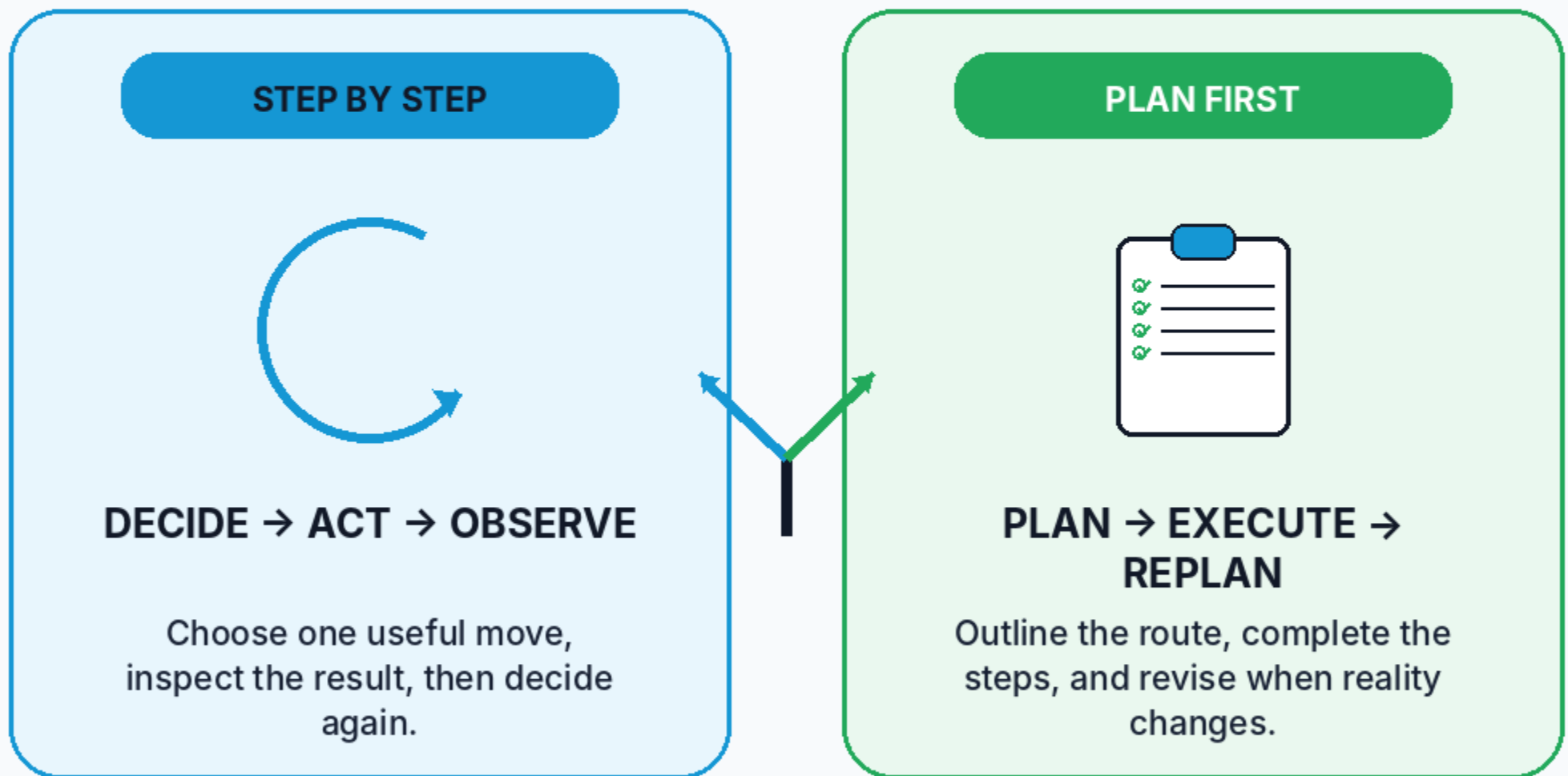


HOW AI AGENTS PLAN THEIR NEXT MOVE

ReAct, Plan-and-Execute, and the hybrid most real agents use.



A tool menu says what the agent can do. Planning decides what it should do next.

A TOOL MENU IS NOT A PLAN

Giving an agent six tools does not tell it which one to use first—or when to stop.



GOAL: Resolve a customer's damaged-delivery problem.



ORDER

Look up delivery



POLICY

Read return rules



PHOTO

Request evidence



REFUND

Return money



REPLACE

Create shipment



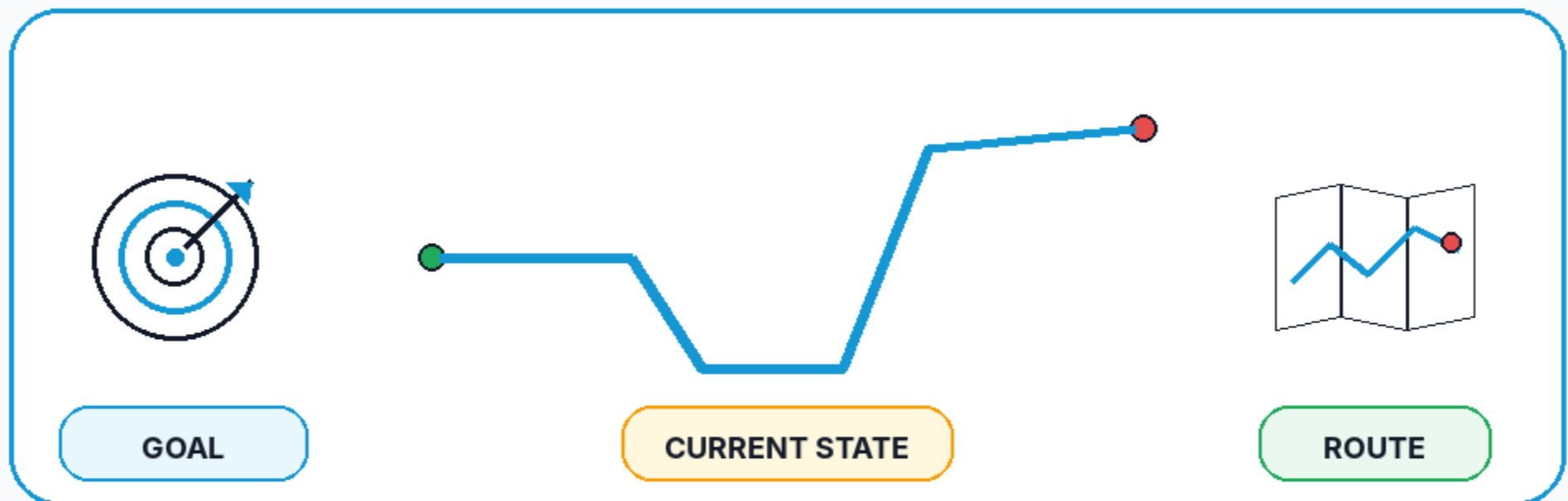
CASE

Escalate to human

Which tool first? What if evidence is missing?
When is the task complete?

WHAT PLANNING REALLY MEANS

Planning is not predicting the future perfectly. It is choosing useful actions under changing information.



1

GOAL

What outcome are we trying to reach?

2

CONSTRAINTS

Budget, time, permissions, rules.

3

NEXT ACTIONS

Which step creates the most useful progress?

4

SUCCESS / STOP

How will the agent know it is done?

TWO COMMON PLANNING STYLES

Both can solve multi-step tasks. They differ in when the agent decides the route.

1 • ReAct

DECIDE ONE STEP



ACT WITH A TOOL



OBSERVE & REPEAT



2 • PLAN-AND-EXECUTE

OUTLINE THE STEPS



EXECUTE THE PLAN



CHECK & REPLAN

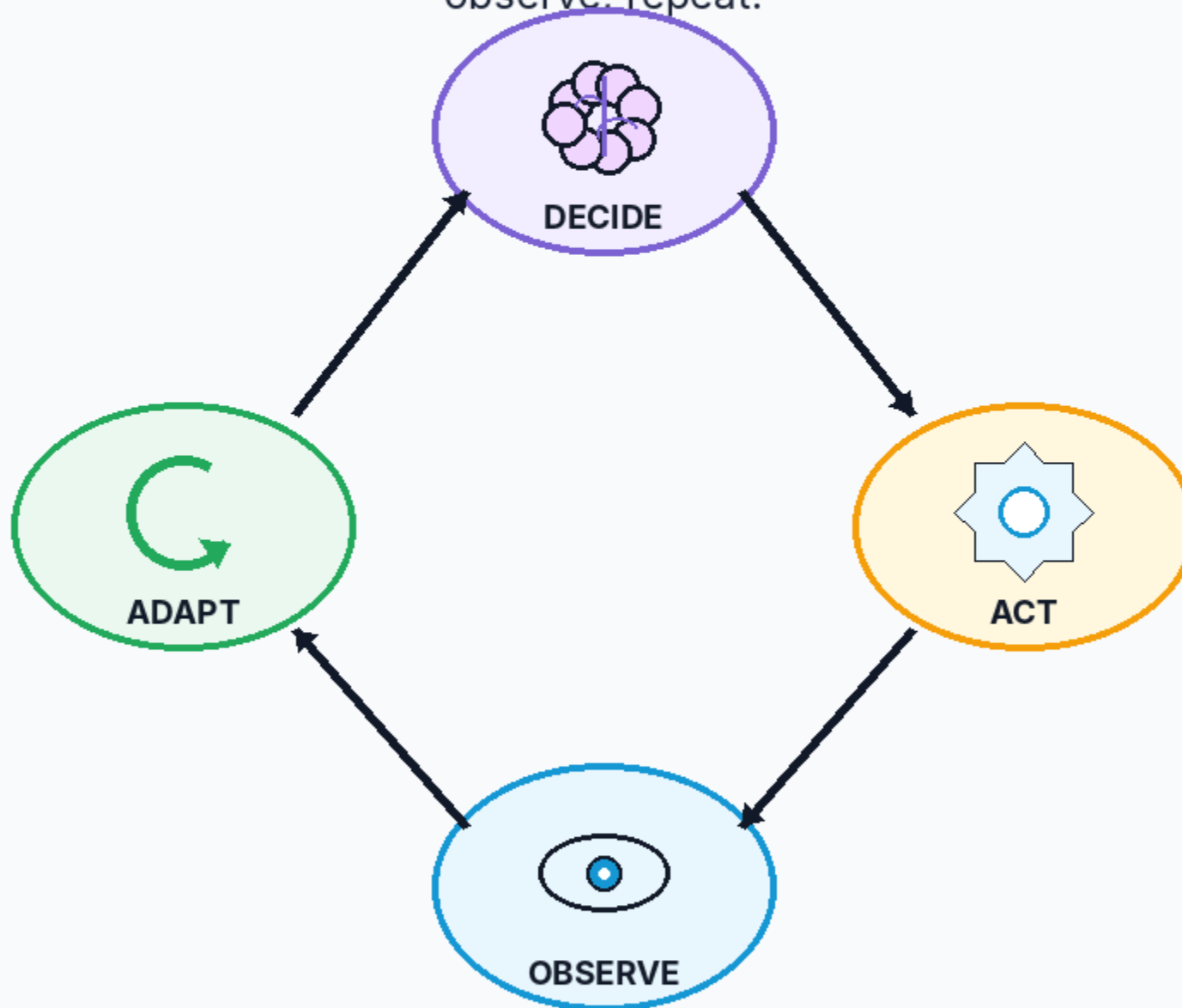


Neither is always better. The task should choose the pattern.

PATTERN 1:

ReAct

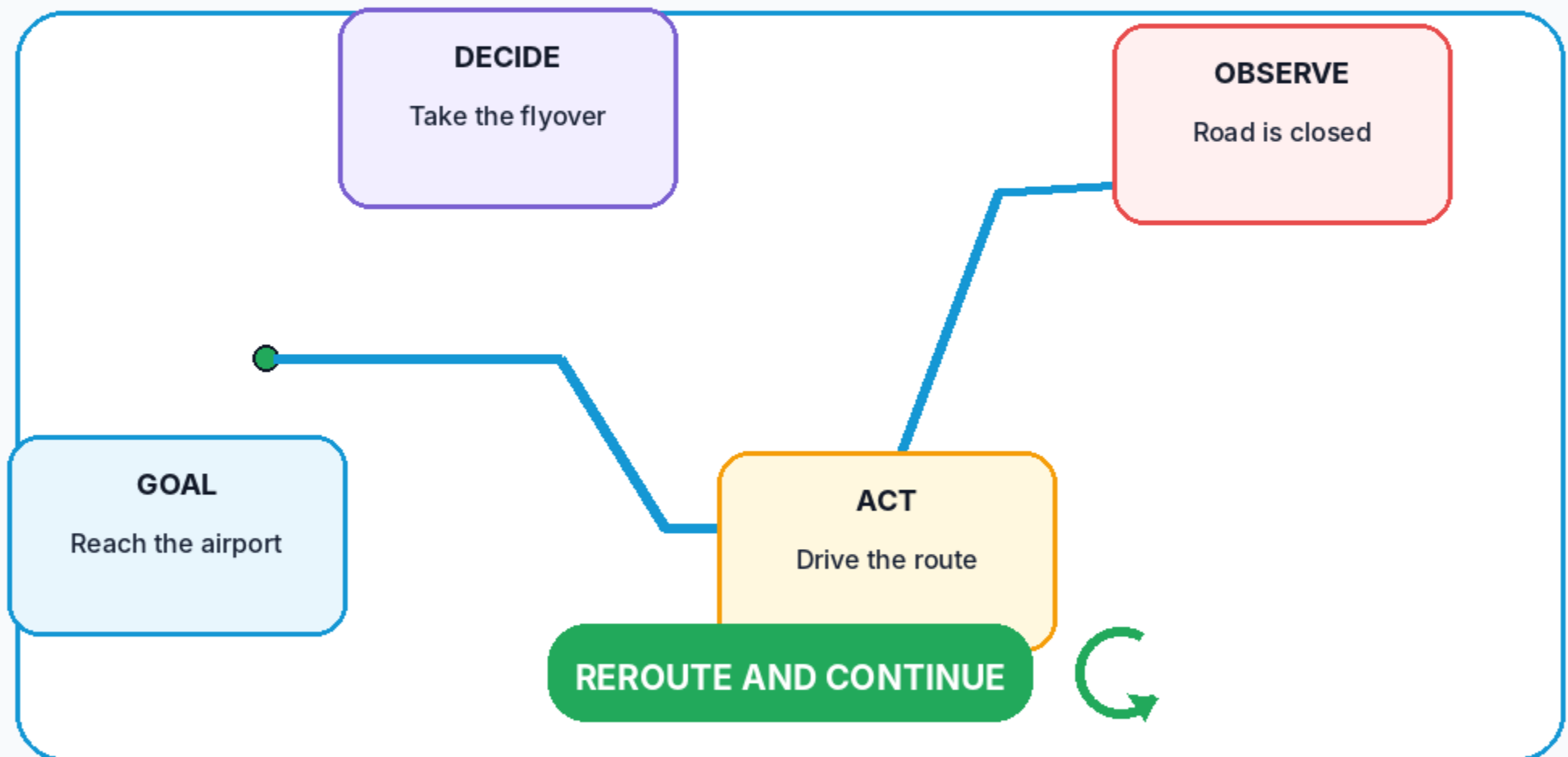
ReAct originally means Reason + Act. The practical loop is simple: decide, act, observe, repeat.



Example: Check inventory → "Out of stock" → search alternatives → compare delivery dates.

GPS IS A GREAT ReAct ANALOGY

The destination stays fixed. The next move changes when the world changes.

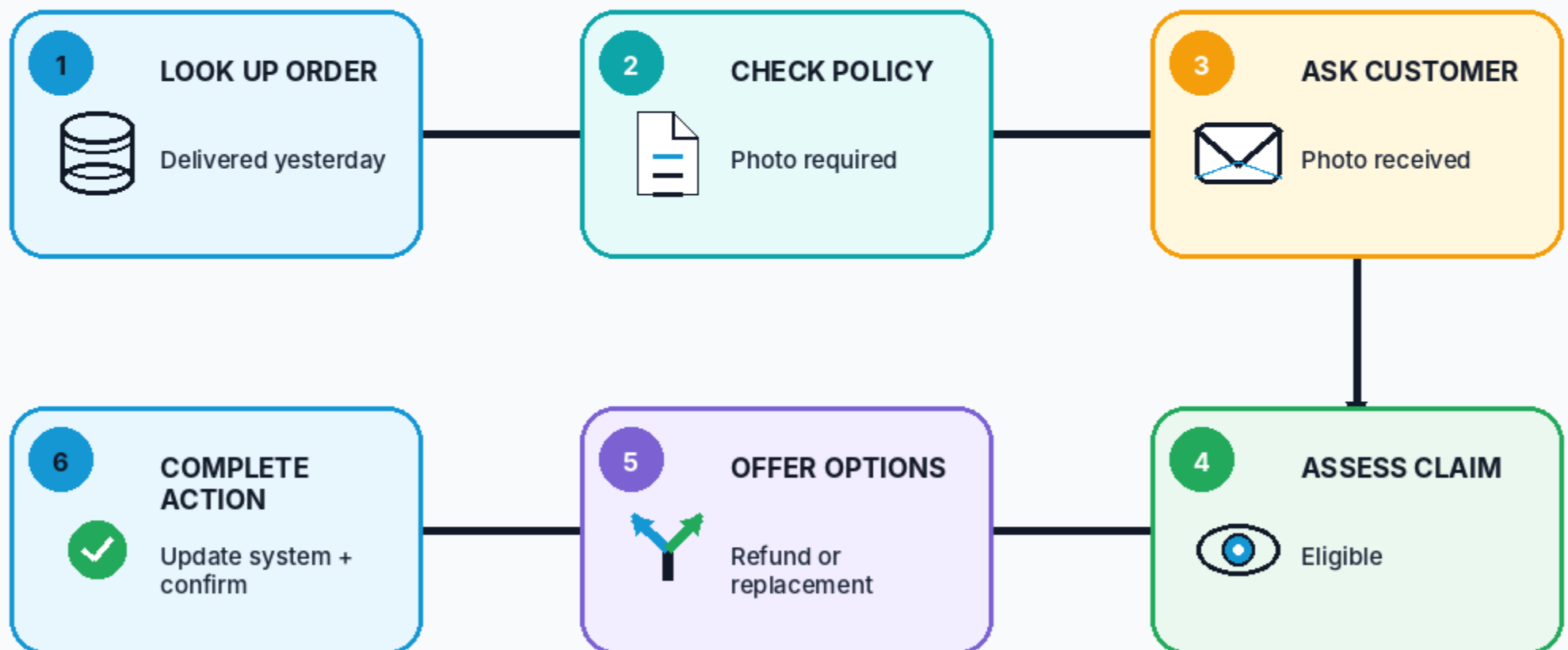


ReAct makes one useful move at a time—then updates from feedback.

ReAct EXAMPLE: DAMAGED DELIVERY

The next step depends on what the previous tool returned.

GOAL: Resolve "My package arrived damaged."



If evidence is missing, ask. If confidence is low, create a case for a human.

WHEN ReAct WORKS BEST

Use it when the path is uncertain and each result changes the next decision.

GOOD FIT

- ✓ Short or medium-length tasks
- ✓ Live tools and changing information
- ✓ Frequent feedback after each action
- ✓ Several possible routes to the goal
- ✓ Easy recovery from a wrong step



TRAVEL

Find a route after a train is cancelled



TECH SUPPORT

Run checks until the failure is isolated



SHOPPING

Compare alternatives as stock and price change



RESEARCH

Search, read, verify, and refine the next query

ReAct is flexible because the agent can change direction after every observation.

WHERE ReAct CAN FAIL

Adaptation without limits can turn into expensive wandering.



INFINITE LOOP

Repeats the same action



TOOL THRASHING

Switches tools without progress



GOAL DRIFT

Solves a different problem



ACTS TOO SOON

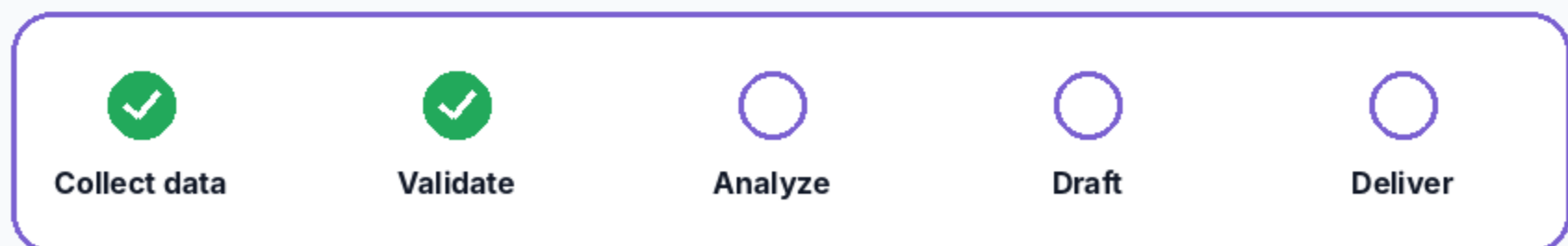
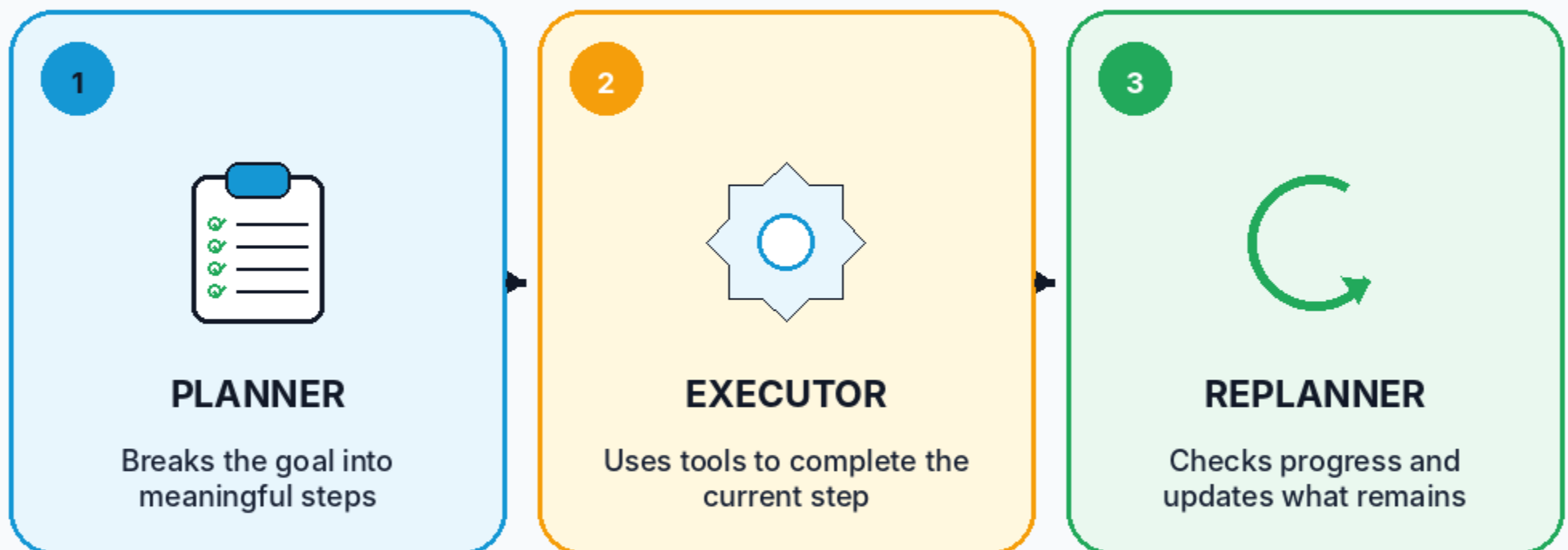
Takes a side effect before approval

MAX STEPS • TIME/COST BUDGET • STOP RULES • HUMAN HANDOFF

A flexible loop still needs boundaries.

PATTERN 2: PLAN-AND-EXECUTE

Create a high-level plan first, execute the steps, and revise the plan when new information appears.

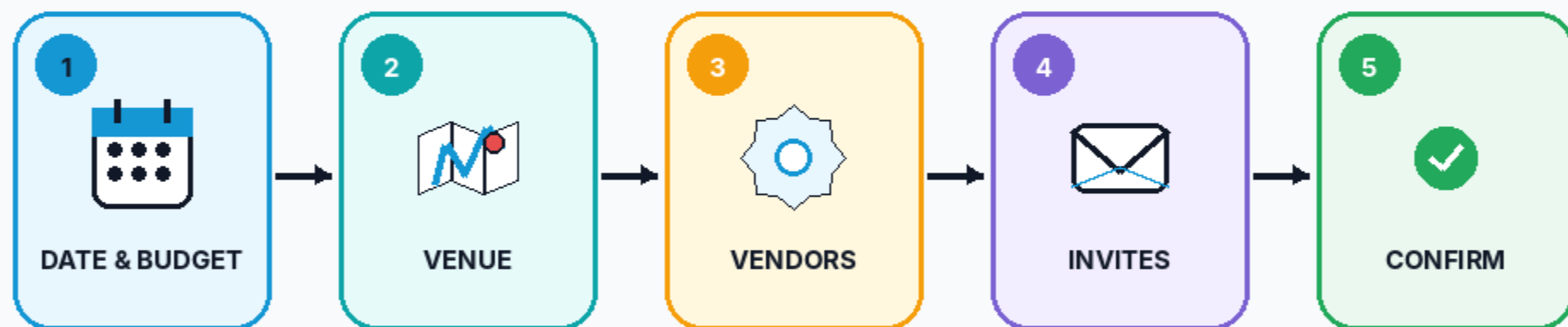


Best for long tasks where progress and dependencies matter.

AN EVENT PLANNER WORKS THIS WAY

You do not book random vendors one by one. You create a plan, then work through it.

GOAL: Organize a 100-person event



OBSERVATION: The venue is unavailable.



REPLAN: Choose another venue, then update only the dependent vendor and invite steps.

The plan gives direction; observations keep it realistic.

PLAN-AND-EXECUTE EXAMPLE: WEEKLY SALES BRIEF

A visible task list makes long work easier to track, resume, and review.

THE PLAN

- ☒ 1 Fetch CRM data
- ☒ 2 Validate missing rows
- ☒ 3 Calculate KPIs
- ☐ 4 Compare with last week
- ☐ 5 Create charts
- ☐ 6 Summarize anomalies
- ☐ 7 Save and send after approval

CURRENT PROGRESS



3 of 7 steps complete

REPLAN TRIGGER



Missing region data →
fetch backup source or
ask the analyst.

Planning makes progress visible; replanning handles surprises.

WHEN PLAN-AND-EXECUTE WORKS BEST

Use it when the task is long, structured, and easier to manage as named subgoals.

GOOD FIT

- ✓ Long reports or research projects
- ✓ Steps with clear dependencies
- ✓ Work that may pause and resume
- ✓ Tasks needing progress visibility
- ✓ Auditable handoffs and approvals

WATCH OUT



STALE PLAN

New facts can make old steps wrong.



PLANNING OVERHEAD

Tiny tasks do not need a project plan.



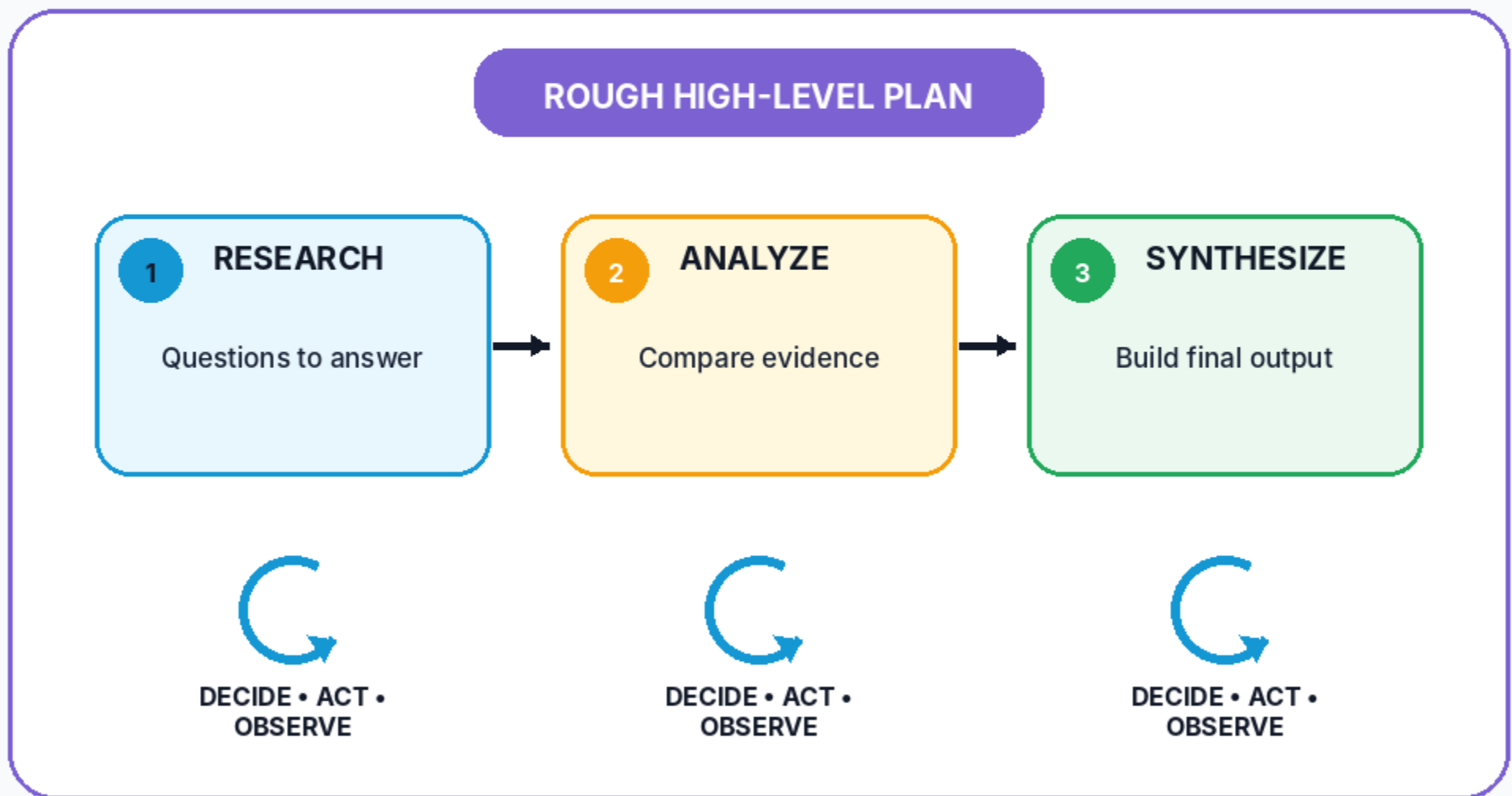
BAD FIRST ASSUMPTION

One wrong premise can affect later steps.

Fix: add checkpoints, validation, and permission to replan.

THE HYBRID MOST REAL AGENTS USE

Plan globally. Adapt locally.



Example: plan the report sections, then use ReAct inside each section to search, verify, and adapt.

WHICH PATTERN SHOULD YOU USE?

Choose the simplest pattern that can reliably finish the task.

Quick lookup or troubleshooting

ReAct

One step at a time

Long report, migration, or multi-stage project

PLAN-AND-EXECUTE

Visible plan and progress

Complex real-world task with surprises

HYBRID

Plan globally, adapt locally

ALWAYS DEFINE: goal • constraints • current state • stop condition • budget • approval gates

Good planning is useful only when the agent knows when to stop.

PLANNING TURNS A GOAL INTO USEFUL NEXT ACTIONS



ReAct

Decide → Act → Observe



PLAN-AND-EXECUTE

Outline → Execute → Replan



HYBRID

Plan globally → Adapt locally

NEXT

DAY 8: HOW AGENTS REMEMBER

Working, episodic, semantic, and procedural memory

Which task would you trust an AI agent to plan for you?