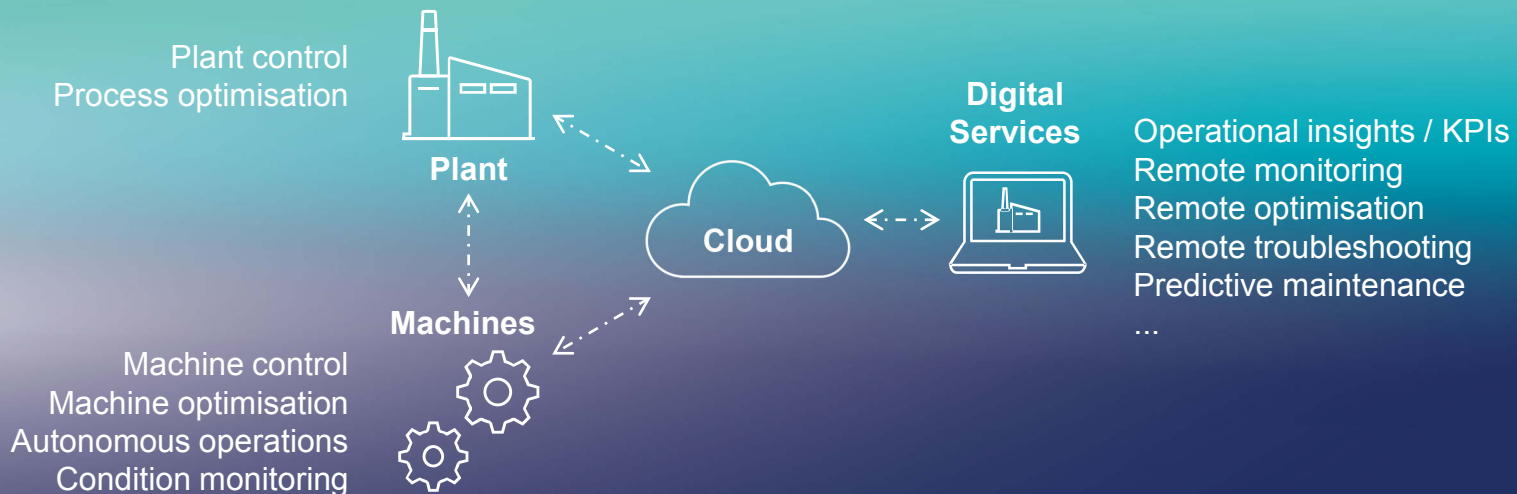
Flow-sheet level



Plant level

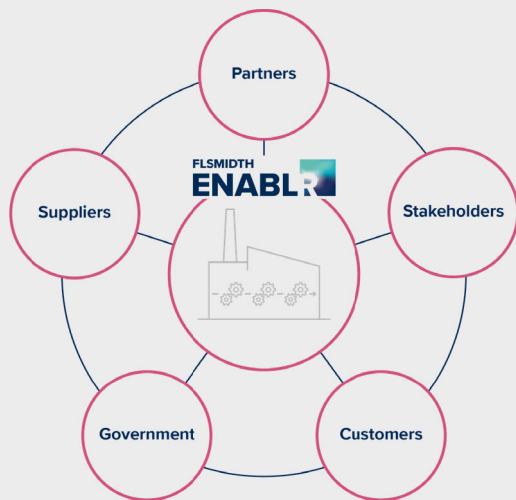


Our digital business offerings



Outlook: full end-to-end integration

Part of a greater ecosystem

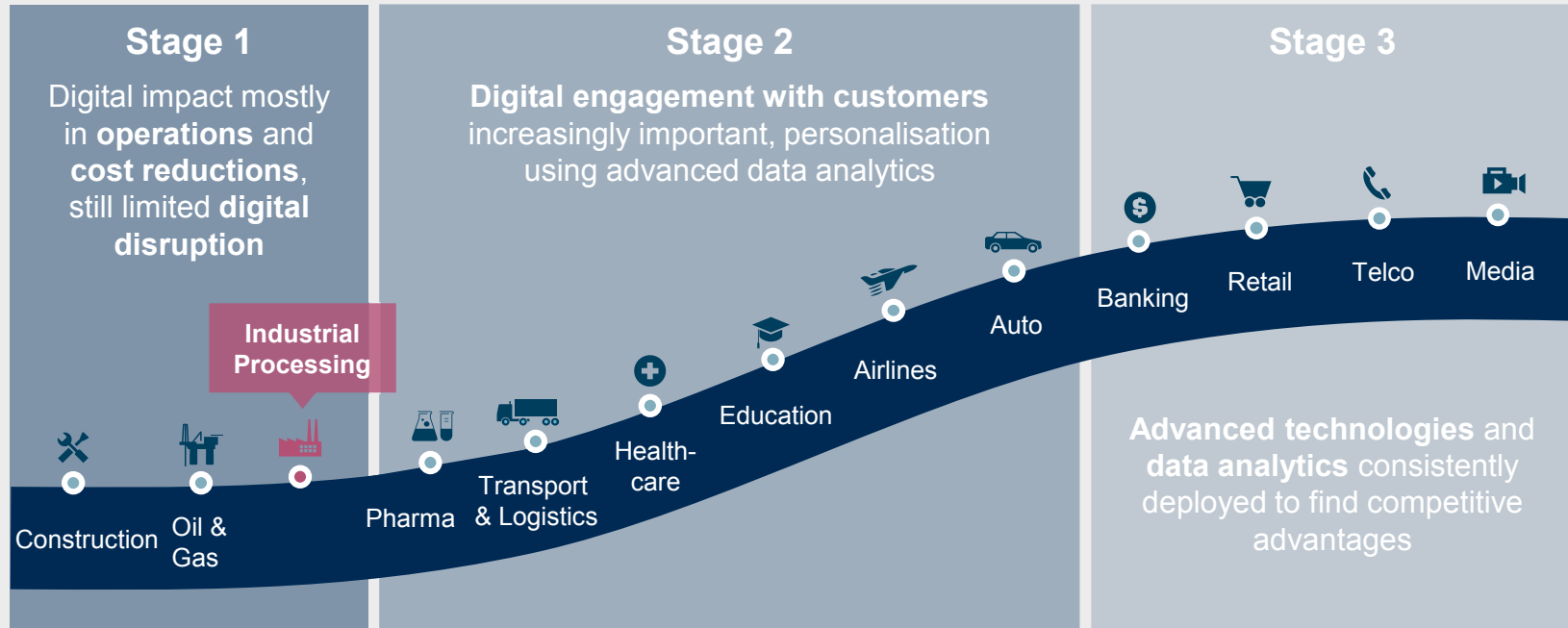


Ecosystem level

Integration upstream and downstream adjusting production to balance supply and demand

Building and orchestrating an **ecosystem**, leveraging **platforms and blockchain**

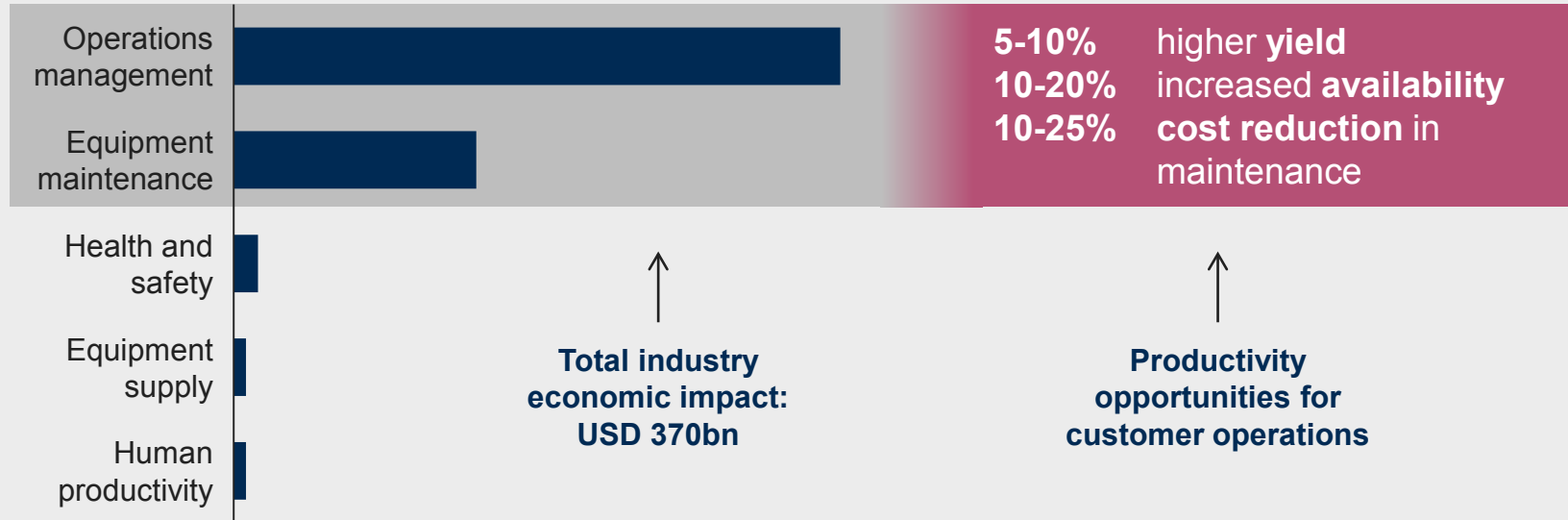
Cement and Mining catch up in digital adoption - many other industries to learn from



Digitalization is a productivity opportunity

Value for our customers

Potential economic impact of sized applications in Mining in 2025 (\$bn)

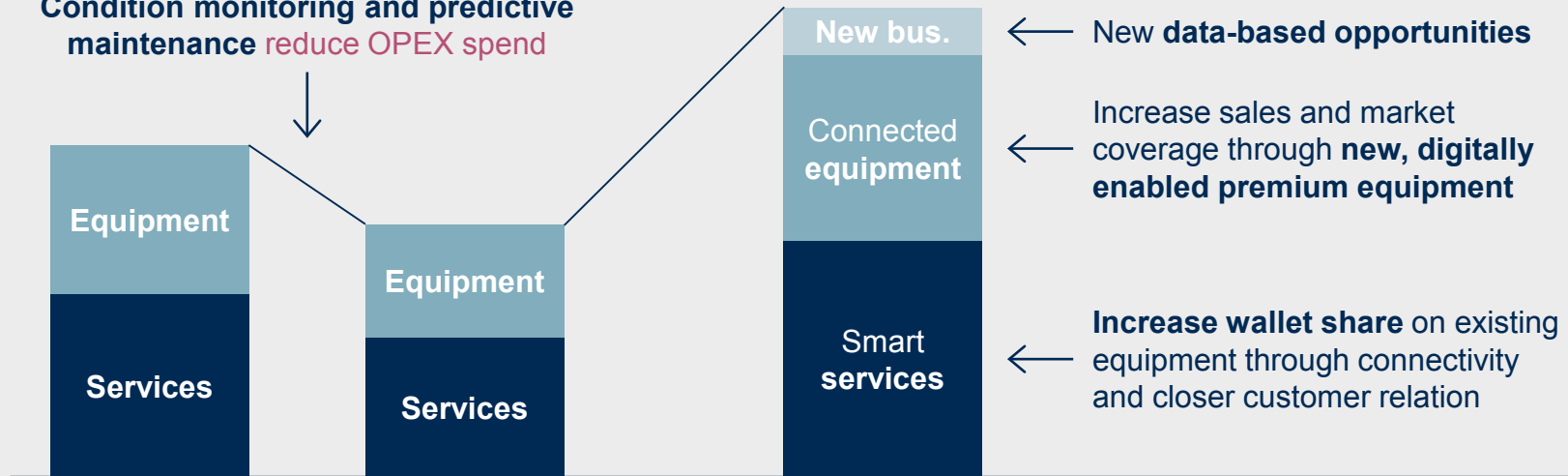


Source: McKinsey

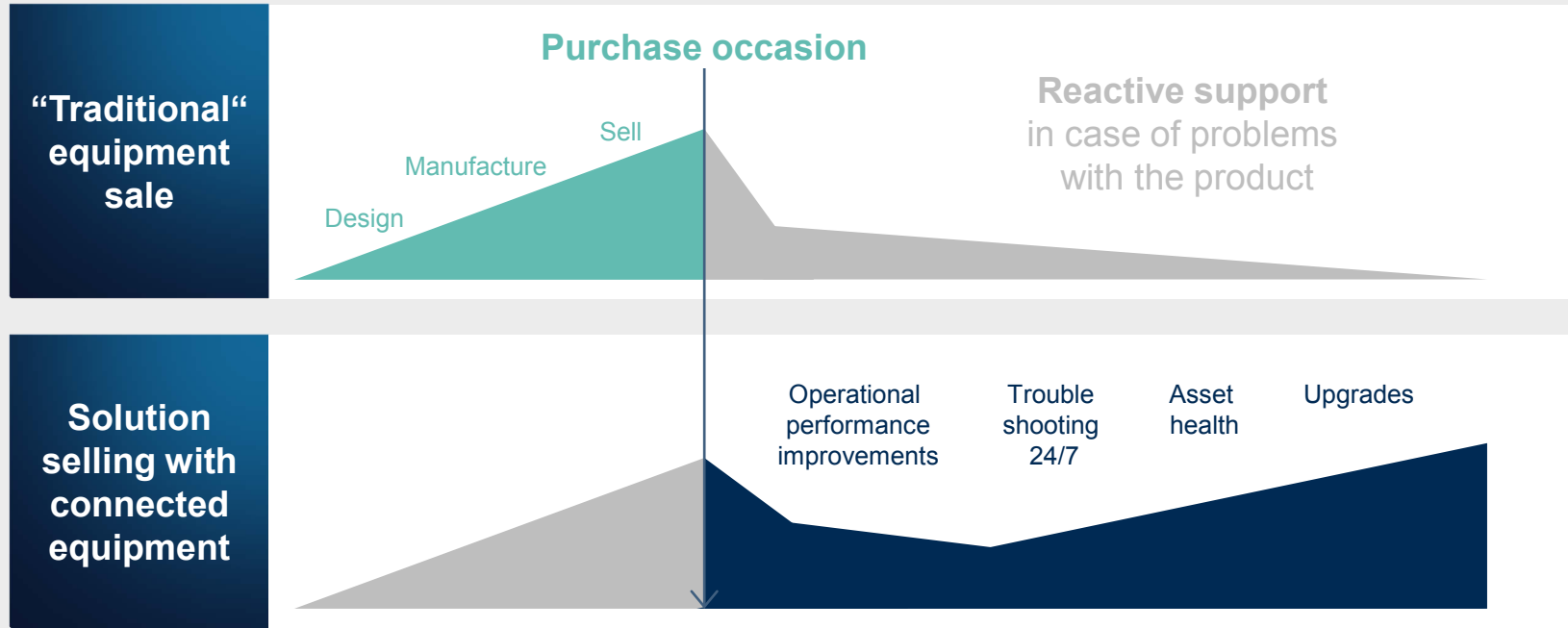
Cannibalisation is a business opportunity

Equipment lasts longer and performs better, reducing CAPEX spend

Condition monitoring and predictive maintenance reduce OPEX spend



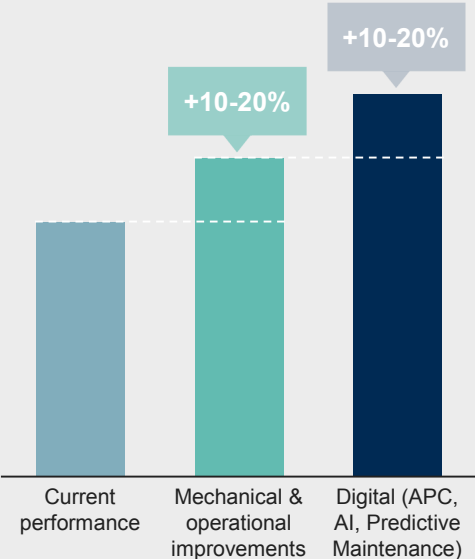
Value creation: previously the product was the end of the user experience – now it is the starting point



FLSmidth's unique position

Combining product, process, service and digital

PRODUCTIVITY
(e.g. throughput)

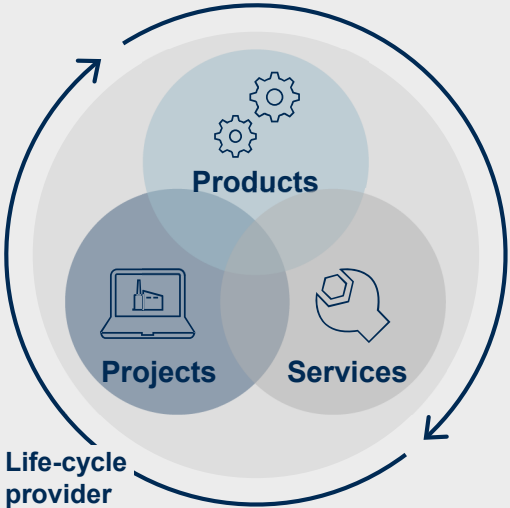


Product, service, process knowledge

Improve maintenance and operational procedures

+ digital and analytical knowledge

Data-driven optimisation and finetuning, implementation through control systems



Example: Flotation optimisation in Mining

Improve recovery & reduce reagents consumption



“Smart Flotation” package

- Improves recovery
- Delivers higher grade product
- Enhances flexibility
- Reduces use of reagents
- Improves control

Economics

- Recovery rate up 3.0%
→ up to DKK 20m revenue increase p.a.
- Reagents consumption reduced by up to 25%

- ✓ **Productivity**
- ✓ **Sustainability**
- ✓ **Service opportunity for FLSmidth**

Example: Fabric Filter optimisation in Cement

Reduce power consumption and increase bag life



EVO II machine control system

- Reduces fan power and compressed air consumption
- Extends filter bag life
- Enables remote filter monitoring and fine-tuning
- Easy to retrofit

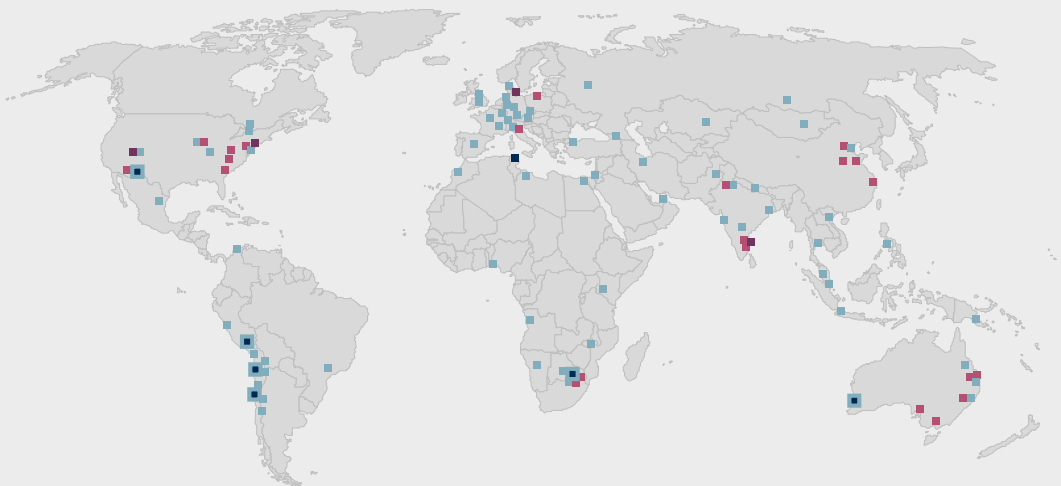
Economics

- 10-15% energy savings¹
- 25% longer bag life
- Bundling with service contracts and filter bags

- ✓ **Productivity**
- ✓ **Sustainability**
- ✓ **Service opportunity for FLSmidth**

1. Energy savings depending on filter size

Number of connected assets grows continuously



Status

- >750 assets connected last 12 months
- >200 plants served with remote monitoring and optimisation service packages

Outlook – next 3 years

- All new equipment is connected
- 25% of installed base retrofitted

Driving innovation in Digital

Access to new technology, talent and capabilities

Partnerships	Partner with market-leading providers of digital technologies and solutions to pilot and scale applications
Intrapreneurship	Identify and incubate new business models based on expertise at the core of our business
Investments	Invest in edge and transformational technology models that will be relevant for FLSmidth in the future



Focus technologies

Artificial Intelligence	Data Analytics
Internet of Things	Blockchain
Sensors & Components	Adv. Materials & Chemicals
Robotic Systems	Resource Productivity

Thank you



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