SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+'
Grade Approved by AICTE, New Delhi & Affiliated to Anna University,
Chennai

DEPARTMENT OF AEROSPACE ENGINEERING

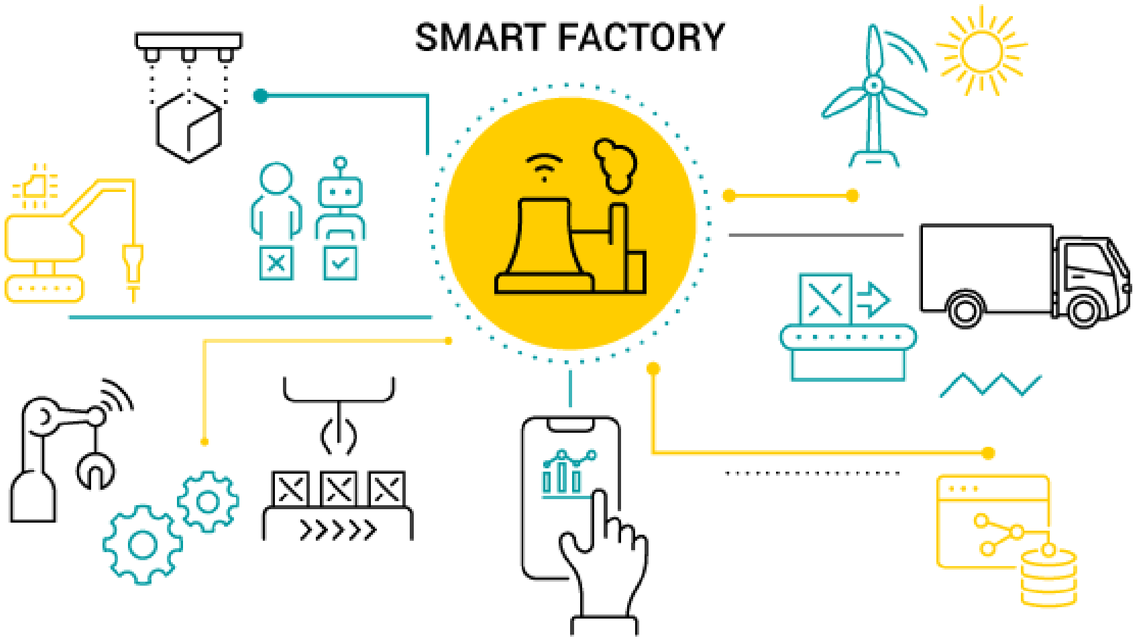
19ASZ301– ROBOTICS & AUTOMATION IN SPACE

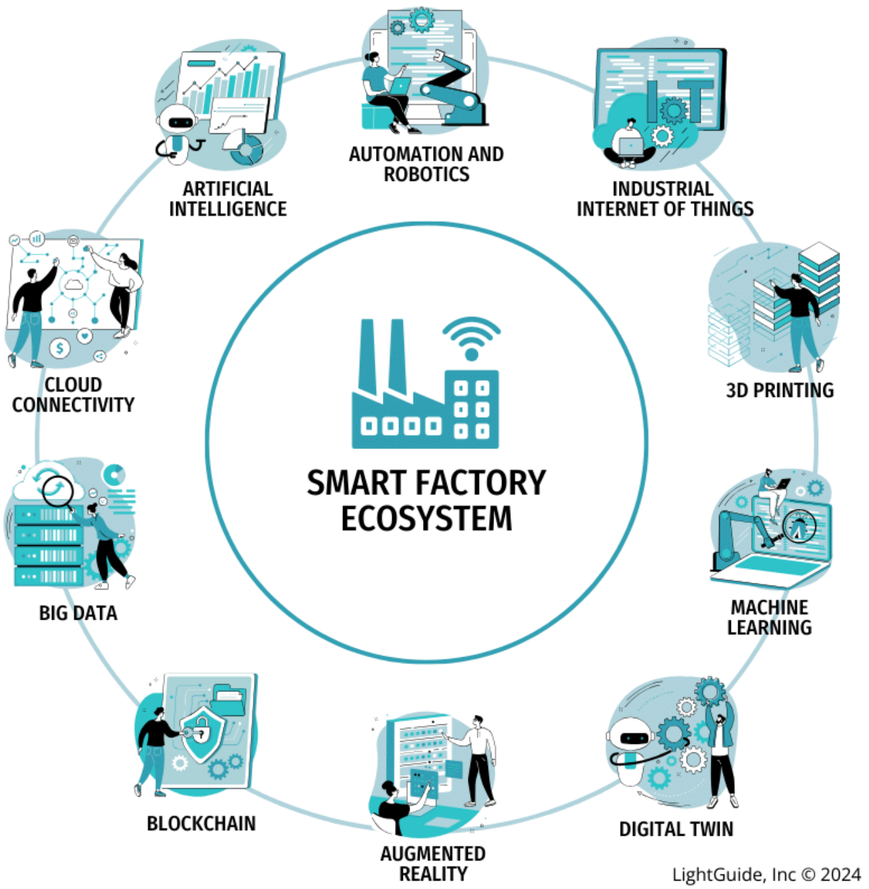
III YEAR VI SEM

UNIT 1 –INTRODUCTION TO AUTOMATION

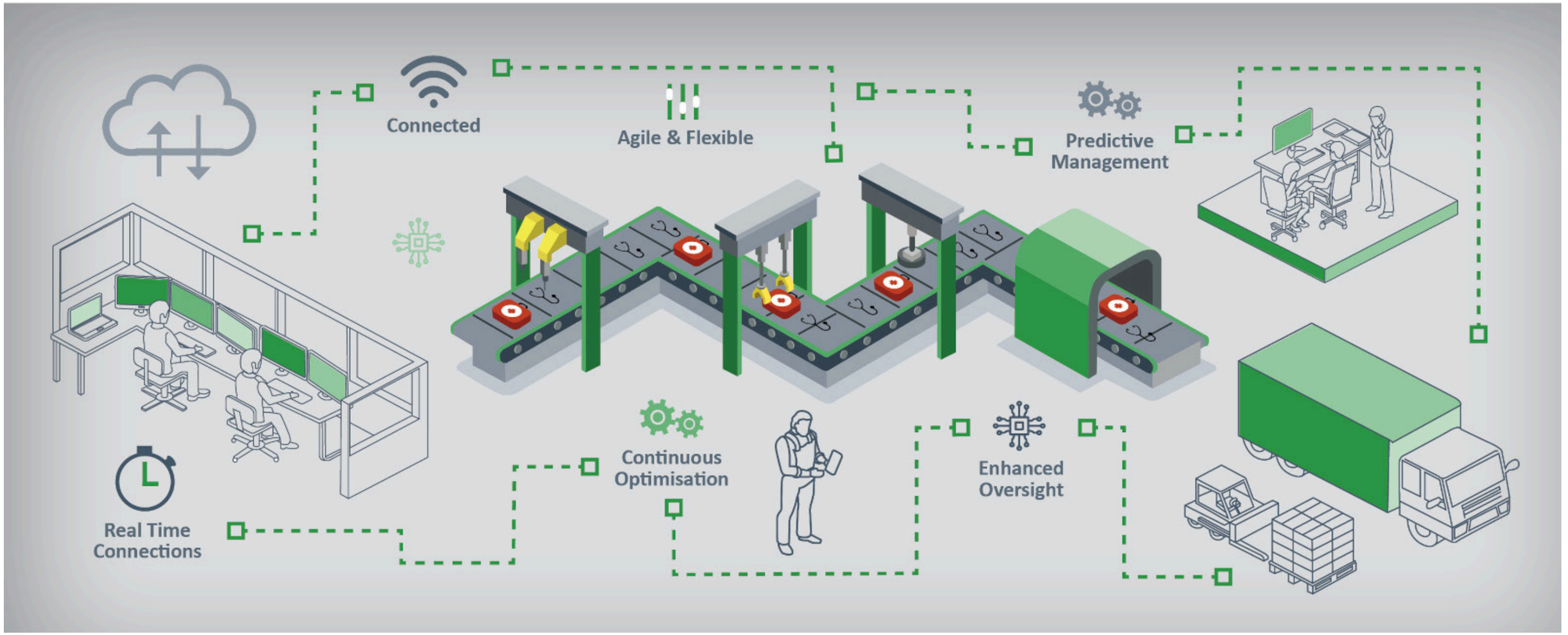
TOPIC - FACTORY & MANUFACTURING AUTOMATION

FACTORY AUTOMATION





SMART FACTORY



FACTORY VS MANUFACTURING

1. Factory Automation

✅ **Definition:**

Factory automation refers to the automation of entire factory systems, including production lines, material handling, inventory, environmental controls, and energy management.

🧠 **Focus Areas:**

- Centralized monitoring & control (SCADA, DCS)
- Automated logistics (AGVs, conveyor systems)
- Building automation (HVAC, lighting, safety)
- Integration with ERP/MES systems
- Plant-wide energy and maintenance management

Aspect	Factory Automation	Manufacturing Automation
Scope	Whole factory systems	Production/assembly processes
Focus	Logistics, building systems, integration	Machinery, production steps
Technologies	SCADA, AGVs, IoT, MES	CNC, PLC, robotics, sensors
Goal	Optimize plant-wide operations	Automate and improve product manufacturing
Example System	Smart inventory system	Robotic welding line

Thank You