Scott Logic

Blending determinism and non-determinism in financial workflows

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Non-determinism is a feature, not a bug.

But a regulator will still ask what happened, when, and why.

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A false choice

The industry is often offered an either-or

Deterministic workflow

Strength

Auditable and predictable

Weakness

Brittle with messy input

Autonomous agent

Strength

Flexible and adaptive

Weakness

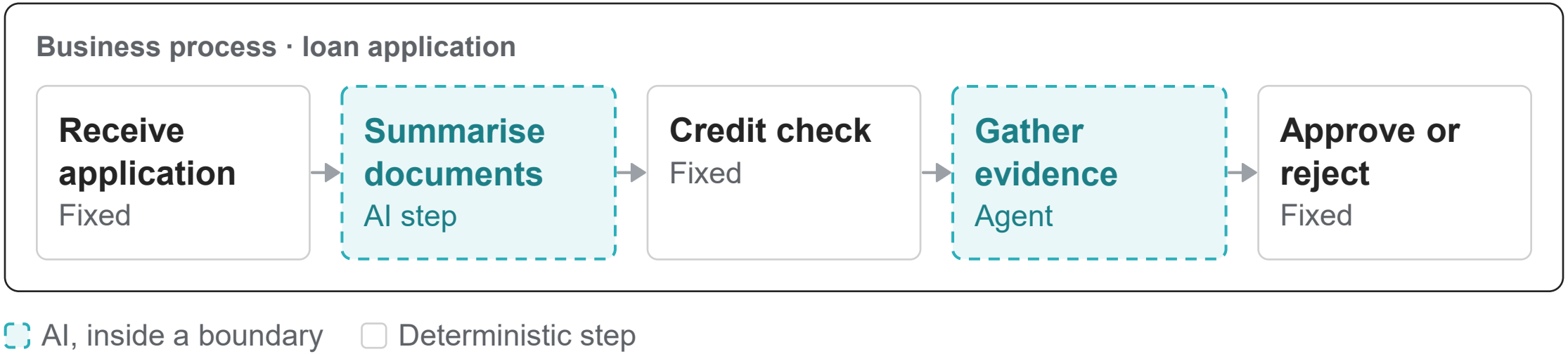
Hard to explain or reproduce

The most effective systems will combine both.

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A deterministic skeleton

Agents decide how. Workflows decide when, where and under what constraints.



AI is woven in where it adds value.
The workflow draws a boundary around each agent.

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Why build the skeleton on a workflow engine?

The controls a regulated process needs come built in

Audit trail
What happened, when, and why

Error handling
Retries and circuit breaking

Persistence
Long-running work survives failures

A visual contract
BPMN that compliance can read



Fluxnova Open-source BPMN orchestration, governed by FINOS

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A sliding scale of AI autonomy

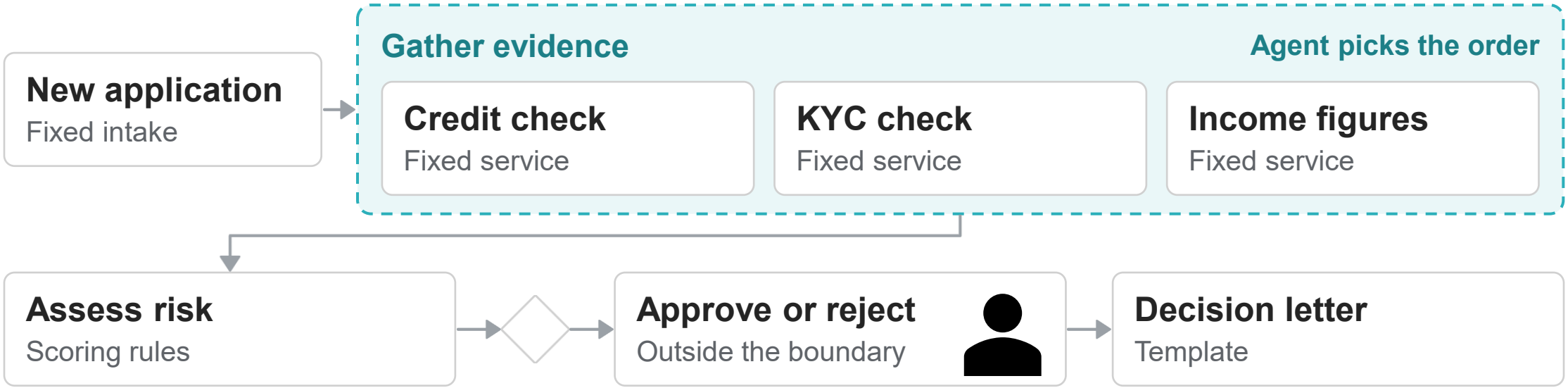
How much of the work the AI decides for itself



Every design sits somewhere on this line.

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Level 1: AI chooses the route

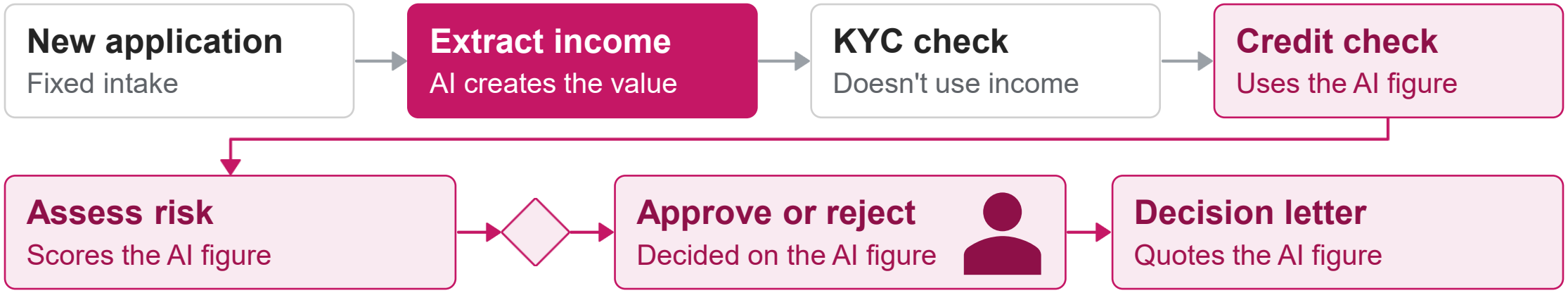


Guardrails Fixed boundary, required tasks, approval kept outside.

Determinism — **Autonomy**

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Level 2: AI creates data

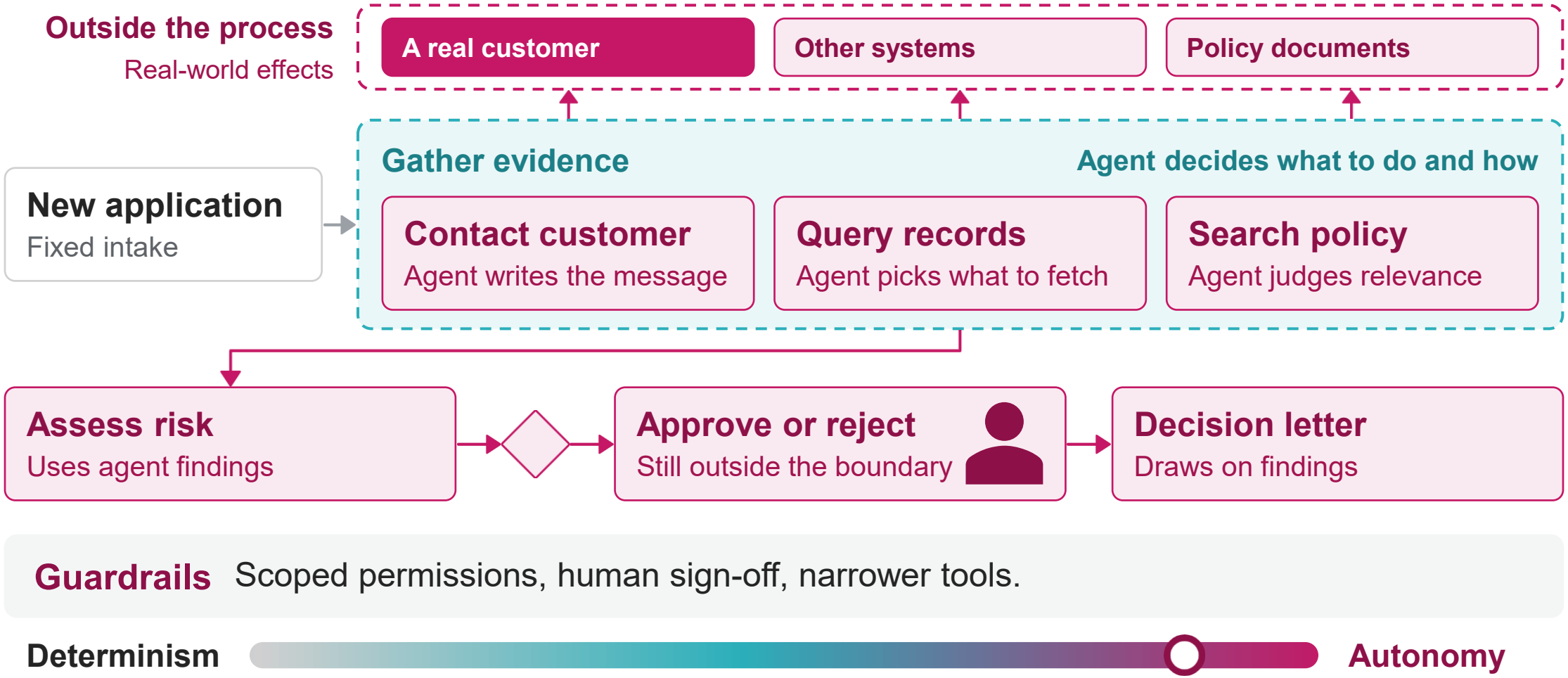


Guardrails Validate AI output at the step edge. Flag AI values in the audit log.

Determinism — **Autonomy**

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Level 3: Agent takes control



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Choosing your level

One process can mix all three

	Level 1 · route	Level 2 · data	Level 3 · agentic
Examples	Evidence gathering	Summaries, letters	Customer queries
Main risk	Wrong order, skipped checks	AI values flow downstream	Irreversible actions
Guardrails	Boundary, required tasks	Validation, audit flags	Permissions, human sign-off
In Fluxnova	Agentic Subprocess	Activity calling an LLM	Agent with general tools

Pick the lowest level that solves the problem.

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Governed autonomy

Three takeaways

01 Keep non-determinism inside a deterministic skeleton.

02 Let a workflow engine like Fluxnova provide the controls.

03 Treat autonomy as a dial

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Thank you

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