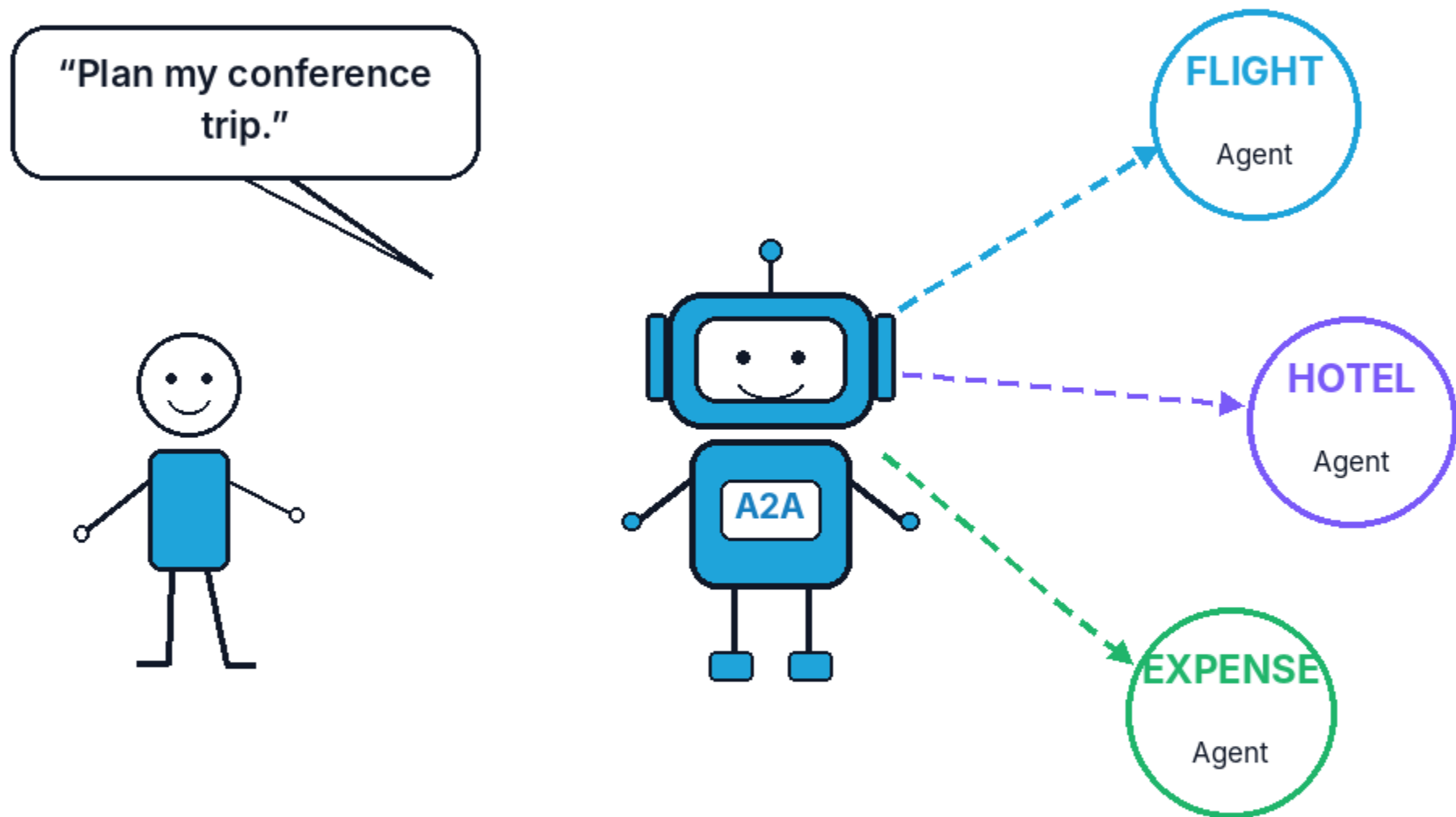


HOW DO AI AGENTS TALK TO EACH OTHER?

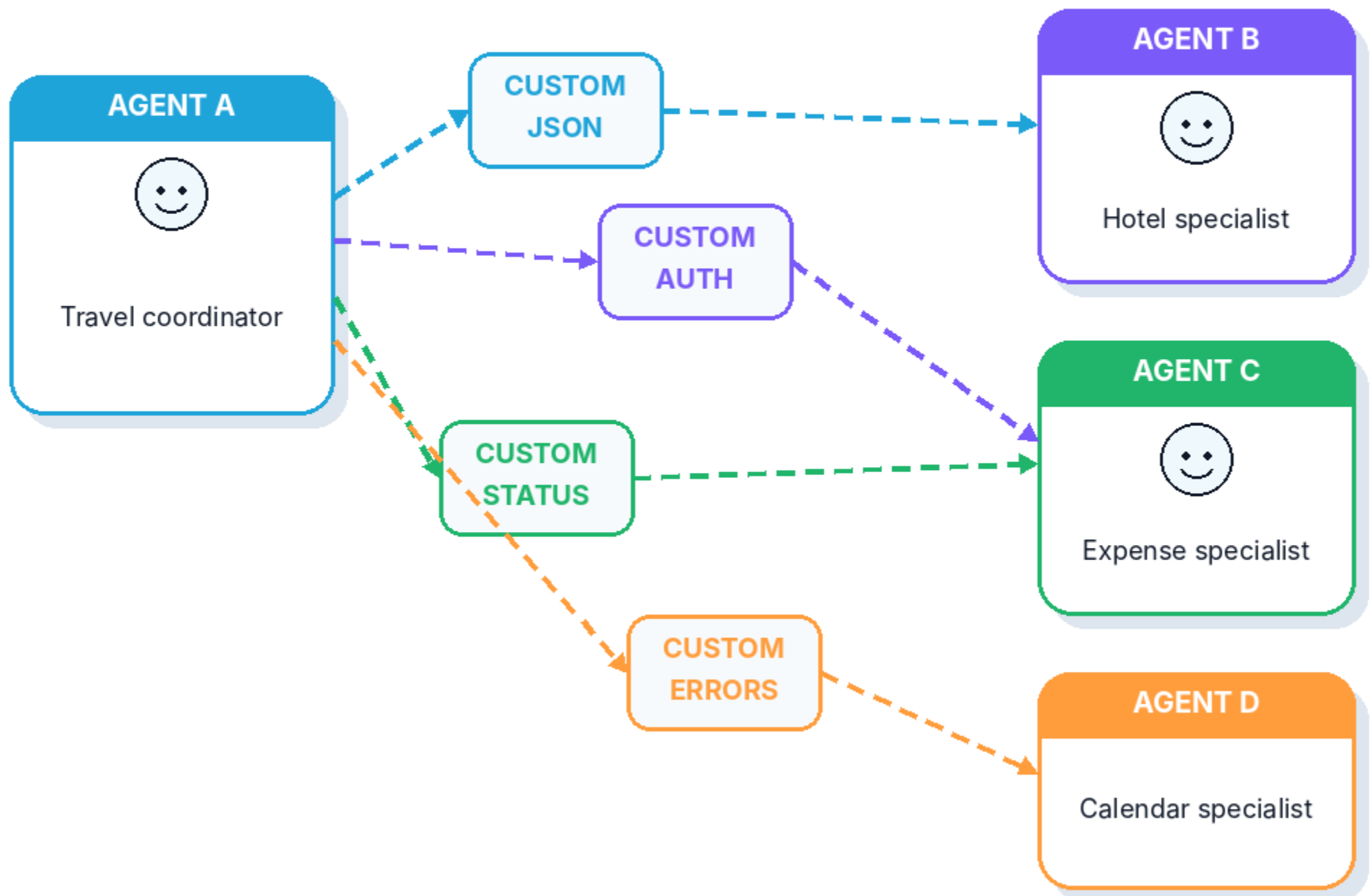
Meet A2A — a shared language for agents built by different teams and platforms.



MCP connects agents to tools. A2A connects agents to other agents.

WITHOUT A STANDARD, EVERY AGENT CONNECTION IS CUSTOM

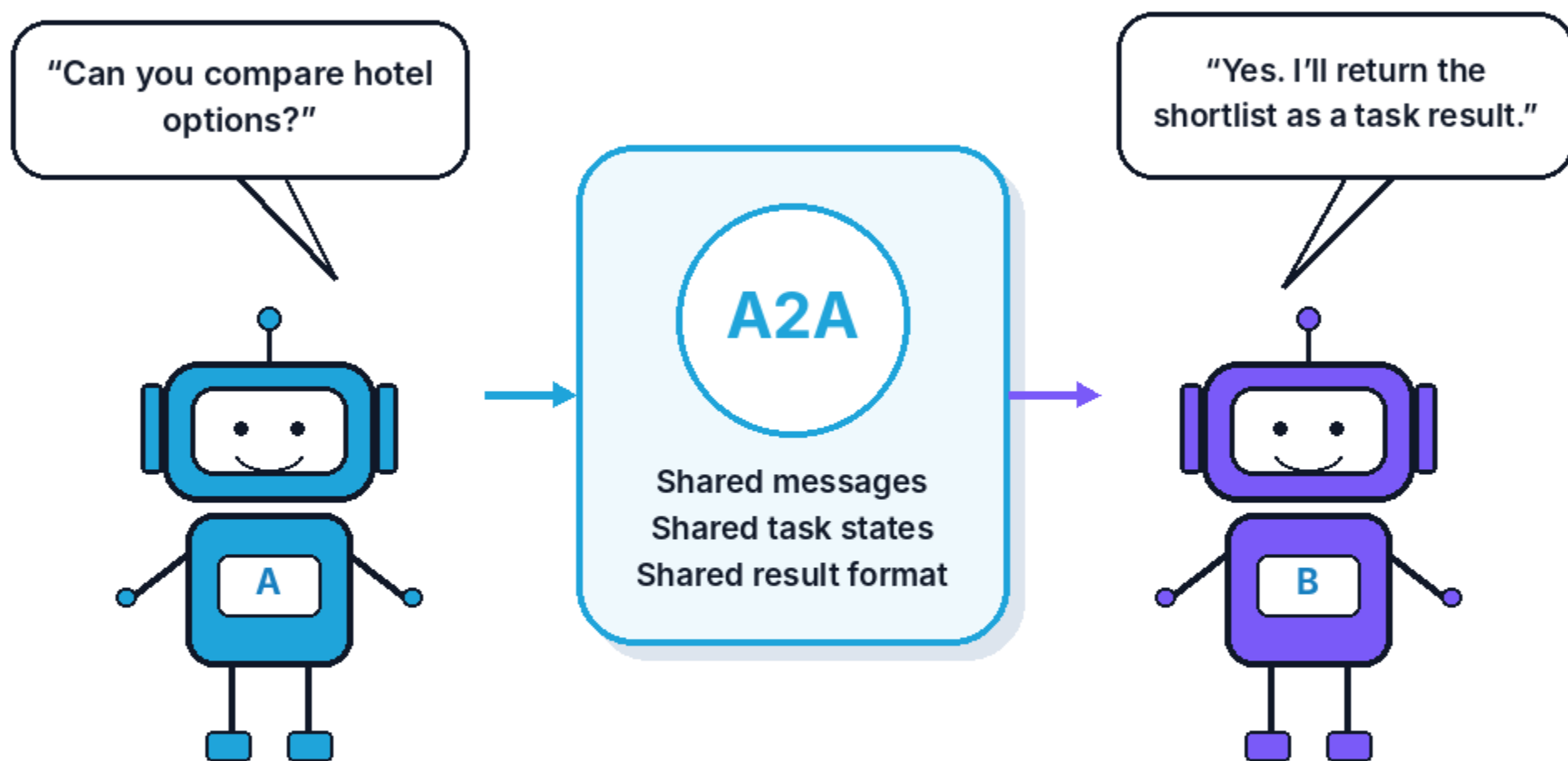
Different frameworks may use different APIs, formats, authentication and task rules.



More agents can mean more glue code, testing, permissions and failure points.

A2A IS A COMMON LANGUAGE BETWEEN SPECIALISTS

The agents can collaborate without revealing how their internal “brains” work.



A2A standardizes the conversation — not the agent's private reasoning.

WHAT EXACTLY IS A2A?

A2A stands for Agent2Agent.

An open protocol that standardizes how independent AI agents discover capabilities, communicate, delegate tasks and return results.

1**DISCOVER**

Find what another agent can do.

2**COMMUNICATE**

Exchange text, files or structured data.

3**DELEGATE**

Hand over a complete task or subtask.

4**TRACK**

Follow progress and receive the final output.

Agents can keep their prompts, memory, tools and implementation private.

A TOOL IS NOT THE SAME AS AN AGENT

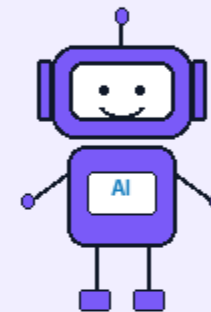
Both can help — but they behave differently.

TOOL



- ✓ Performs one defined operation
- ✓ Usually has structured input and output
- ✓ Often short-lived and predictable
- ✓ Examples: calculator, search, database query

AGENT



- ✓ Owns a goal and chooses steps
- ✓ May use several tools
- ✓ Can ask questions and adapt
- ✓ May keep state across a longer task

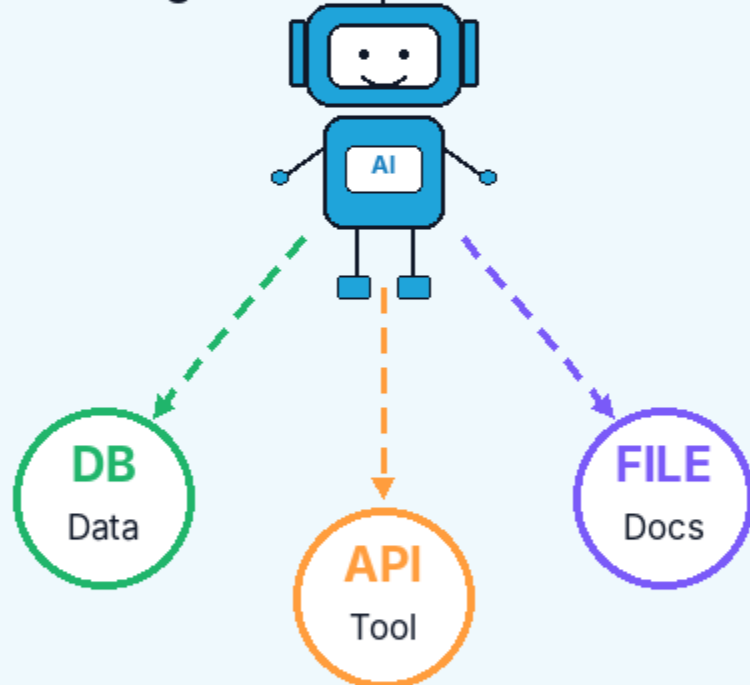
Call a tool for a function. Collaborate with an agent for a goal.

MCP VS A2A: TWO DIFFERENT CONNECTIONS

They are complementary, not competitors.

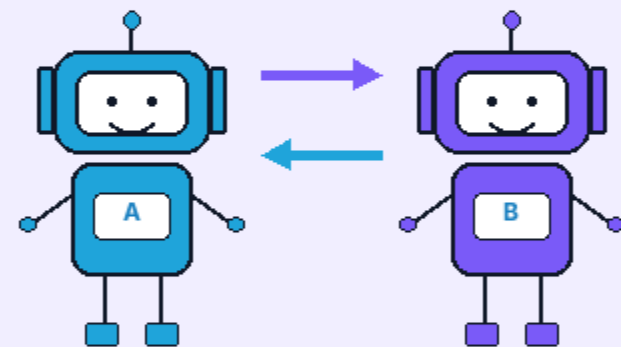
MCP

Agent ↔ tools and data



A2A

Agent ↔ agent

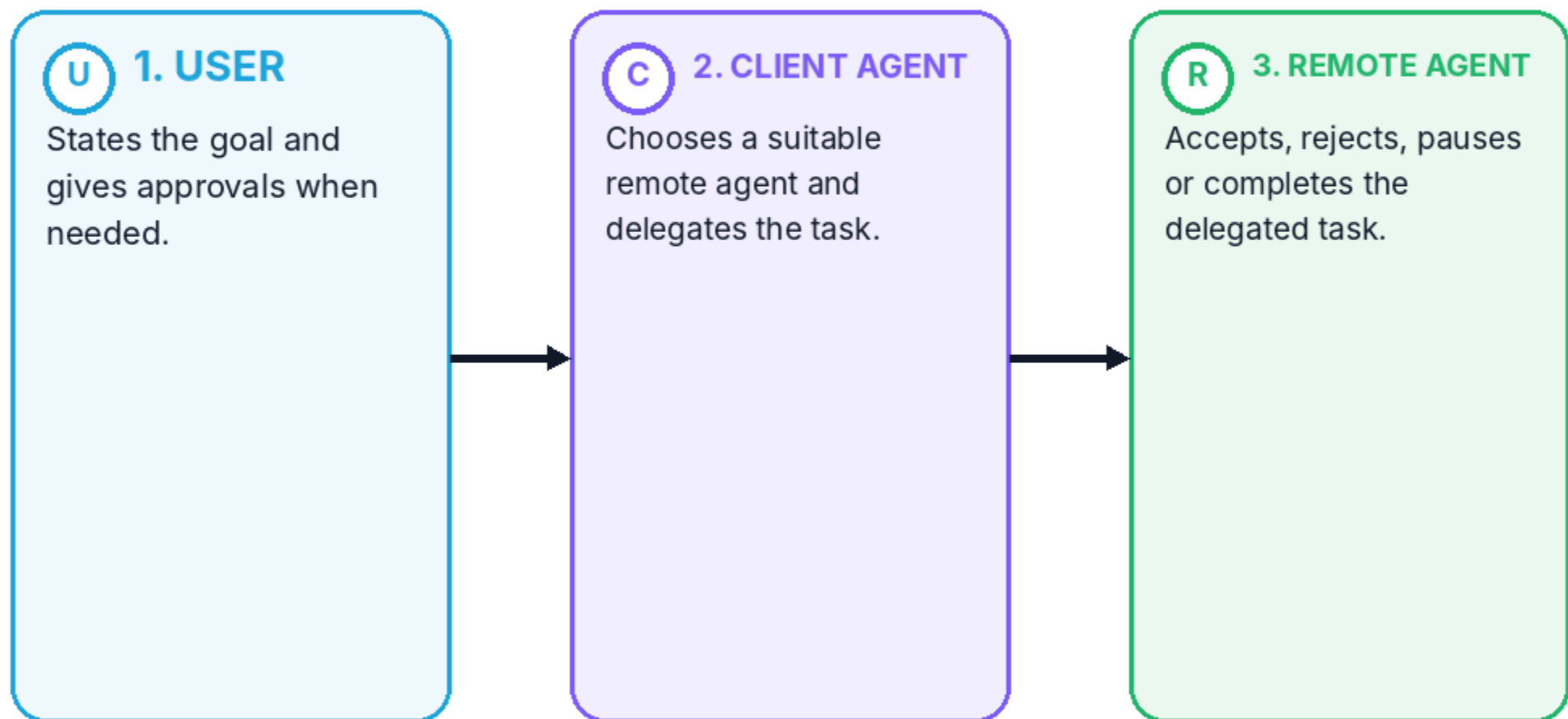


Each agent may use MCP internally.

MCP is the vertical connection to capabilities. A2A is the horizontal connection between agents.

MEET THE THREE ROLES IN A SIMPLE A2A INTERACTION

One asks, one coordinates, and one performs specialized work.



The same agent can be a client in one interaction and a remote agent in another.

"Client" and "remote" describe the role in that conversation — not the agent's permanent identity.

EVERY A2A AGENT NEEDS A DIGITAL BUSINESS CARD

The Agent Card explains what the agent offers and how to contact it.

AGENT CARD: HOTEL FINDER

NAME	Hotel Finder Agent
SKILLS	Search stays • compare policies • hold a room
INPUT	Text or structured trip details
OUTPUT	Shortlist, JSON or booking hold
ACCESS	OAuth 2.0 • streaming supported

1 IDENTITY

Name, description and provider.

2 CAPABILITIES

Skills, input/output modes and update support.

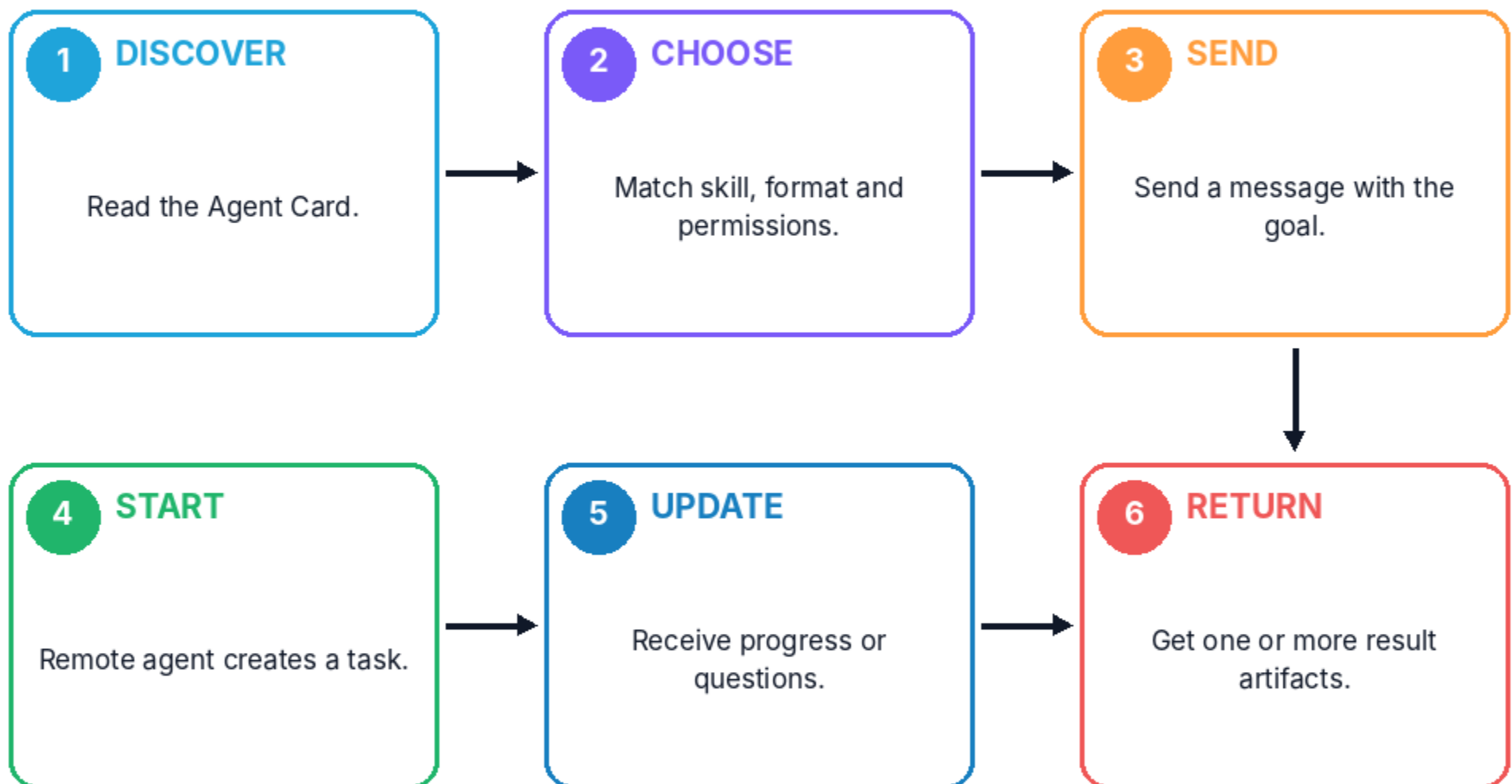
3 SECURITY

Endpoint and required authentication.

The client reads the card before deciding whether the agent is suitable.

HOW AN A2A TASK FLOWS FROM ONE AGENT TO ANOTHER

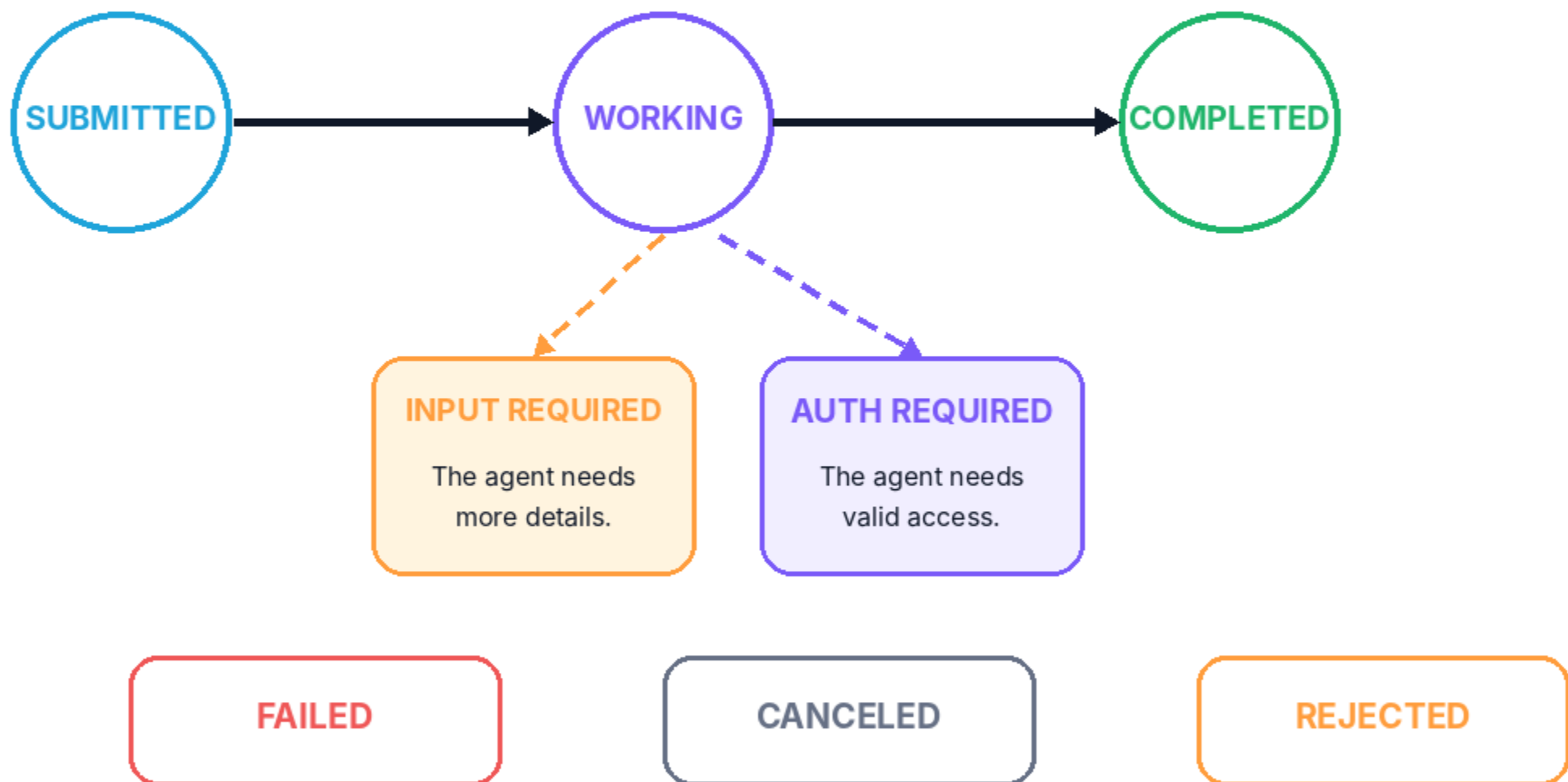
Think: discover → delegate → track → receive.



A2A provides a shared contract for the exchange — the remote agent still decides how to do the work.

AN A2A REQUEST BECOMES A TRACKABLE TASK

A task can progress, pause for help, or end clearly.



A task can pause and continue instead of pretending every job is one instant reply.

MESSAGES ARE THE CONVERSATION. ARTIFACTS ARE THE RESULT.

A2A separates coordination from the work product.

MESSAGES

GOAL "Compare three vendors."

QUESTION "What is your deadline?"

UPDATE "Two sources checked."

FOLLOW-UP "Also include support costs."

ARTIFACTS

REPORT vendor_comparison.pdf

DATA comparison.json

PLAN final_itinerary.md

IMAGE annotated_scan.png

Use messages to coordinate. Use artifacts to deliver the final work.

A2A ALSO SUPPORTS WORK THAT TAKES TIME

The client can receive progress without restarting the task.



EXAMPLE: MARKET RESEARCH REPORT

The remote agent works for 20 minutes, sends progress, asks which region matters most, then returns a cited report.

WAYS TO RECEIVE UPDATES

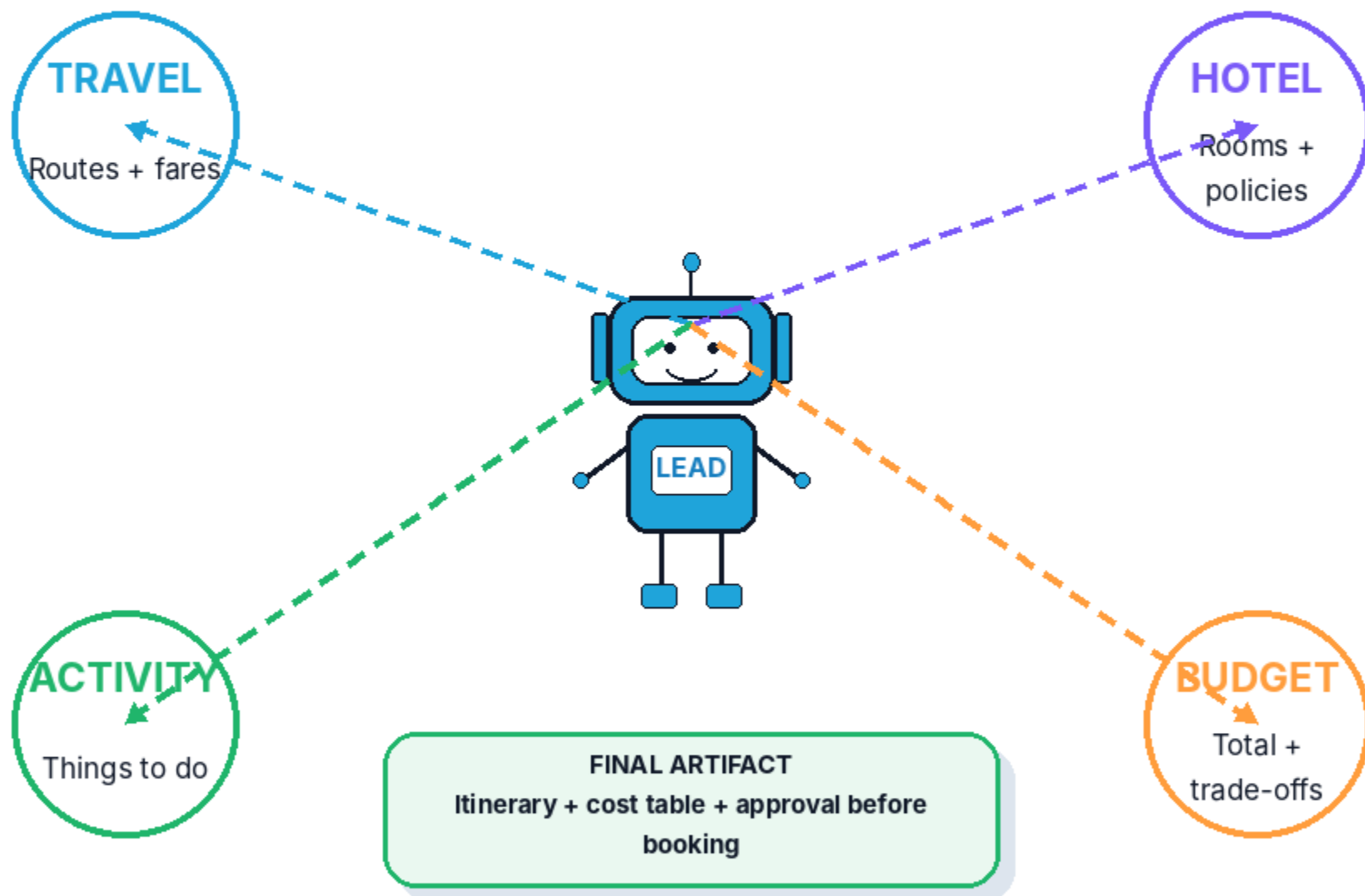
- ✓ Wait for the response
- ✓ Poll for status
- ✓ Stream live updates
- ✓ Receive a push notification

Long-running does not mean silent: tasks can report progress, pause and continue.

REAL EXAMPLE: ONE TRAVEL GOAL, FOUR SPECIALIST AGENTS

Goal: "Plan a 3-day Jaipur trip under ₹30,000."

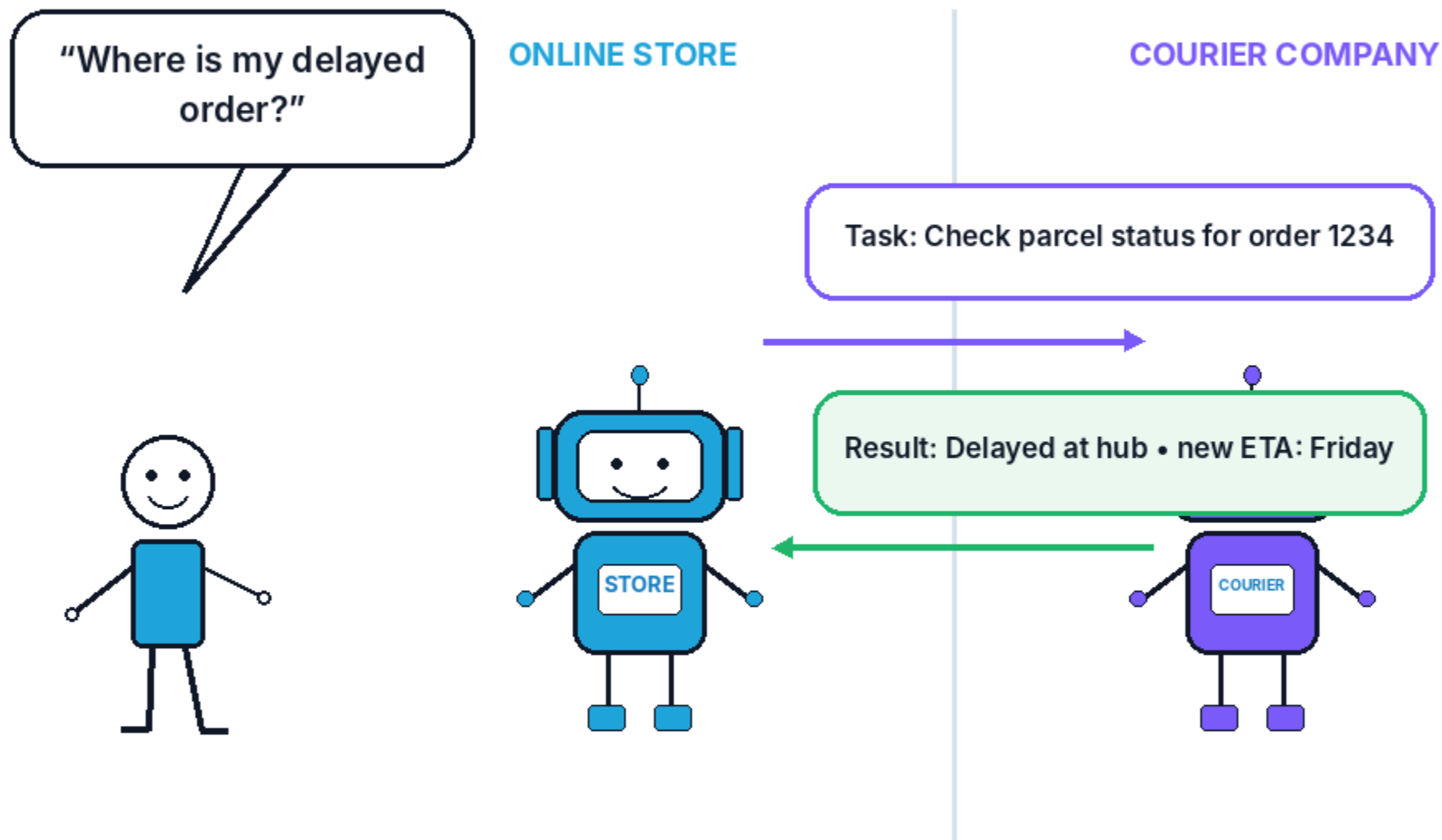
The coordinator delegates only the parts that need specialist work.



Each specialist may use its own tools internally; A2A coordinates the agents.

A2A CAN CONNECT AGENTS ACROSS TEAMS OR COMPANIES

Each organization can keep its internal systems private.



Shared: order reference + authorized status request
Not shared: private prompts, full databases or unrelated customer data

A common protocol reduces custom integration — it does not remove identity, permissions or contracts.

A COMMON PROTOCOL DOES NOT CREATE AUTOMATIC TRUST

Every remote agent must still be treated as an external system.



TRUST MUST BE EARNED

✓ **Verify identity and use HTTPS**
Know which agent you are contacting.

✓ **Authenticate every request**
Use valid credentials — never secrets in prompts.

✓ **Authorize the specific skill**
A valid identity may still lack permission.

✓ **Share the minimum data**
Send only what the task needs.

✓ **Validate files and content**
Treat external data as untrusted.

✓ **Require approval for impact**
Confirm purchases, changes and sensitive actions.

Discovery tells you what an agent claims. Security decides what it may actually do.

WHERE AGENT-TO-AGENT SYSTEMS CAN BREAK

Coordination adds new failure modes — so add limits and visibility.

✗ WRONG AGENT

The chosen skill does not match the task.

CONTROL: Match skills and examples.

✗ LOST CONTEXT

Important constraints disappear during handoff.

CONTROL: Use structured task context.

✗ DELEGATION LOOP

Agents keep passing work back and forth.

CONTROL: Set a hop limit and owner.

✗ DUPLICATE ACTION

A retry sends the payment or email twice.

CONTROL: Use idempotency keys.

✗ CONFLICTING RESULTS

Specialists return incompatible answers.

CONTROL: Add a resolver or human review.

✗ RUNAWAY COST

Too many calls increase time and spending.

CONTROL: Set budgets, timeouts and traces.

More agents are useful only when the value is greater than the coordination overhead.

A2A IN 2026: FROM A NEW IDEA TO A STABLE STANDARD

The focus is interoperability across frameworks, vendors and organizations.

APR 2025

Google introduces A2A.

JUN 2025

Project moves to Linux Foundation governance.

MAR 2026

A2A v1.0 becomes the first stable, production-ready release.

AUG 2026

A2A joins the Agentic AI Foundation as a Growth Stage project.

1 OPEN STANDARD

A shared contract instead of a vendor-specific pairwise adapter.

2 OPAQUE AGENTS

Agents can collaborate without exposing internal logic or tools.

3 MULTI-VENDOR

Designed for agents built on different frameworks and platforms.

A standard improves interoperability — it does not guarantee that an agent is correct, safe or useful.

DAY 17 TAKEAWAY

A2A gives independent agents a shared way to collaborate.

**DISCOVER → DELEGATE → COMMUNICATE → TRACK →
RETURN RESULTS**

M MCP

Agent ↔ tools, data and resources.

A A2A

Agent ↔ agent collaboration.

✓ TOGETHER

Composable systems across apps and organizations.

**NEXT: DAY 18 — A2UI: WHEN AGENTS CREATE INTERACTIVE
INTERFACES**

Which two agents should collaborate in your industry?

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