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Robotics: Introduction

Area 2 – Technologies

Lesson 7 – Robotics

Sequence ID – 23a

CSIC





DISCLAIMER

A2.L7.T1a Robotics: Introduction

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Image: NEWMAN Technology INC.



SPARKLE

Images: Nao (Aldebaran Robotics), Terminator (movie), "I, Robot" (movie)

What is Robotics - Definition

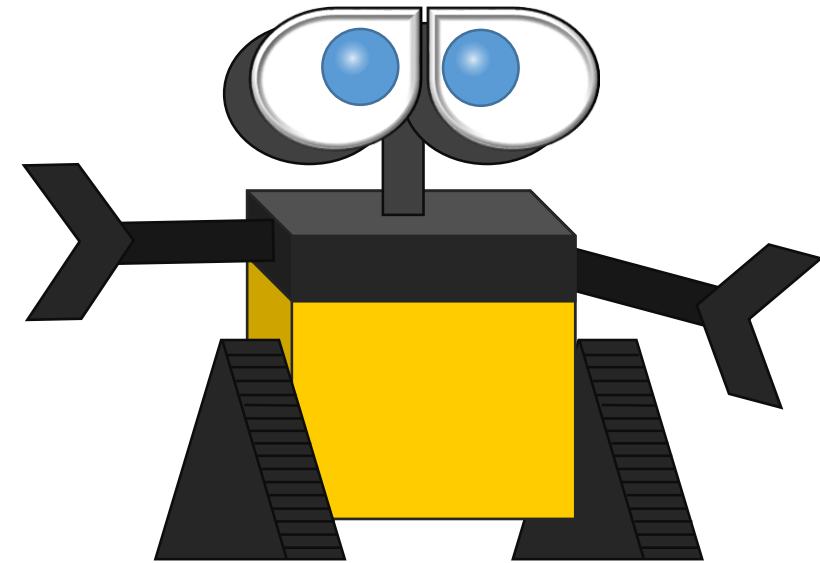


robot noun

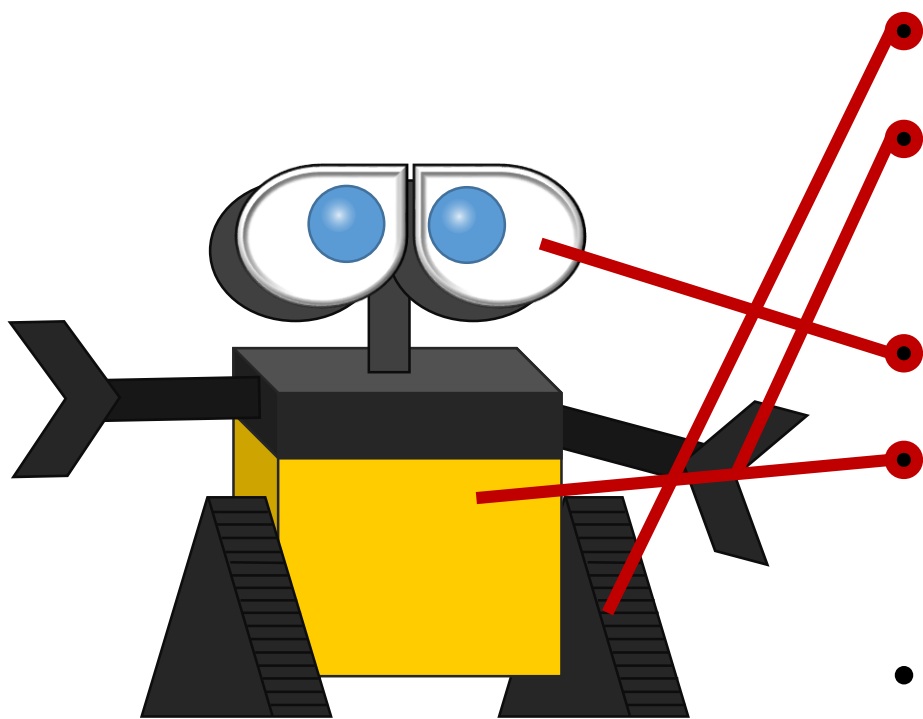
ro·bot | \ 'rō- , bät, -bət\
plural robots

1. A machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer.

- A machine:
 - “~~black~~ box”
yellow
- Carry out actions:
 - Actuate
- Automatically:
 - Makes own decisions
- Programmable:
 - Changeable behaviour (Software)



What is Robotics - Needs



Mobility

→ Topic 23b

Manipulation

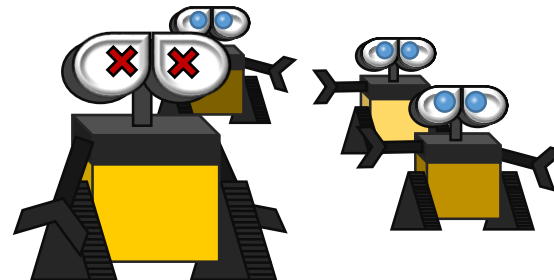
→ Topic 24

Sensing

Decision Making

• Fleets/Redundancy

→ Topic 25



Why use Robots in **SPA**?

And why is it so difficult?



SUSTAINABLE **P**RECISION **A**GRICULTURE

- Reduce Waste
- Non-depleting
- Return on Investment
- Single plant care
- Precise
 - Dose
 - Position
 - Time
- In the field
- Growing Plants
- Changing conditions



Robotic Action Plan



SENSING

DECISION MAKING

ACTING

