



**BUSINESS**atOECD

## **Annual Economic Forum 2019**

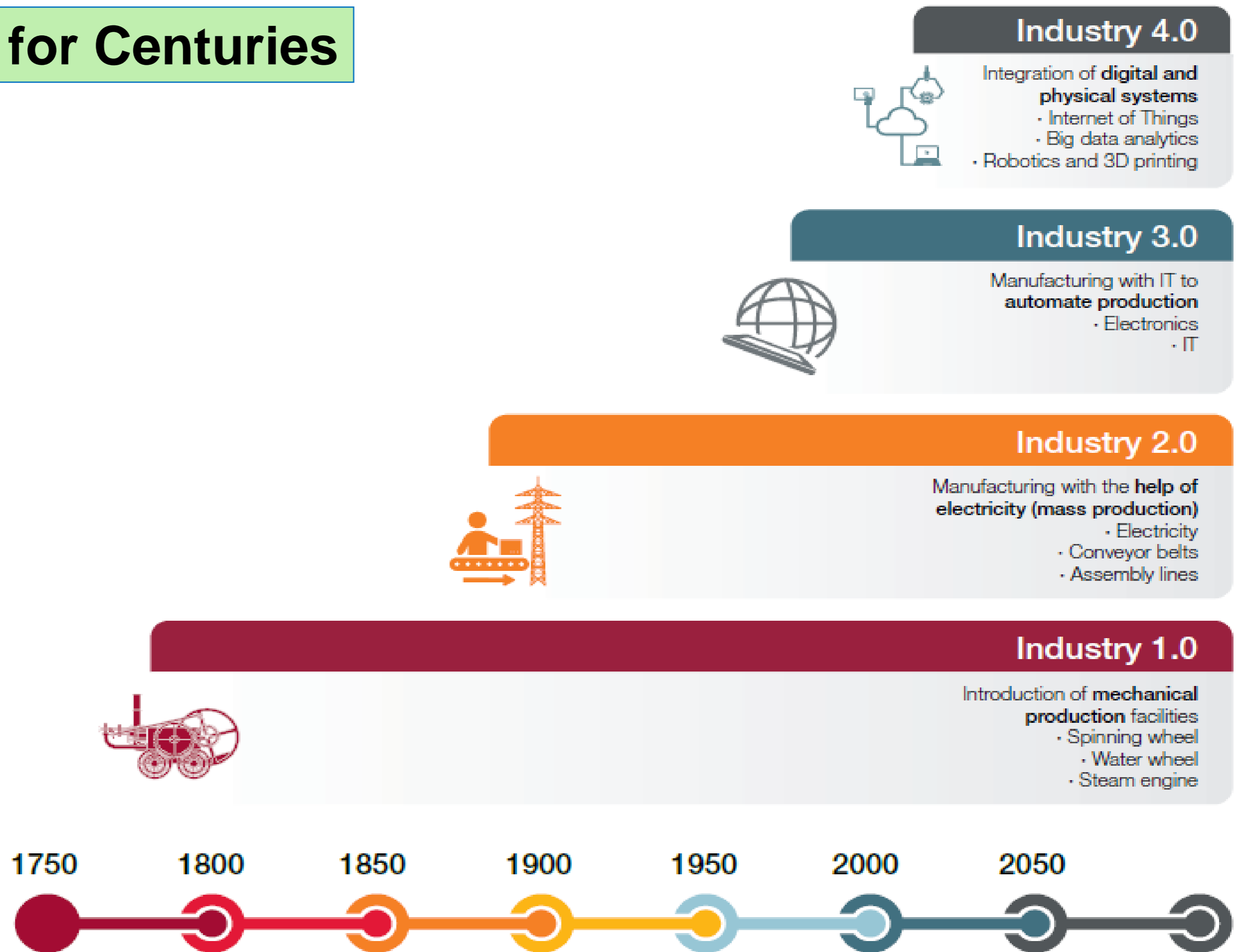
# **INDUSTRY 4.0 DEVELOPMENT TENDENCIES**

**8<sup>TH</sup> October 2019 - Vilnius**

# What is your Vision of a Sustainable Future?



# Industries Adapting for Centuries



# Humans Adapting for Thousands of Centuries



**Adapting never ends**

# How do you plan to make your ..... A FUTURE WINNER?

## Sustainability 101



## Economics 101

1. **Wealth Enables (thriving) Societies**
2. **Businesses Generate (all) Wealth**
3. **Governments (mostly) Distribute Wealth**

**... will you rely on Evidence or Opinions**

# Companies Adapting

Top 10 Companies by market cap - US stock market

Year Position	1980	1990	2000	2010	2018 3 <sup>rd</sup> qt.
1	 \$40B	 \$64B	 \$475B	 \$369B	 \$1,093B
2	 \$35B	 \$64B	 \$302B	 \$296B	 \$975B
3	 \$35B	 \$50B	 \$290B	 \$238B	 \$878B
4	 \$23B	 \$48B	 \$287B	 \$198B	 \$840B
5	 \$22B	 \$42B	 \$275B	 \$195B	 \$528B
6	 \$18B	 \$35B	 \$237B	 \$192B	 \$475B
7	 \$17B	 \$34B	 \$231B	 \$190B	 \$379B
8	 \$17B	 \$34B	 \$229B	 \$184B	 \$371B
9	 \$17B	 \$33B	 \$216B	 \$182B	 \$360B
10	 \$15B	 \$31B	 \$202B	 \$180B	 \$344B

Source: S&P 500

Or NOT

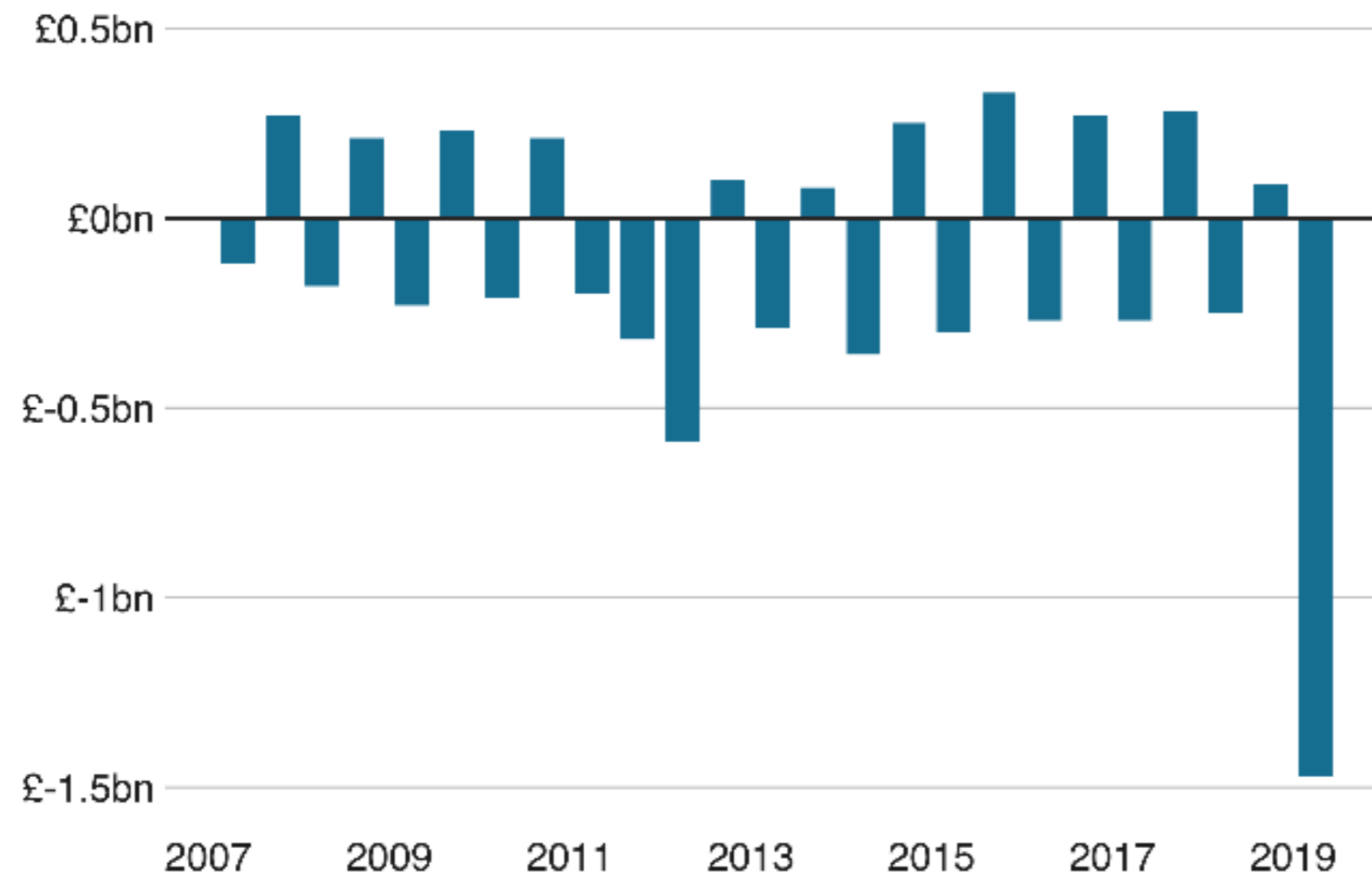
**But are We Adapting Fast enough ?**



# Environmental, Societal and Economic Sustainability ALL Critical

## Thomas Cook profits

Semi-annual net profits/losses since 2007



Source: Thomas Cook

BBC

# In REAL WORLD sustainability essentials have different timelines

## Sustainability 101



**Thomas Cook**  
*Let's go!*

**Need 4 Speed**

**... and the INDUSTRY 4.0 Winners are ....**

- **Adaptability & Learning**
- **Innovation & Effort**
- **Cooperation & Collective Intelligence**

# Leaders Adapt ... by understanding Customers

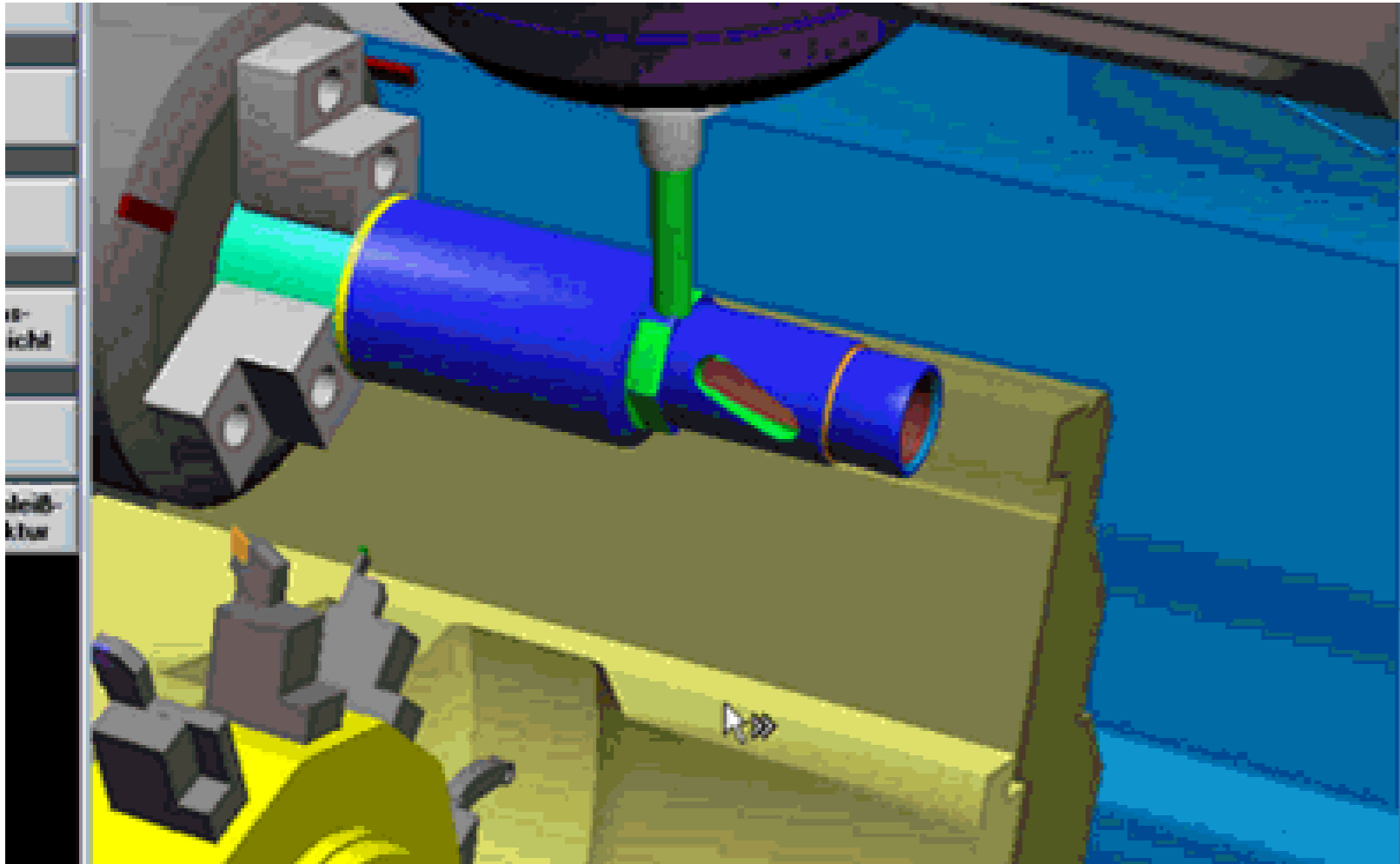


**New business models analysing  
& integrating “Big Data”**



- Enabling predictive/proactive maintenance
- Delivering “power by the hour”
- Paid based on flight hours

# Digitalisation drives Productivity .... enabling Resource Efficiency



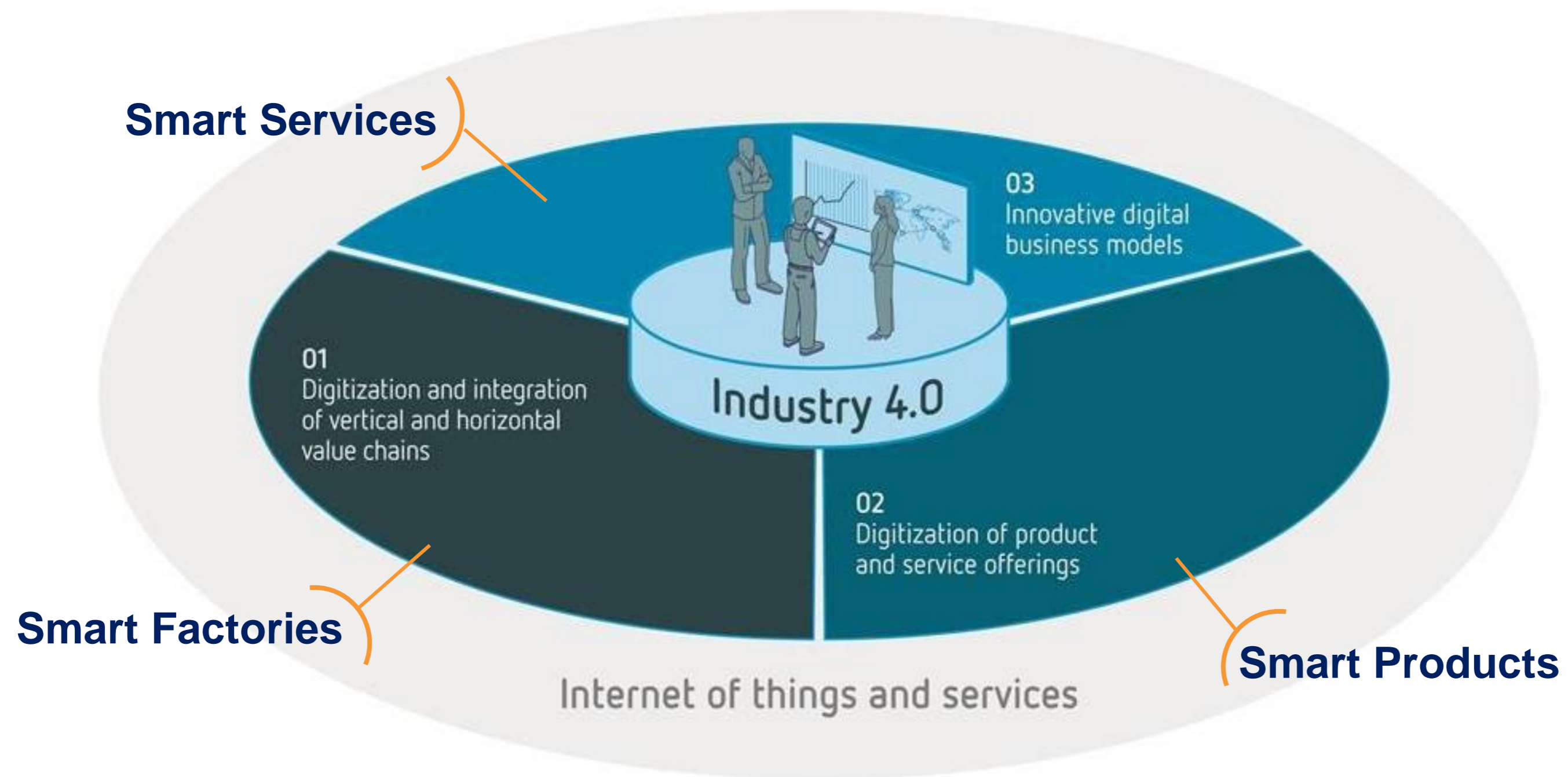
**Digital twin simulates real world manufacturing & production cycles**



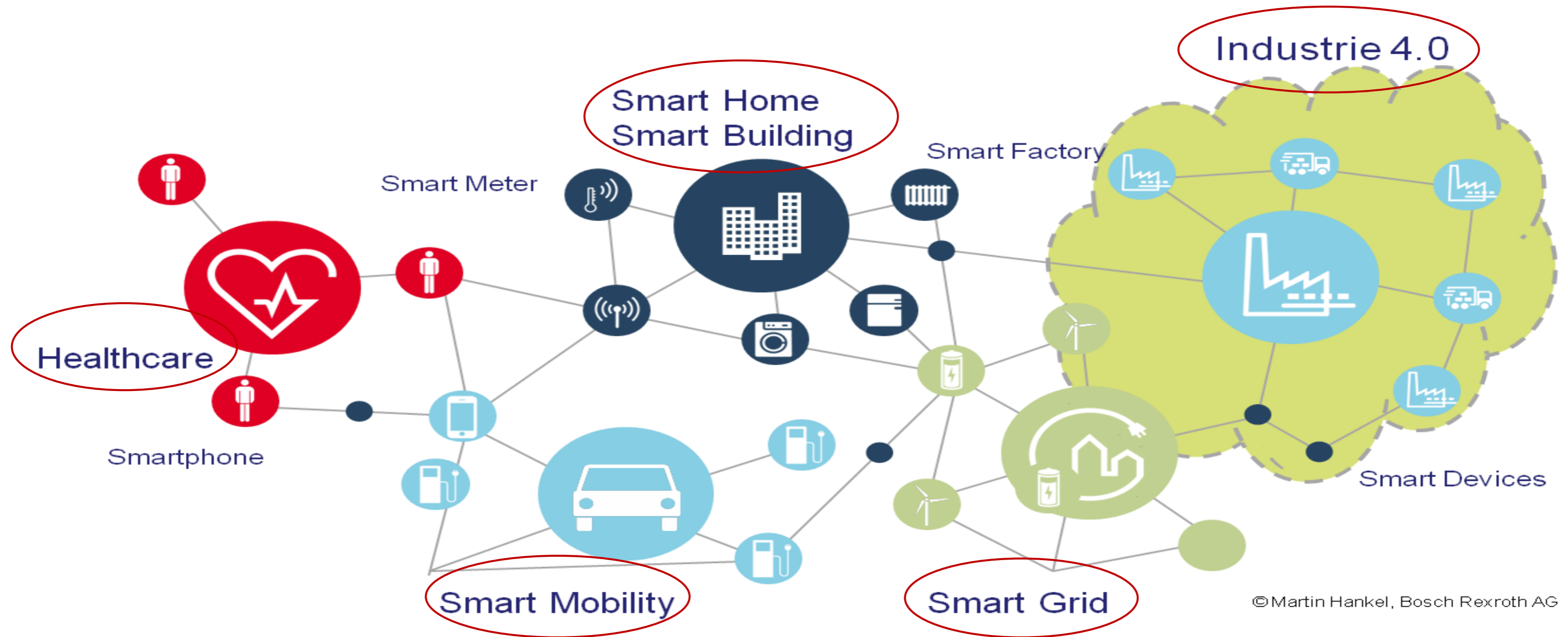
- 10% Productivity Improvements**
- 80% savings in set up time**

*(References: Siemens – Appendix for details)*

# INDUSTRY 4.0 requires multidimensional approaches



# Interconnectivity requires Cooperation



**Collective Intelligence enables Collective Benefits**

# Business models evolve ..... so do societal views / expectations

Kids exploring ancient ruins



1930s Household Job Killing Robot



# What will the societies you live in choose ?

**Outlook for AI by 2030 about + \$16 Trillion globally**

- Data based health
- Autonomous fleets
- Personalised financial planning
- Enhanced digital security



# Future of Life increasingly linked to Future of work

**Successful companies (& countries) recognise**

- Without positive narrative, people most in need won't retrain**
- At current costs even SMEs can/will buy industrial robots**
- Rapid changes but NET job gains (published OECD evidence)**

# Successful companies in successful societies share common views

**Robotisation / Digitalisation  
are tools to help Humans**  
- AI is less “Artificial  
Intelligence” more  
“Augmented Intelligence”

**No one has all the answers.  
Lifelong learning is a cradle to  
grave responsibility. Role of  
business increases as work  
based learning & reskilling  
needs increase.**

**Adaptable / healthy / skilled workforce is  
main competitive advantage for future.  
Training / retraining is first and foremost an  
investment – leading companies are  
investing accordingly.**



**....and again the INDUSTRY 4.0 Winners are PEOPLE that embrace...**

- **Adaptability & Learning**
- **Innovation & Effort**
- **Cooperation & Collective Intelligence**

# Annex: References

- CGI. Industry 4.0, Making your business more competitive, 2019 (slide 3)
- Business at OECD, Dream Big, Princess, Global Photography Series, 2019 (slide 4)
- S&P 500 Companies (slide 6)
- BBC, Thomas Cook collapses as last-ditch rescue talks fail, 2019 (slides 7-9)
- Prof. Dieter Wegener, Siemens Annual Consultation with OECD Ambassadors, Paris, January 15th, 2019 (slides 11-13)
- Martin Hankel, Bosch, Rexroth AG & Prof. Dieter Wegener, Siemens Annual Consultation with OECD Ambassadors, Paris, January 15th, 2019 (slide 14)