Unit 2 · Enabling technologies

In Unit 1 you drew the X-ray of your company: its offices (IT), its physical operation (OT) and the pipes between them. Now comes the fun part of any city-builder game: the **tech tree**. Every upgrade you unlock (sensors on the water pipes, a control room, robots in the depot, a 3D model of the whole city) makes something possible that was impossible before. In this unit you meet the eleven upgrades that matter most today, see what each one is good for, and decide which ones your company should unlock first.

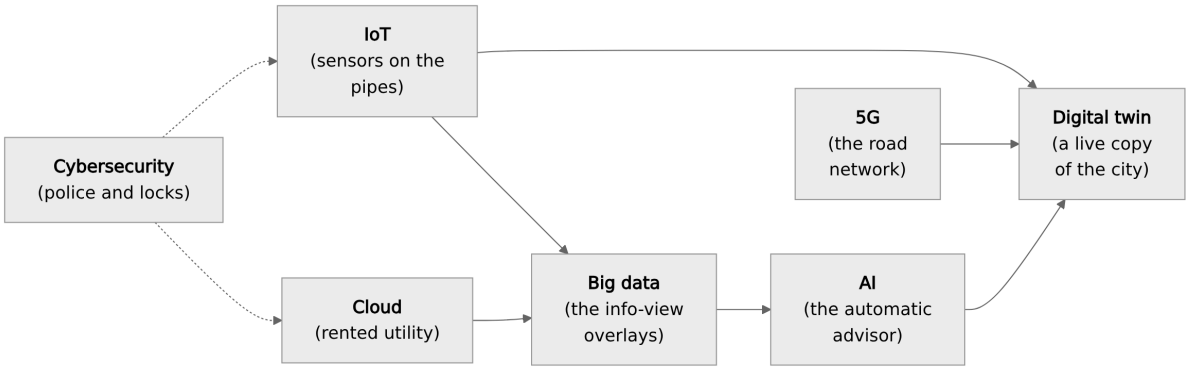
What you will learn

- Name the eleven **enabling technologies** of the unit and say in one sentence what each one does
- Tell a **characteristic** (what a technology is like) from an **application area** (where and for what it is used)
- Find a real deployment of a technology, ideally in the Balearic Islands, and cite it properly
- Explain how these technologies change products and services and create **new markets**
- Weigh their benefits and costs for a **sustainable** economy, and place each one in the business side, the plant side or both
- Write the **technology report** of your company: Deliverable 2 of the course project

The arrows are prerequisites, as in a real tech tree: a digital twin needs live data, and live data need sensors and a network. Cybersecurity protects every node.

Lessons

#	Lesson	What it covers
1	Enabling technologies I	IoT, cloud, big data, AI and cybersecurity; follow a real sensor
2	Enabling technologies II	Blockchain, robotics, additive manufacturing, AR/VR, 5G and digital twins; read real spec sheets



#	Lesson	What it covers
3	Products, services and markets	Connected products, servitisation, business models and new markets
4	Sustainability, business and plant	The two faces of sustainability, business vs plant, IT and OT improvements; measure a footprint
5	Writing the technology report	Search, evaluate and cite sources; the structure of the report
6	Deliverable 2 · Technology report	What you hand in, who writes what, how it is assessed, the defence