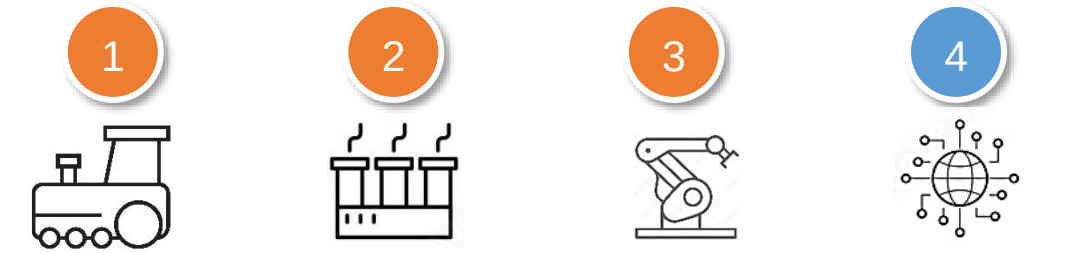
A BEGINNER'S GUIDE TO INDUSTRY 4.0 AND IIoT

Industry 4.0 refers to the fourth **industrial revolution**



Mechanization[1] Technological[2] Computerization[3] Digitalization[4]

Products and the means of production are **digitized** and can 'communicate', enabling new ways of production and real-time optimization.

Enables autonomous **decision-making** processes, remote **asset and process monitoring**, end-to-end **information streams**, and real-time **value creation** (the process of turning labor & resources into something that meets the needs of others).

[1] Steam engines, water/steam power, new manufacturing, iron production, textile industry, mining & metallurgy, machine tools, steam factories
[2] Electrification, production line, mass production, globalization, engines/turbines, broad adoption of telegraph, gas & water supply
[3] Computer/Internet, digital manufacturing, robotics, informational technology (IT) & operational technology (OT), automation, electronic/digital, networks, digital machines
[4] Convergence of IT and OT, autonomous machines, advanced robotics, big data/analytics, IOT, cloud-based, Smart factories, machine learning, artificial intelligence

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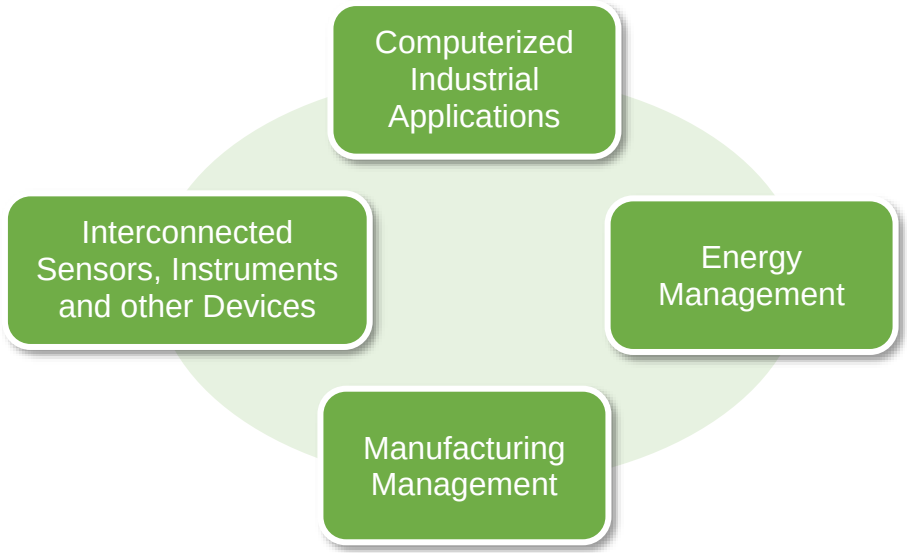
Industrial Internet of Things (**IIoT**)

Machines + Computers + People

Using **advanced data analytics** to intelligently respond (including changing a course of action) based on information received through established feedback loops.

As a part of Industry 4.0, it's a technology based on using **networked** and **connected** devices to increase automation and refine & optimize process controls.

Allows for data **collection**, **exchange**, and **analysis** in real time.



[5] Technologies such as cyber-physical systems (CPS), cloud computing (no direct connection to a server needed) plus edge computing (a decentralized system of data processing, cybersecurity, mobile technologies, machine-to-machine, additive manufacturing (3D printing), advanced robotics, big data (large and varied data sets), artificial intelligence (AI) - intelligent machines created to react like humans, and machine learning (ML) - software that accurately predicts outcomes that were not explicitly programmed.