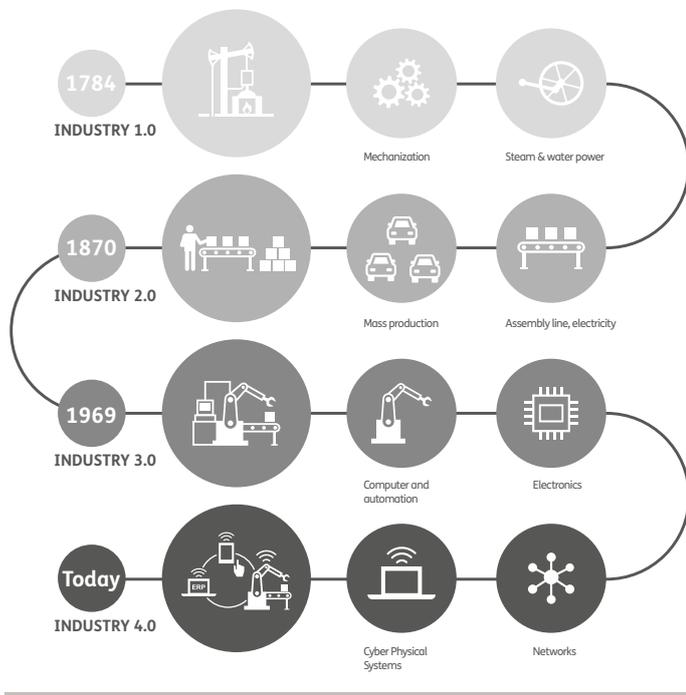


## Industry 4.0

# Industry 4.0 – Revolution in manufacturing and production

The global economy is entering the so-called „post information age“ with technology and information processing power that will sustainably change the industrial sector and leverage hidden potential throughout the entire manufacturing process and any global value chain.

After steam, which had been the power used to drive the manufacturing processes in the first industrial revolution, came electricity which enabled mass production almost independently of the natural environment. In the late 20th century the use of computing power again raised manufacturing capabilities beyond anything known before. Today, decades after the invention of the internet and the first use of e-mail communication, the industrial sector faces the next stage of evolution.



The 4th industrial revolution will be based on the “Internet of Things” (IoT) and boost today’s manufacturing to “Industry 4.0”. Industry 4.0 will contain fully interconnected production processes with autonomous and intelligent communication between suppliers, manufacturers and customers as well as “cyber

physical systems” such as machinery, production plants and even products and resources themselves (Smart Factory). Central to this concept is the fact that any device in production will be interlinked with everything else.

The process of moving on to the Smart Factory will dramatically change today’s way of manufacturing and interaction among the stakeholders of any industrial value chain. The Smart Factory creates enormous value enhancement potential with positive effects on bottom line profitability. According to Bill Ruh, GE vice president of GE Software, “the big money [of industry 4.0] is on two things: Zero unscheduled downtime and resource efficiency”.

## Smart Factory & Risk Management implications

Industry 4.0 with its concept of a Smart Factory indicates significant opportunities for both efficiency gains in established value creation processes as well as for new business models. However, any opportunities are always accompanied by risk. ERGO is following the emergence of the Smart Factory in global manufacturing closely. Over a series of articles ERGO intends to outline main challenges for manufacturers in moving on to the Smart Factory. Each of the below-mentioned articles will take a closer look at both defined opportunities and the corresponding risk implications of the Smart Factory for manufacturers.

- (1) The Smart Factory – Increased vulnerability to cyber-attacks?
- (2) Being connected within Industry 4.0 – Potential for business interruption
- (3) Being connected within Industry 4.0 – Sharing and securing data across the value chain
- (4) The Smart Factory and liability for losses
- (5) The Smart Factory – Implications on workforce in production and management
- (6) Industry 4.0 shaping Insurance 4.0