

AUTOMATION

"Automation is a term for technology applications where human input is minimized."

- Types of Automation

- Basic Automation:**
1. Takes simple, rudimentary tasks & automate them
 2. Is about digitalizing work by using tools to streamline & centralize routine
 - ↳ e.g. using a shared message system instead of having info in disconnected silos
- E.g. Business process management (BPM)
Robotic Process Automation (RPA)

- Process Automation:**
1. Manages Business Processes for uniformity & transparency
 2. Typically handled by dedicated software & business apps
 3. Can increase productivity & efficiency within business
 4. Can deliver new insights into business challenges & suggest solutions
- E.g. Process Mining
Workflow Automation

- Integration Automation:**
1. Where machines can mimic human tasks & repeat the actions once humans define the machine rules
- E.g. Digital Work
 - ↳ software robots that are trained to work with humans
 - to perform specific tasks
 - ↳ have a specific set of skills
 - ↳ can be "hired" to work on teams

- Artificial Intelligence (AI) Automation:**
1. Machines can learn & make decisions based on past situations they have encountered & analyzed
- E.g. Virtual Assistants in Customer Service
 - ↳ can reduce costs while empowering both customers & human agents
 - ↳ creates an optimal customer service experience

- Potential Benefits of Automation

Content Management: Capture, Store, Activate, Analyze & Automate Business Content

Document Processing: Combine AI & Deep Learning to streamline the processing of business documents

Document Management: Capture, Track & Store info from digital documents

Workflow Automation: Uses rules-based logic to perform tasks with limited to no human interaction

Decision Management: Model, manage & automate business decisions through machine learning

Process Mapping: Can improve operations by identifying bottlenecks & enabling cross-organizational collaboration

- Automation Trends

"The modern era of workflow automation began in 2005 with the introduction of BPM."

"With the release of Apple's Siri in 2011, the trend was to move away from physical robots to automation software"

Machine Learning & Workflow:

- Triggering new processes
- Rerouting running processes
- Making Action Recommendations

Hyperautomation:

- Merging of Machine Learning, software & automation tools
- Maximize the number of automation process

Intelligent Automation:

- Automate Robot configurations
- Use predictive & probabilistic processing to learn & interact

Intelligent Industrial Robots:

- Robots will perform multiple tasks, make decisions, & work autonomously, inc.
- self - diagnostics & maintenance

Low - code or no-code workflow:

- Workflow software requiring minimal or no coding will be a priority to make process automation accessible to the organization

- AI & Machine Learning in Automation

Automation:

- Encompasses everything activities both mundane & business - critical
- Basic automation is programmed to perform a repetitive task so humans do not have to

AI:

- Is programmed with logic & rules to mimic human decision making
- Can be used to detect threats (e.g. changes in user behavior or increased data transfers)

Machine Learning:

- Uses data & experiences to learn without additional programming
- Offers more sophisticated and informed insights with each new dataset