Writing the technology report

Imagine you are the manager of your company and two reports land on your desk. Both say "we should install smart sensors on the water network". The first one says it because "it is the future". The second one says it because the company lost a known amount of water last year (link to its annual report), because EMAYA did something similar in Palma (link to the news), and because a sensor of that type costs a given amount (link to the manufacturer). Which one do you believe?

The second one, obviously. Not because it is longer, but because you can **check** it. That is the whole difference between an opinion and a report. This page is about the craft of the second kind: finding sources, deciding whether to trust them, citing them, and putting four people's work together into one document that reads as if one person wrote it.

What you will learn

- Search the web with **search operators** to find primary sources quickly
- Evaluate a source with the **SIFT** method and **lateral reading**, and tell a **primary source** from a secondary one
- Separate **facts** (with a source) from **hypotheses** (your reasoned guesses), and label each one
- Cite web sources in **APA style**, in the text and in the list of sources
- Know the structure of Deliverable 2 and how the group turns four sections into one report
- Avoid the trap: "I found it on Google" is not a source

Search like a professional

A search engine gives you what most people click, not what is most reliable. **Search operators** are short codes that tell it exactly what you want.

Operator	What it does	Example
`"..."`	Exact phrase	`"contadores inteligentes" Emaya`
`site:`	Only one website or domain	`site:caib.es gemelo digital`
`filetype:pdf`	Only PDF files (annual reports, official documents)	`Iberostar sostenibilidad filetype:pdf`
`-`	Exclude a word	`blockchain -bitcoin -crypto`
`OR`	Either word	`cobot OR "robot colaborativo" Mallorca`

Where to look, depending on the claim:

You need	Look in
What the company is and does	Its own website, "about us", annual or sustainability report
Official figures about the islands	Ibestat, the Govern (`caib.es`), the BOIB, the Spanish INE

You need	Look in
What a technology is	Standards bodies and public agencies: ITU, NIST, the European Commission
A real deployment	The company's press room, regional and specialised press
A product's characteristics	The manufacturer's spec sheet

Most search engines also let you filter by date (in Google: *Tools* → *Any time*). Use it: a "latest" article from 2017 is not the latest.

Can I trust this source?

> A **primary source** is the original: the company's own report, the law in the BOIB, the manufacturer's spec sheet. A **secondary source** reports on it: a newspaper article, a blog post.

Primary sources are best for facts; secondary sources help you find them and add context. Before you use any source, apply **SIFT**, a four-step method proposed by the digital-literacy researcher Mike Caulfield:

Step	Question	What you do
S · Stop	Do I know this website? Why am I trusting it?	Pause before you copy anything
I · Investigate the source	Who is behind it, and what do they want?	**Lateral reading**: open new tabs and search what others say about that website, instead of reading only its own "about us"
F · Find better coverage	Do other reliable sources say the same?	Search the claim itself and compare
T · Trace to the original	Where does this figure or quote come from?	Follow the links back to the primary source and cite that one

Warning signs: no author and no date, a page that sells the product it praises, figures with no origin, a forum or social-media post, and any answer written by an AI chatbot. An AI answer is not a source: it can invent references that look real, and in this course it is not allowed in assessed work unless the teacher authorises it.

Facts and hypotheses

Your company will not publish everything you would like to know. That is normal, and the course rule is simple:

> A **fact** is a statement you can support with a source, and you cite it. A **hypothesis** is a reasoned guess you could not verify, and you label it as such.

Statement	Type	How to write it
The company has 3 hotels in Mallorca	Fact	"…has three hotels in Mallorca (Company, 2026)."
The company probably uses a cloud booking system	Hypothesis	"*Hypothesis:* given its size and its online booking page, it probably uses…"
A cobot UR5e lifts 5 kg	Fact	"…a payload of 5 kg (Universal Robots, n.d.)."

A hypothesis is not a weakness. Presenting a guess as a fact is.

Cite it

The report uses a simplified **APA style** (7th edition), the most common in technical and social-science writing. Each citation has two parts.

In the text, right after the claim: (Author, year). The author can be a company or a public body.

> EMAYA expects about 104,000 smart meters installed by 2026 (Mallorcadiario, 2023).

In the list of sources, at the end, in alphabetical order:

Kind of source	Pattern
Web page or news	Author or organisation. (Year, Month Day). *Title*. Site name. URL
Report (PDF)	Organisation. (Year). *Title of the report*. URL
Page that changes over time (a live map, a price list)	Organisation. (n.d.). *Title*. Retrieved Month Day, Year, from URL

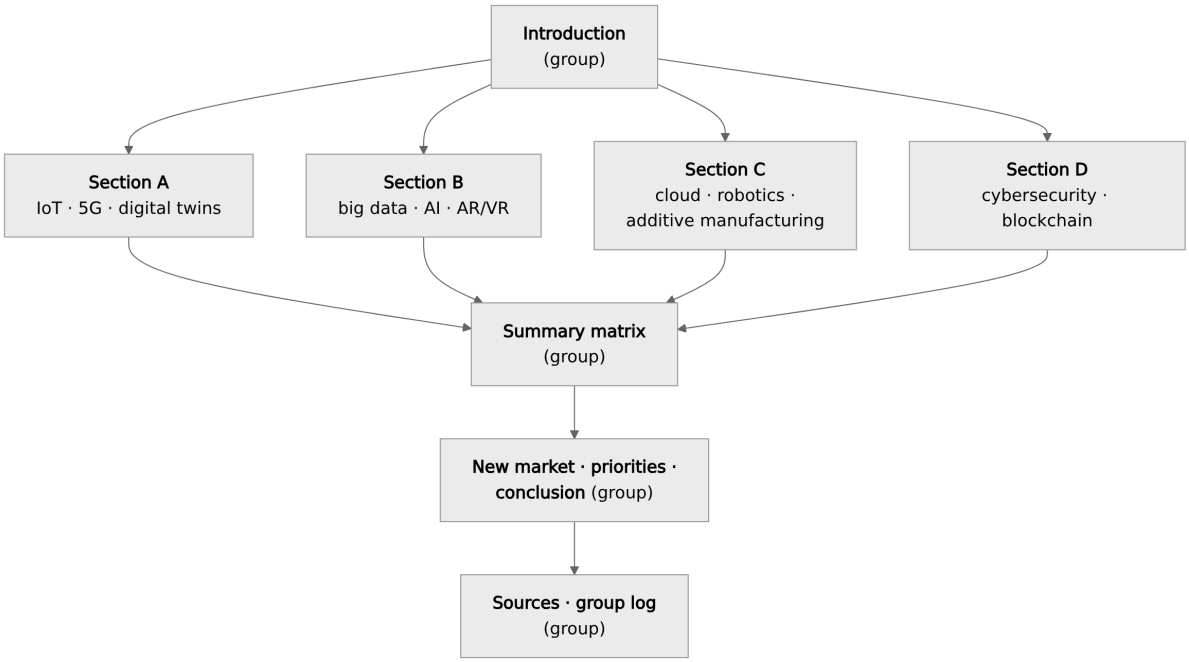
`n.d.` means “no date”. If the author and the site name are the same, write it once. Every source in the list must be cited in the text, and every citation in the text must be in the list.

The structure of Deliverable 2

The report is built from the work of the last four sessions. Each member owns a section of two or three technologies; the group writes the parts that tie them together. The full brief is on the Deliverable 2 page.

Each technology gets the same **technology sheet** with seven fields, so that the four sections can be compared:

Field	Content	Lesson
1	What it is and three characteristics	Enabling technologies I and II
2	A real deployment, with its source	Enabling technologies I and II



Field	Content	Lesson
3	Where in the company: process, business or plant	Sustainability, business and plant
4	Product or service it would enable	Products, services and markets
5	Sustainability: a benefit, a cost, what to measure	Sustainability, business and plant
6	IT or OT improvement, with a KPI	Sustainability, business and plant
7	Verdict: fits, maybe, does not fit, and why	Enabling technologies II

Writing as a team

Habit	Why
One shared document, everybody writes in it	The version history shows who did what; it is part of the group log
The same sheet format for every technology	The reader can compare; the summary matrix almost writes itself
The **Source checker** opens every link before the hand-in	A dead link is a missing source
The **Editor** reads the whole report aloud once	Four voices become one
Cite while you write	Adding sources at the end means losing half of them

In class: source audit

Individual first, then as a group. Handed in on Classroom (class activity). **No AI tools.**

Part 1 — Audit three claims of your own section.

Step	Do this	You should see
1	Pick three statements from your technology sheets: one about a technology, one about a real deployment, one about your company	Three sentences
2	For each, search with at least one operator and write the query you used	e.g. `site:emaya.es contadores`
3	Apply SIFT to the best result: who is behind it, primary or secondary, date	Three short notes
4	Write the APA reference and the in-text citation	Three references in the pattern above
5	If one claim cannot be verified, rewrite it as a labelled hypothesis	"*Hypothesis:* …"

Part 2 — Assemble the skeleton. In the group's shared document: put the headings of the report in place, paste each member's sheets in their section, start the summary matrix and the group log, and let the Source checker list the sources that are still missing.

For your project

Today you leave the session with Deliverable 2 assembled as a draft and a list of what is missing. The report is due on **Monday 21 December 2026 at 23:59**, and in the session of that same day each of you will defend your own sections of Deliverable 1 and Deliverable 2 in a short conversation with the teacher.

Key takeaways

- **Search operators** (`"..."`, `site:`, `filetype:`, `-`, `OR`) take you straight to primary sources.
- A **primary source** is the original; a **secondary source** reports on it. Cite the primary one whenever you can.
- **SIFT**: Stop, Investigate the source, Find better coverage, Trace to the original. Investigate with **lateral reading**.
- A **fact** carries a citation; a **hypothesis** carries a label. Never present a guess as a fact.
- **APA style**: (Author, year) in the text, the full reference in the alphabetical list of sources.
- An AI chatbot's answer is not a source, and AI is not allowed in assessed work without the teacher's authorisation.

Quick check

1 You want only PDF documents from the Govern's website about digital twins. Which query does that?

A `gemelo digital PDF Govern`
B `site:caib.es filetype:pdf gemelo digital`
C `"caib.es" OR "pdf" gemelo digital`
D `gemelo digital -caib.es -pdf`

2 Which one is a primary source for the number of smart meters EMAYA plans to install?

A A forum thread where a neighbour comments on his bill
B A chatbot's answer
C EMAYA's own press release or report
D A blog that summarises Mallorca news

3 In SIFT, what is lateral reading?

A Reading the whole website carefully before judging it
B Opening other tabs to find what other sources say about the website you are evaluating
C Reading only the headlines of an article
D Translating a source into another language

4 You could not find whether your company uses an ERP, but it is large and has several warehouses. How do you write it?

A "The company uses an ERP." with no source
B As a labelled hypothesis, with the reasoning behind it
C Leave out anything you cannot verify, even if it is important
D Ask a chatbot and cite its answer

5 Which in-text citation follows the APA pattern of this page?

A "...installed by 2026 [link]."
B "...installed by 2026 (found on Google)."
C "...installed by 2026 (Mallorcadiario, 2023)."
D "...installed by 2026 (https://www.mallorcadiario.com, page 1)."

6 Why does every technology get the same seven-field sheet in the report?

A To make the report longer
B So the four sections can be compared and integrated into the summary matrix
C Because the teacher only reads the first field
D So that each member can copy another member's sheet

7 A news article says a hotel chain “cut its water use by 30%” and links to the chain’s sustainability report. What should you cite?

- **A** The news article only, because it is shorter
- **B** The sustainability report, after checking that the 30% is really there
- **C** Nothing: figures from companies are never reliable
- **D** The search engine where you found the article

Everything is ready: the technologies, their applications and impact, and the craft of the report. The brief, the rubric and the defence are on the last page of the unit: Deliverable 2 · Technology report.

Solutions

1. B · `site:` limits the search to one domain and `filetype:pdf` to PDF files. The last option would exclude exactly what you want.

2. C · The **primary source** is the original, issued by the organisation itself. A newspaper that reports it is a good secondary source; a forum or a chatbot is not a source at all.

3. B · Instead of trusting a website’s own description, you **leave it** and check what independent sources say about it. Professional fact-checkers work this way.

4. B · A reasoned guess is welcome if it is labelled: “*Hypothesis:* given its size and its warehouses, it probably uses an ERP”. Presenting it as a fact would be the mistake.

5. C · In the text: **(Author, year)**. The full reference with the URL goes in the alphabetical list of sources at the end.

6. B · A common format turns four people’s work into one report: the reader compares technologies field by field, and the group builds the **summary matrix** from it.

7. B · This is the **T** of SIFT: trace the claim to the **original** and cite it there. If the figure is not in the report, you have learned something important about the article.