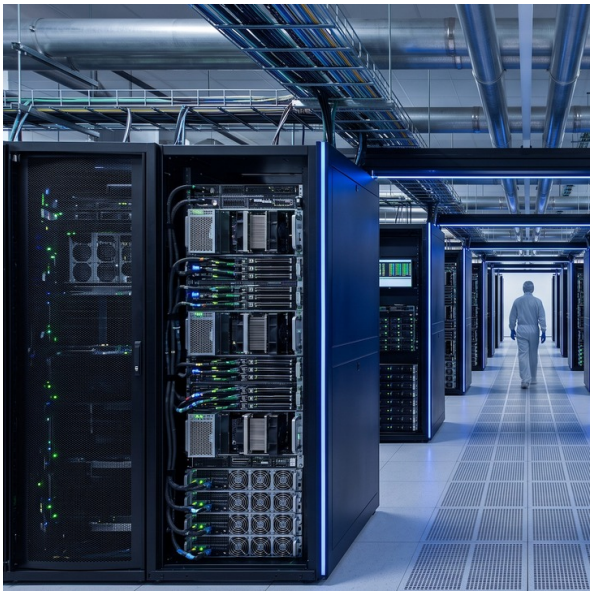
THE AI BOOM'S HIDDEN HEAT PROBLEM



Scan to review worksheet

Expemo code:
1KC4-M1L3-EE6

1 Warm up

In pairs, each person picks a question and speaks for one minute. Your partner should listen and ask one follow-up question.

1. Describe a time you experienced a heatwave at work or in an office. How did it affect productivity?
2. What comes to mind when you hear the phrase 'data centre'? Be honest – most people have never seen one.
3. Do you think technology companies take climate risk seriously enough? Give one reason for your view.
4. If your company had to choose between cheaper land and a safer climate location for a new facility, which would you prioritise?



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2 Focus on vocabulary

The following words appear in the news report you are about to hear. For each word, choose the definition (a or b) that is correct.

1. reckoning
   a. a formal financial calculation used to predict future company profits
   b. a moment when past problems can no longer be avoided and must be confronted

2. swelters
   a. suffers from uncomfortably high temperatures
   b. expands rapidly in size or volume

3. backbone
   a. the most profitable division within a large company
   b. the essential underlying structure that allows something to function

4. mercury
   a. a toxic silver-coloured metal used in some electronic components
   b. the temperature level, as shown on a thermometer

5. breakneck
   a. carefully controlled and deliberately unhurried
   b. extremely and often dangerously fast

6. positioning
   a. the way an organisation presents an issue to shape public perception
   b. the physical location chosen for a new company facility

7. venting
   a. storing a substance safely for later, controlled use
   b. releasing a gas or substance into the open air

8. throttles
   a. chokes or squeezes something tightly by the throat
   b. automatically reduces its own speed or power to prevent damage

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3 Listening for gist

Listen to the report and tick all of the following which are mentioned.

1. ☐ Cooling's share of a typical data centre's energy use
2. ☐ An explanation of why overheated chips can be permanently damaged
3. ☐ Why solar panels actually lose efficiency in extreme heat
4. ☐ The exact stock price of a major chipmaker
5. ☐ A European heatwave is causing blackouts in an Italian city
6. ☐ Efforts to reuse data-centre waste heat for homes and hospitals
7. ☐ A government ban on building new data centres

4 Listening comprehension

Listen again. Decide if the following statements are True or False.

1. According to the report, cooling accounts for roughly forty per cent of a typical data centre's energy use. _____
2. Extreme heat increases demand for air conditioning at the same time as power grids are least able to cope. _____
3. According to the report, a chip that gets too hot will automatically slow itself down before any permanent damage occurs. _____
4. According to the report, solar panels actually generate more electricity as their temperature rises. _____
5. According to the report, severe weather accounts for around half of one insurer's US data-centre losses. _____
6. The report states with certainty that waste-heat reuse is a fully proven, permanent solution. _____

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5 Pre-reading vocabulary

The following idioms and phrases appear in the three opinions you are about to read. Match each one to its meaning.

1. Publishing a claim without checking it first is a clear case of **lazy journalism**.
2. The press office had to **field** dozens of **angry phone calls** after the announcement.
3. The new factory represents millions in **inward investment** for the region.
4. Regardless of today's result, the **direction of travel** is clearly positive.
5. Announcing a cure before trials finish is **getting ahead of the evidence**.
6. It's tempting to **wave away** customer complaints, but it rarely ends well.

a. the general trend or path something is currently following
b. money invested in a region or country from an external source
c. dismiss a concern without giving it proper consideration
d. make confident claims that outpace what the evidence actually supports
e. reporting that is careless, unrigorous, or insufficiently researched
f. deal with a series of difficult questions or complaints, often unplanned

Now, scan the article "Three Business Perspectives" and find the words in bold which mean:

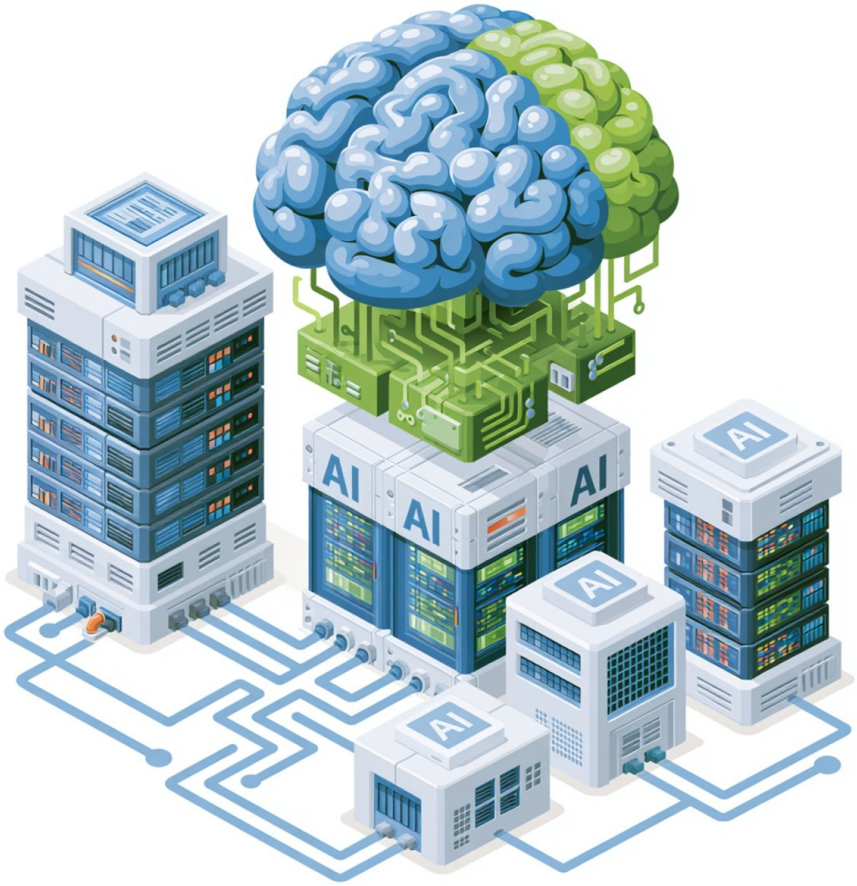
1. _____ (n.) careful and detailed examination or attention, often to check whether something is right or acceptable.
2. _____ (n.) a feeling, opinion, or attitude about something, especially one based more on emotion than facts.
3. _____ (n.) in insurance, the process of calculating risk and deciding the price or conditions of insurance.
4. _____ (adj.) honest and direct, especially when saying something that may be difficult or uncomfortable.
5. _____ (n.) a small extra detail or comment; literally, a note at the bottom of a page.
6. _____ (n.) the process of adding new systems, equipment, or features to an older building, machine, or site so that it works better or meets newer standards.

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6 Reading comprehension

Read the three opinions on the next page and decide if the following statements are True or False.

1. Marcus argues that the tech industry is largely ignoring the issue of climate risk. _____
2. Marcus's company is exploring partnerships to reuse waste heat for local communities. _____
3. Tom says that rejecting a data-centre proposal has no real cost for his local authority. _____
4. All three speakers agree unanimously that the AI data-centre industry is fully prepared for climate risk. _____
5. Tom has started asking developers harder questions before granting planning permission. _____
6. Marcus explicitly criticises some media coverage of the issue as unfair. _____



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Three Business Perspectives

An executive, a risk analyst, and a local council officer

1. **Marcus, data-centre company executive**

   I'll be **candid**: the coverage of this issue makes the industry sound far more complacent than it actually is. Nobody building data centres today is ignoring the climate. If anything, we're under more **scrutiny** on this than almost any other sector, and rightly so. What the critics often miss is how quickly the engineering side is moving. Chip manufacturers are redesigning hardware specifically to tolerate higher operating temperatures, which sounds like a minor technical **footnote** until you realise it directly cuts the energy bill for cooling. We're also actively pursuing waste heat partnerships with local authorities, piping otherwise wasted warmth into homes and public buildings rather than simply venting it skyward. Is it happening everywhere, fast enough, all at once? Honestly, no. **Retrofitting** existing sites is expensive and slow, and older facilities weren't built with any of this in mind. But framing the sector as recklessly indifferent to a problem it's actively spending billions to solve strikes me as lazy journalism. We didn't choose the timing of this heatwave, and we're certainly not the only industry straining the grid this summer. I'd simply ask people to judge us on the direction of travel, not on a single uncomfortable news cycle.

2. **Priya, insurance risk analyst**

   My job is to price risk accurately, not to reassure anyone, so I'll give you the numbers rather than the **sentiment**. Severe weather has become the single largest driver of insured losses across our data-centre construction portfolio in the United States, and that share has been climbing steadily for three consecutive years. A recent study covering dozens of markets worldwide found that the overwhelming majority of global data-centre capacity now sits facing meaningful climate exposure, whether that's flooding, extreme wind, or heat stress on the grid itself. What concerns me most isn't any single heatwave; it's that operators are increasingly building in so-called frontier markets, precisely because land is cheap there, often with far less historical weather data to underwrite against. You genuinely cannot price a risk properly when the historical baseline barely exists. I don't doubt the sector's engineers are clever, and some of the cooling innovations are genuinely impressive. But **underwriting** isn't about admiring good engineering; it's about pricing exposure honestly, and right now, premiums in this space are rising for a reason. Anyone telling you this is a fully solved problem is, at best, getting ahead of the evidence.

3. **Tom, local council economic development officer**

   It's honestly the most complicated item on my desk this year. On one hand, a proposed data centre means serious inward investment, construction jobs, and a meaningful boost to business rates for the local authority, at a time when our budget is under real pressure. Turning that down isn't a cost-free decision either; the investment simply goes to whichever neighbouring authority says yes instead. On the other hand, residents quite reasonably want to know what happens to the local grid and water supply once summer temperatures climb, and I don't think it's my job to wave those concerns away with a glossy corporate brochure. We've started asking developers much harder questions before granting planning permission: what happens to surrounding electricity capacity during a heatwave, whether any waste heat could realistically be redirected to nearby homes or our hospital, and what happens if the site changes hands in ten years. Some developers welcome that scrutiny. Others clearly find it inconvenient. Either way, I'd rather ask the difficult questions now, at the planning stage, than field angry phone calls from residents during the next heatwave.

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7 Speaking practice

In pairs, each person picks a card and speaks for one to two minutes. Your partner should listen and challenge at least one point you make.

Card 1

Argue Marcus's position – that the industry is being unfairly criticised given how much it is already investing in solutions.

Card 2

Argue Priya's position – that optimism about engineering fixes is getting ahead of what the risk data actually shows.

Card 3

Argue Tom's position – that local authorities need much stronger negotiating power before approving new data centres.

Card 4

If you were a resident living next to a proposed data centre, what would you want your local council to guarantee before approving it?



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8 Optional extension / homework

You work for a regional investment agency. Write a short briefing note (250 words) advising your director whether to actively court a major data-centre developer for a plot of land in your region, or to prioritise other types of investment instead.

You should:

- write at least 250 words
- use a formal, professional register appropriate for an internal business document
- reference at least two specific points raised in this lesson
- give a clear recommendation, with reasoning
- check your spelling, grammar and punctuation

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