

The Fourth Industrial Revolution

Industry 4.0

Big data in manufacturing and the Internet of Things (IoT) are happening NOW

From innovations in additive manufacturing to horizontal/vertical migrations, Industry 4.0 is transforming the world around us.

1

Mechanization, water power, steam power

2

Mass production, assembly line, electricity

3

Computer and automation

4

Cyber physical systems

Background



First Industrial Revolution: Steam Engines & Mechanized Production



Third Industrial Revolution: The Age of Digital



Second Industrial Revolution: Mass Production, Electricity, and Fossil Fuels



Fourth Industrial Revolution: Computerization & Connections within Manufacturing

The Internet of Things

Has to do with all things connected via the Internet

35%

of U.S. manufacturers are using data generated by smart sensors to enhance operation processes

34%

believe it is extremely critical that U.S. manufacturers adopt an IoT strategy in their operations

38%

currently embed sensors in products that enable end-users/customers to collect sensor-generated data

Companies Adopting IoT



Dell EMC now produces a wide variety of computer and networked storage data platforms

In 2015, Dell Inc. acquired EMC, and EMC had acquired Data Domain, who is at the forefront of IoT



BIGASS
FANS

Haiku fans use SenseMe smart technology
Programmed to work with a NEST thermostat

Won CES Best of Innovation Award and 2015 ENERGY STAR Most Efficient

What's Next?

To rebuild a manufacturing base in America, it is essential to move towards advanced manufacturing in robots, automation, IoT and other computerization on the shop floor



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