People are already getting to work

- Today, look at how researchers, engineers and communities approach these problems.
- Then turn one idea into a project you could begin.

Your question can be a starting point too.

Yesterday: a town. Today: an early warning.

- Which decision from yesterday would you most like to revisit?
- If you could know one thing earlier, what would it be?

Each partner shares one answer.

From a lab to the places people live

- Use the official links to explore food, wildlife monitoring, weather forecasting and ocean cleanup.
- Remember one specific approach. Ask what else it needs to help in practice.

Follow the people doing the work back to their own sources.

What should an AI see before forecasting a flood?

- Open Market Marshes in Google AI Quests. This lesson uses an eight-minute discussion about data and testing.
- What information might help predict rising water? How would you test a model with something it has not seen?

The English original needs internet access. See the resources page for prompts.

Four tools, different tasks

- Pangu, GenCast, Aurora and Earth-2 differ in their tasks, outputs and evaluation conditions.
- Check what was actually measured instead of comparing a single headline number.

Continue with the official papers, documentation and repositories.

One future can have several forecasts

- A set of possible forecasts helps describe uncertainty.
- The fraction of scenarios crossing a threshold is not an absolute guarantee for a place.

When would you start preparing, and why?

An early warning has to reach someone

- Observation, modelling, communication, reception and action can each fail.
- A warning still needs people, routes, supplies and protection behind it.

Back in our town, which step would be easiest to miss?

A box around a shape is not a final answer

- Computer vision can produce false alarms and miss things.
- Record lighting, distance, obstruction and sample conditions.

Then review the results.

How do we know whether the model works here?

Beyond the camera, there is a ranger

- Wildlife monitoring connects equipment, recognition, expert review and conservation action.
- A detection matters when it helps someone do useful work.

Who will use this information?

Keeping a record of shape and distance

- 3D measurement records shape and position in space.
- Resolution, obstruction and measurement error still matter.

How would you compare this model with the real object?

When a machine moves, errors have consequences

- Intelligent manufacturing connects sensing, planning and execution.
- Measure errors, verify movements and provide suitable safeguards.

How would you test it beyond one successful demonstration?

A different way to generate power in the Hexi Corridor

- A solar power tower uses heliostat mirrors to concentrate sunlight.
- Trace the energy, then distinguish solar thermal storage from nuclear reactors.

The same term, molten salt, can describe very different uses.

Stored heat can keep working after sunset

- Collect heat during the day and store part of that energy in a thermal storage medium.
- Operating time at night depends on storage capacity, weather and operating conditions.

Which limit does energy storage help address?

Molten salt: where does the heat come from?

- Solar thermal salt storage does not involve nuclear fission. A liquid-fuel molten-salt reactor uses nuclear reactions.
- The Fukushima Daiichi accident units were boiling-water reactors. These three systems should not be confused.

Identify the heat source and system before comparing risks.

Stopping a reactor does not stop all its heat

- Decay heat remains after the nuclear chain reaction stops and must be removed reliably.
- Cooling, pressure and passive provisions differ by design. Their capability needs verification.

Passive safety also has conditions.

Where could radioactive material go?

- Compare normal operation, accident releases and waste management separately.
- Low-pressure designs may reduce some accident pathways. Materials, containment, monitoring and waste still need attention.

Do not invent accident probabilities or safety ratios from a reactor's name.

What questions should a safety claim answer?

- Effects can include radiation exposure, cleanup, relocation, livelihoods and long-term monitoring.
- New designs need tests, regulatory review and operating evidence.

Ask about capability, limits and responsibility together.

Food production can take new routes

- Research into microbial fermentation and starch made from carbon dioxide explores new production pathways.
- Moving from an experiment to affordable, sustainable supply takes engineering and evaluation.

How would we assess inputs, energy use, cost and food safety?

Take a ten-minute break

- Look away from the screen and move around.
- Then return to narrow your question and prepare a proposal.

Choose something you want to keep investigating.

Boyan asked a question. A team kept working on it.

- Follow a young person's question about ocean plastic through design, testing and deployment.
- Listen to his own account and check how the project records progress and limitations.

How can one person's question connect with other people's work?

First, listen to someone affected

- Before designing for someone, learn how they live and work.
- Listen to the real difficulty. Respect anyone who does not want to be interviewed or recorded.

Who should you listen to first?

Choose a problem in a place you know

- Pick a specific place, a group of users and an observable change.
- Start where you can gain access and investigate.

Make the question small enough to take a first step.

Make the question specific enough to begin

- Who experiences what difficulty, and under which conditions?
- Which part would our attempt change?

Write down one piece of information you still need.

Give your idea a fair comparison

- Compare before and after, or use a suitable control.
- Keep other conditions as consistent as possible. Record failures and surprises.

What result would make you revise the idea?

Ask another group to find a weak point

- Restate their question before offering a specific challenge.
- Check measurement, comparison, participants and real-world conditions.

Explain the reason behind your suggestion.

Three minutes to explain the question and the test

- Say who it is for, what you would try, how you would compare results and what remains uncertain.
- Keep the main points on one worksheet.

Listeners should be able to understand your next step.

Now, let's hear your proposals

- Four groups each have three minutes to present and one minute for feedback: sixteen minutes in total.
- As you listen, help the group spot a question they missed.

Discuss the proposal without labelling the people.

Use the feedback to revise your proposal

- Choose one comment to improve the question, method or comparison.
- Explain why you used it, or why you are keeping your original idea for now.

Keep a record of what changed.

Your next step can start in everyday life

- Write down one action for the coming week and how you will record its result.
- Find someone willing to hear what you learn, and keep investigating.

The world is big. A first step can be specific.