



The European Association of the Machine Tool Industries

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Manufuture 2017 – Moving up the Value Chain

**THE DIGITISATION OF MANUFACTURING**  
Challenges and opportunities for European  
advanced manufacturing

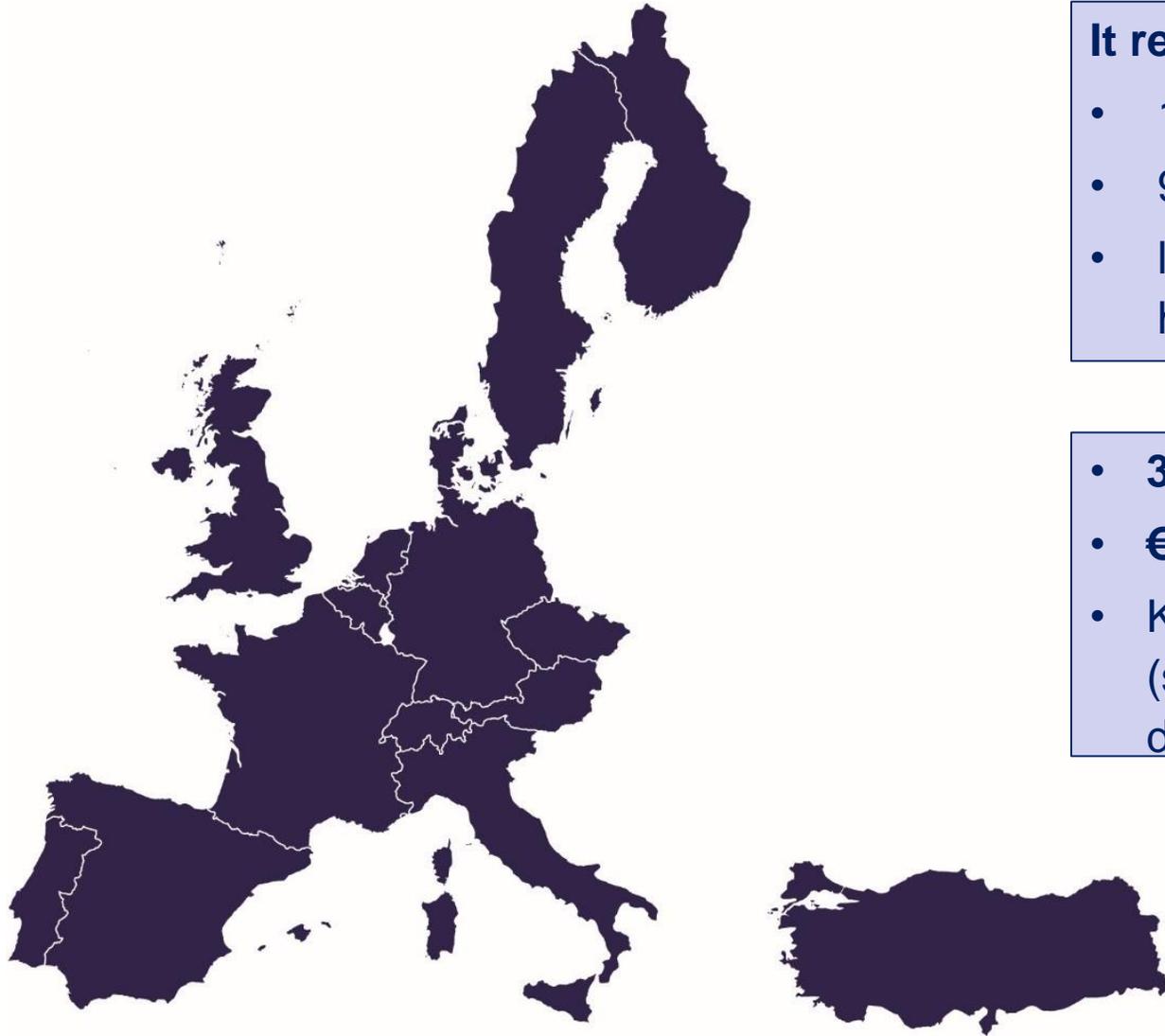
Filip Geerts, Director General, CECIMO

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*" where manufacturing begins"*

# CECIMO, the European Association of the Machine Tool Industries

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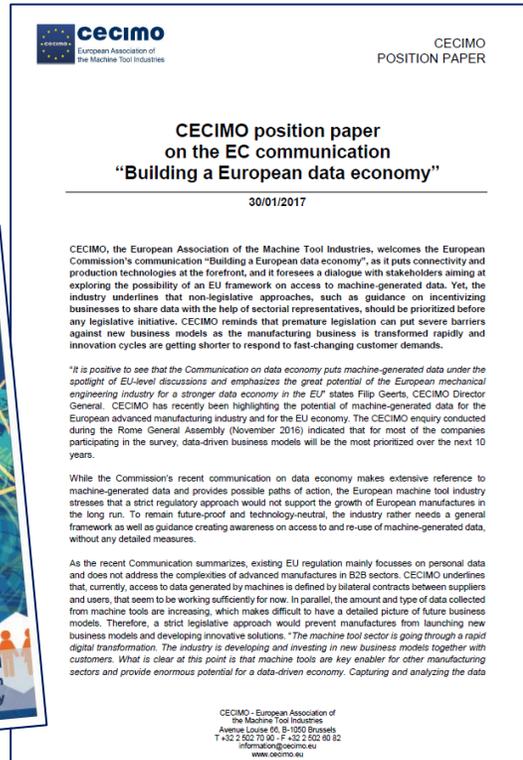
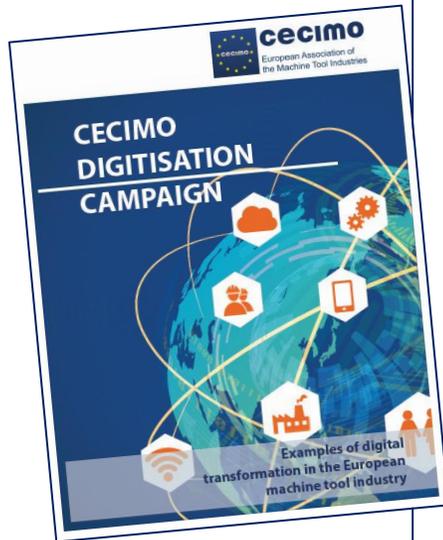


## It represents:

- 15 National Associations
- 98% of the entire European machine tool
- leaders in metal AM machine production & hybrid manufacturing

- **39%** of the MT global production
- **€24.2 bn** of MT sales in 2016
- Key supplier for key manufacturing sectors (such as automotive, aerospace & medical devices)

# CECIMO, the European Association of the Machine Tool Industries



## WHY:

Industry 4.0 is happening **now** in the machine tool sector.

Digitisation and new data-driven business models provide tremendous growth avenues for MT companies. These are opportunities that cannot be missed.

## HOW:

CECIMO launched a large-scale digitisation campaign to promote digital practices in the European MT sector



# CECIMO, the European Association of the Machine Tool Industries

## WHY

There is a need to keep European leadership in segments of the Additive Manufacturing value chain and support the adoption of AM adoption in the European mainstream

## HOW

CECIMO promotes interests of the European AM industry towards govts & the manufacturing community by:



Source: Safran

=> Engaging in ongoing EU-funded projects for the industrialization of AM

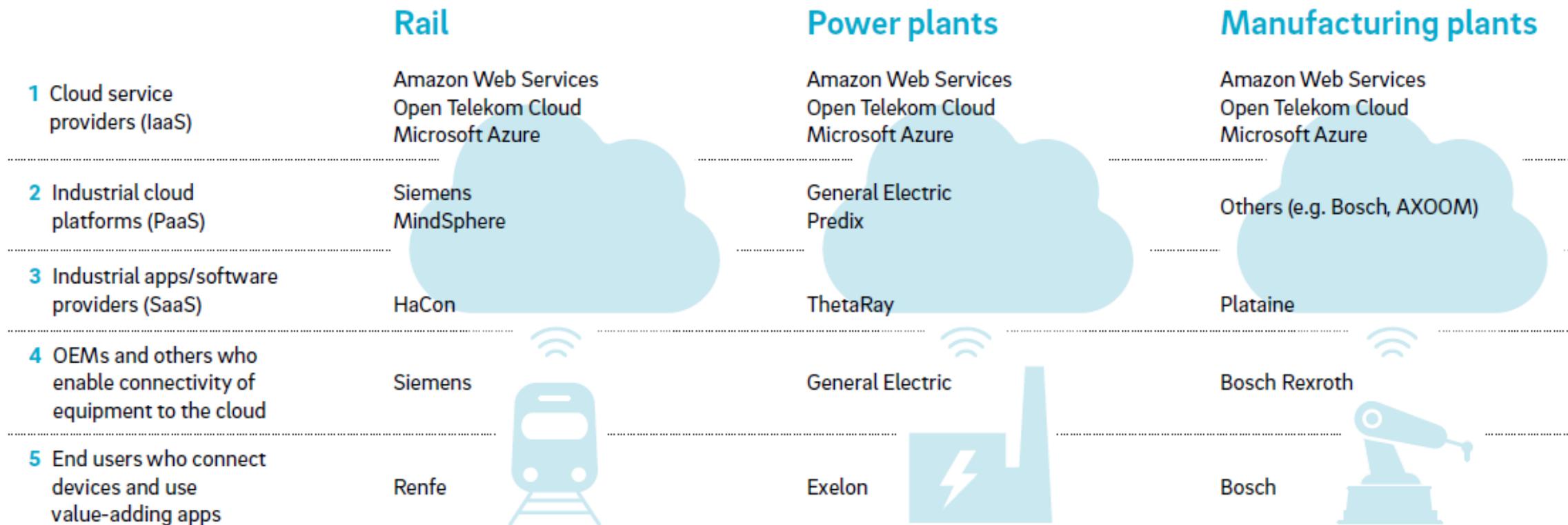


=> Organising +100 attendees conferences & panel debates with key AM players & authorities

=> Advocating AM needs in the EU context



# The emerging IIoT ecosystem



Source: Roland Berger

# Innovation: Shift from incremental to disruptive

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## *Conventional approach*

Producing better capital goods

Added value via hardware

Focus on machine performance

Revenue through one-off asset sale

*Most manufacturers do it; still demanded by users.*

## *State-of-the-art approach*

Understanding better how the capital good is used

Added value via software and services

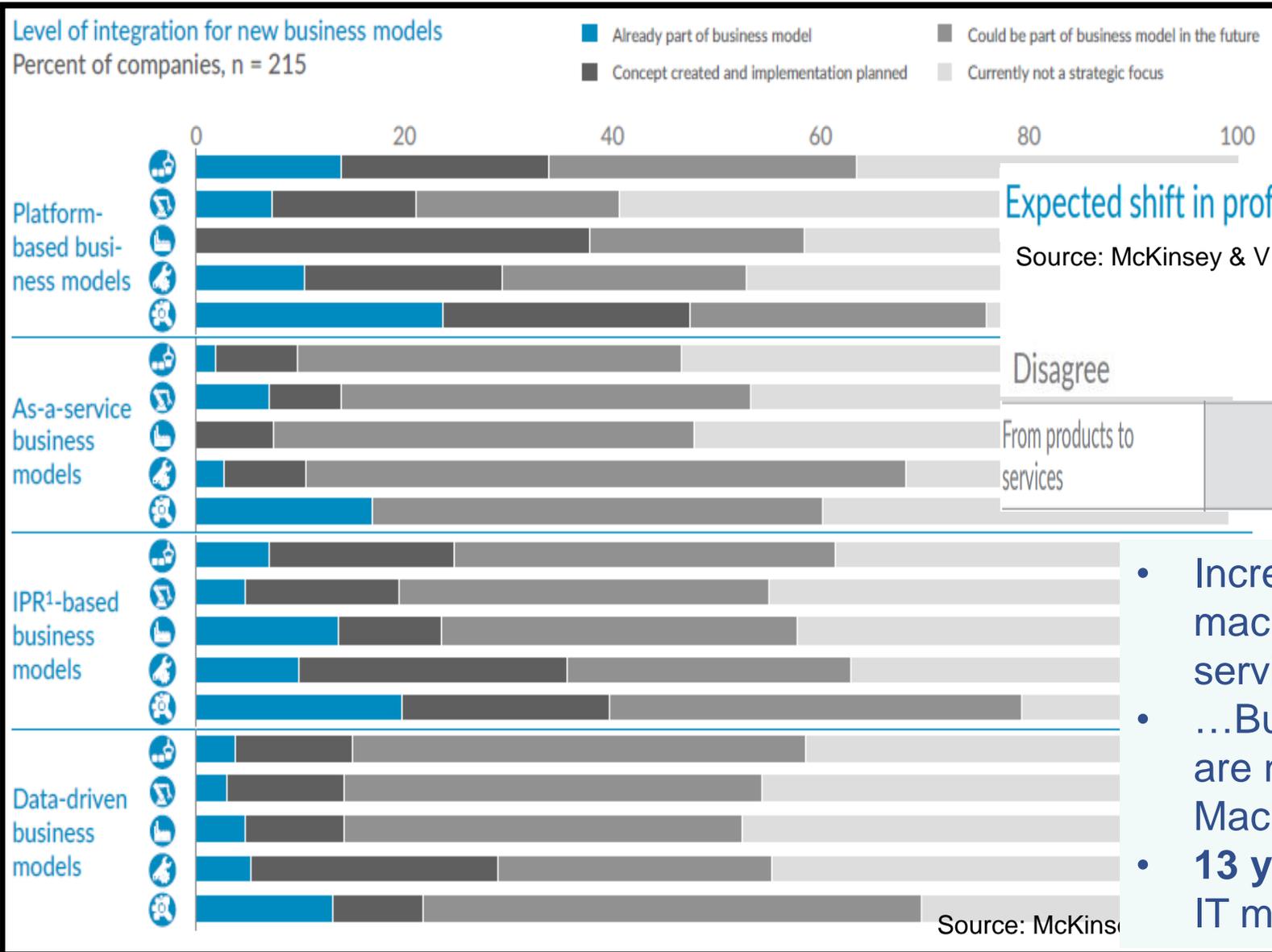
Focus on overall process efficiency and benefits

Constant revenue stream

*Pioneer manufacturers do it; more and more users will demand it.*

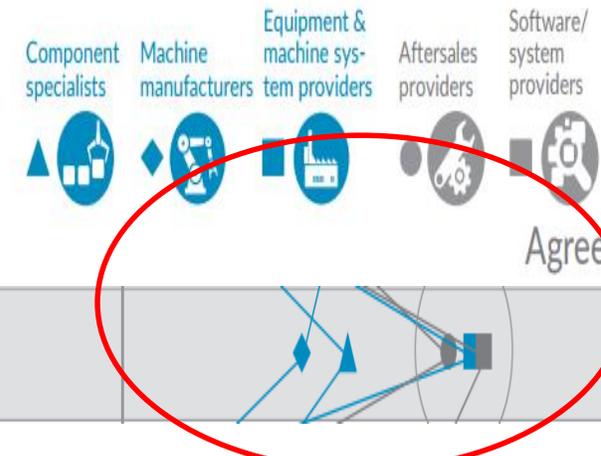


# Digitisation & new business models



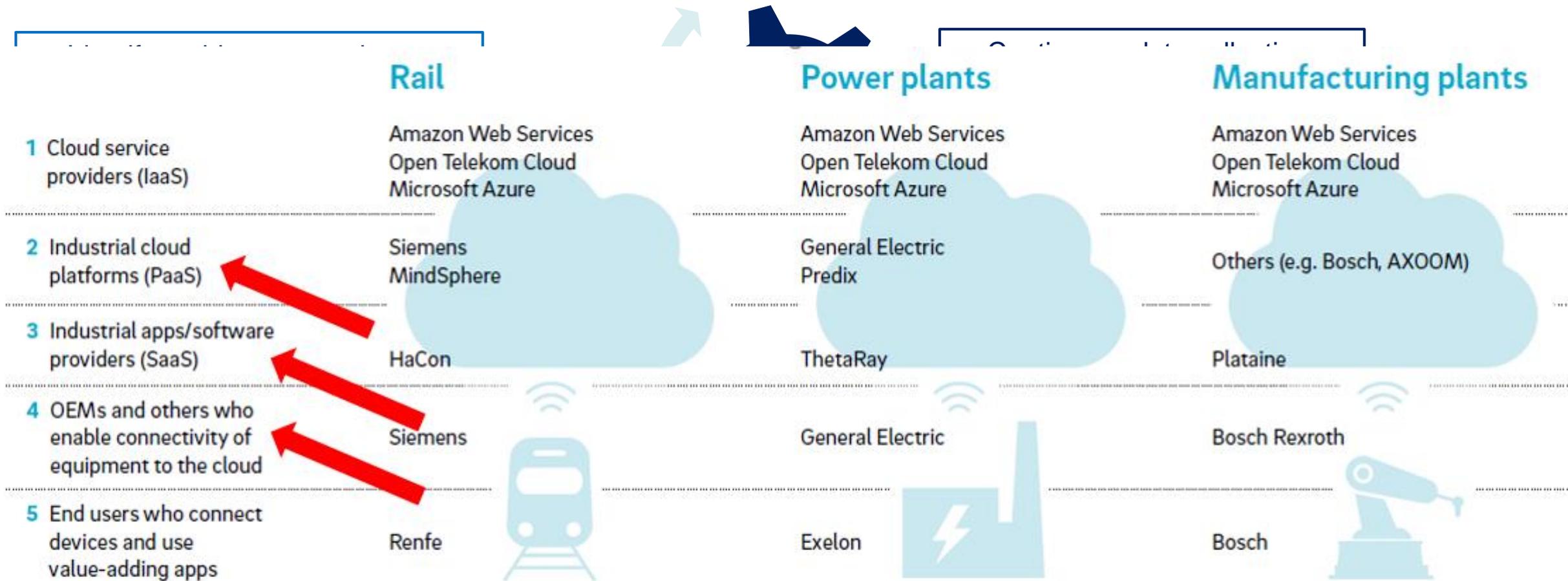
## Expected shift in profit pools, n = 215

Source: McKinsey & VDMA



- Increasing number of connected machines and data exploitation services...
- ...But 64 million factory machines (**92%**) are not network connected - IHS 2014 Machines Survey, PWC 2015
- **13 yrs** is the avg. age of MT installed in IT mechanical industry

# Solutions developed by machine tool builders



Source: Roland Berger

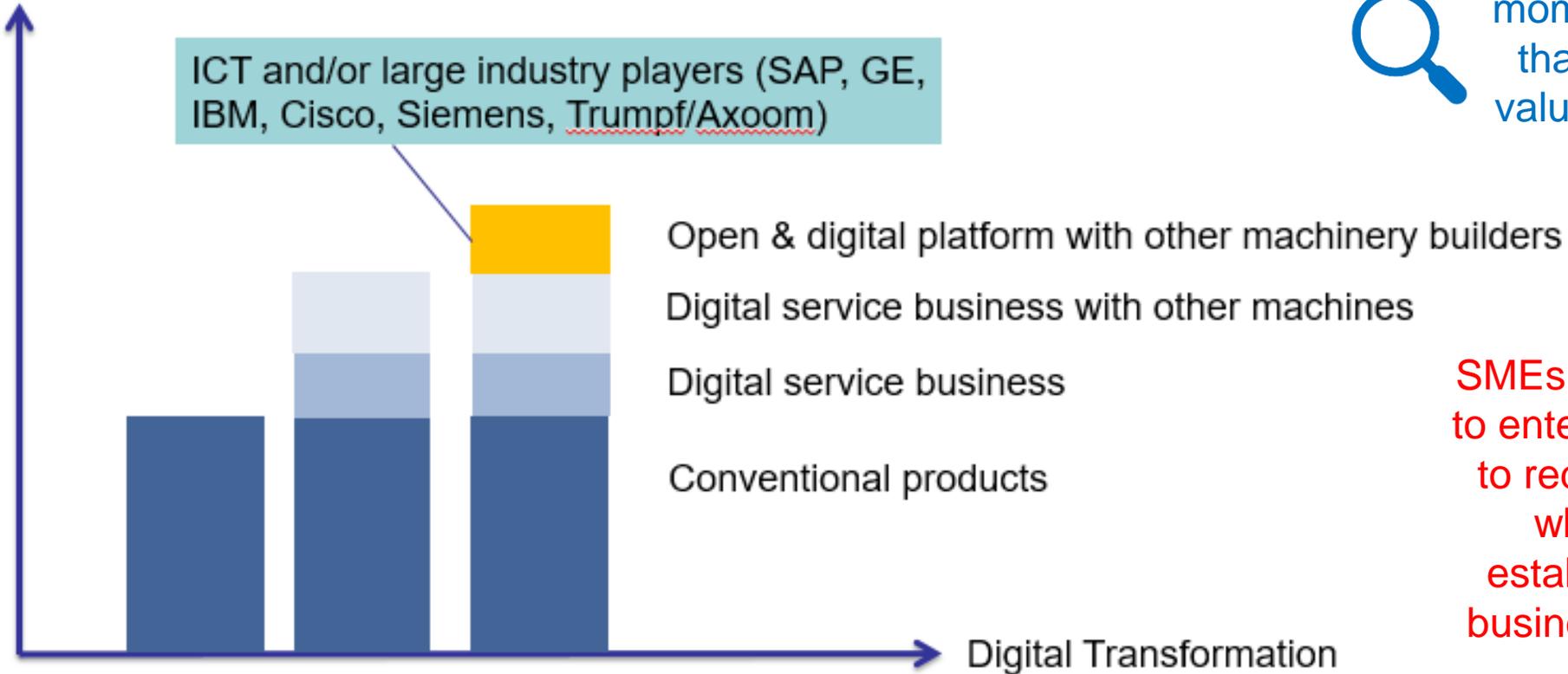
accessible by the operator via app on the spot.

velocity, high-variety data, insights, decision-making & overall process efficiency.



# Catching the digital train

Business model



Few big companies at the moment provide open platforms that connect actors along the value chain; while most of them focus on digital service businesses.

SMEs machine tool firms need to enter the right collaborations to reduce risks of a scenario where new I4.0 actors establish their own bilateral businesses with machine tool industrial users.

Source: Dr. Wieselhuber & Partner GmbH

# Anticipating & responding to changing skill needs

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*Some jobs are disappearing from the EU manufacturing sector...*

Between 2015-2025, future employment growth in the EU manufacturing sector is projected to change for:

- Stationary plant & machine operators by **-5.31%**
- Metal, machinery & related trades **-10.69%**

*Source: Cedefop skills panorama*



*... while others are shifting & emerging because of Industry 4.0:*

- *WHO will generate new added-value from the machine tool?*
- *WHO will push down costs like maintenance and machine state monitoring?*
- *WHO will unleash the power of new technologies like (metal) Additive Manufacturing...*

*....where designers need a completely new thinking and H&S is critical?*

# Recommendations for a forward looking strategy

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- Promoting & incentivizing shorter innovation cycles
- Avoiding premature regulation & remaining future-proof
- Rebuilding close links with finance and manufacturing (e.g. Italian National Plan Industry 4.0)
- Pooling resources at EU level for digitization (fragmented national, regional and European-level Initiatives in the EU for the industry)
- Promote skills-related sectoral cooperation and help modernize education across Europe

# thank you

# questions

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