



1st Industrial Revolution

Introduction of mechanical production with use of steam and water power

2nd Industrial Revolution

With means of electrical energy, the assembly line and mass production were introduced

3rd Industrial Revolution

Automation of production by use of electronic and IT systems

4th Industrial Revolution

Digitalization of the entire value chain by use of cyber physical systems

4 Useful links

- <http://www.plattform-i40.de/I40/Navigation/EN/Home/home.html>
- <http://www.bmwi.de/EN/root.html>
- <https://industrie4.0.gtai.de/INDUSTRIE40/Navigation/EN/industrie-4-0.html>
- https://www.dfki.de/web?set_language=en&cl=en

Industry 4.0 represents the coming 4th Industrial Revolution, which is a paradigm shift from centralized to decentralized production enabled by a combination of production methods with State-of-the-art information communication technologies. In other words, industrial production machinery will become self-managing production processes provided by intelligent and digital network systems. In this regards, the role of Big Data will expand as to provide insight and generate meaningful information to the factory management to assist in decision-making of increased productivity, quality and flexibility within production. Big Data Analytics consist of the 6 C's within Industry 4.0. Industry 4.0 connects embedded system production technologies and smart production processes to enter a new technological age that will transform industry and production value chains, business models radically.

The 6 C's within Industry 4.0

- 1) Connection; sensors and networks
- 2) Cloud; computing and on-demand
- 3) Cyber; model and memory
- 4) Content/Context; meaning and correlation
- 5) Community; sharing and collaboration
- 6) Customization; personalization and value

“Plattform Industrie 4.0”

The initiative, Plattform Industrie 4.0, is a follow-on and support of the Federal Government's “Action Plan High-tech Strategy 2020”. The platform aims to develop recommendations for all stakeholders and initiates alliances and networks to support the evolution of the entrepreneurial skills in Germany. Thus, identify relevant trends and developments in the manufacturing sector as well as diffuse a common understanding of Industry 4.0.