THE THESIS

AI ROI is not evenly distributed.

AI adoption is rising quickly across organizations, but adoption alone does not prove economic value. The stronger evidence appears where AI is tied to operational reality: a defined workflow, firm-specific data, measurable outputs and a process that changes around the tool.

This distinction matters because many AI applications are easy to demonstrate but harder to monetize. The key question is not whether an organization uses AI, but whether AI changes a measurable production loop.

WHERE VALUE APPEARS, IT USUALLY MEETS FOUR CONDITIONS

01

A specific workflow

A bounded task with clear inputs, outputs and responsibility.

02

Proprietary or operational data

Data generated inside the organization, not only public or generic data.

03

Clear performance metrics

Outcomes that can be measured before and after deployment.

04

Process change

The workflow is redesigned around the tool, not just assisted by it.

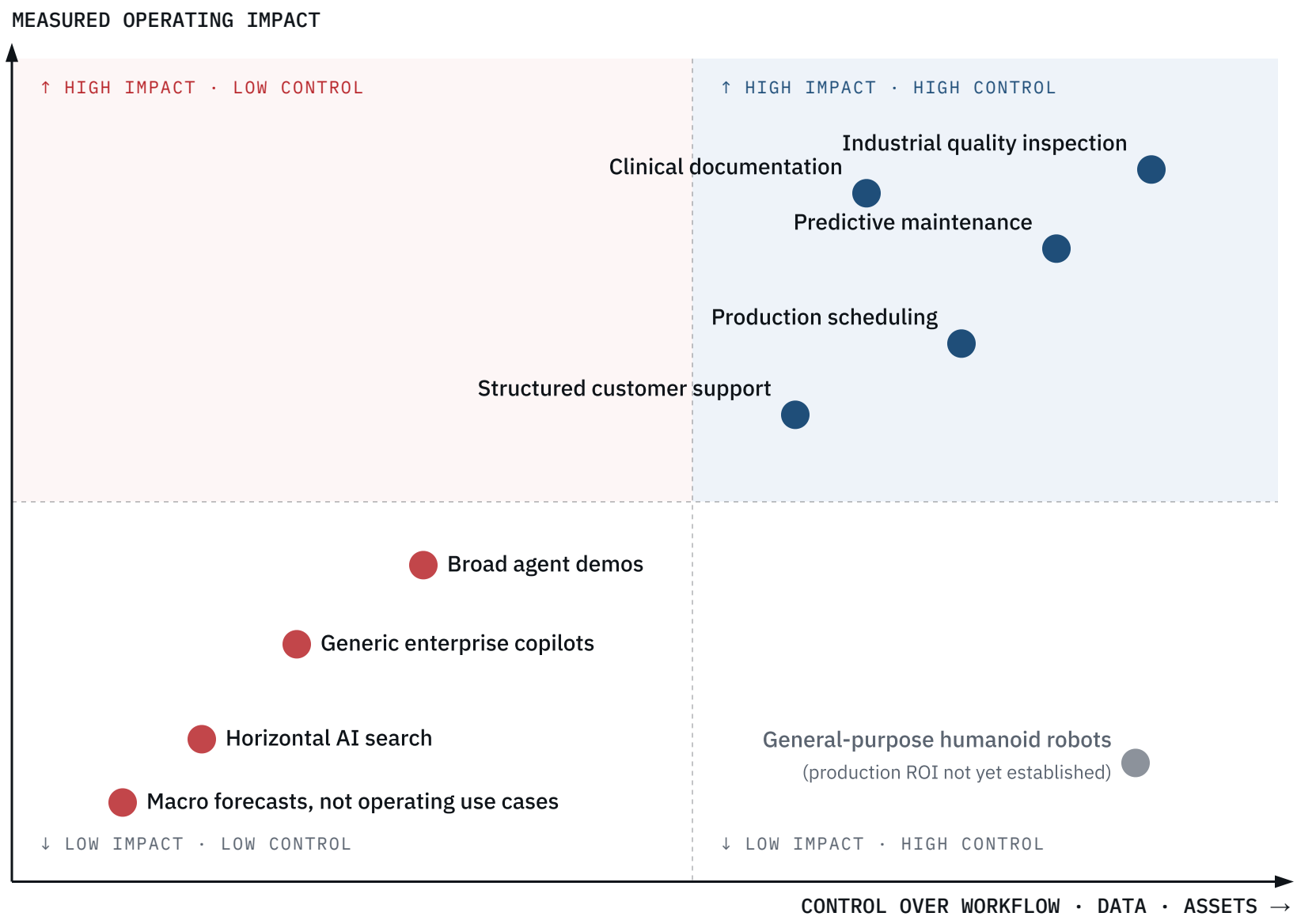
A MAP

Where AI shows measurable operating impact.

A useful way to read the evidence is through two questions.

First: does AI change a measurable operating loop?
Second: does the firm control the workflow, data, or assets around that loop?

The strongest cases appear where both are true. AI is not just added to work; it becomes part of how the work is measured, managed and improved.



Reading: The upper-right quadrant is where the evidence is strongest: high operating impact and high control over workflow, data, or assets. The lower-left is where claims often outrun measurement.

ALREADY MEASURABLE

The strongest evidence is task-level and workflow-level.

The clearest productivity gains do not come from "AI in general." They appear in bounded settings where the task is repeated, the output is observable and performance can be compared before and after deployment.

That is why customer support, clinical documentation and manufacturing automation are more useful evidence than broad adoption numbers.

14 to 15 %

PRODUCTIVITY GAIN · AVG.

Customer support with AI assistance

A large field study of 5,179 agents found that AI assistance increased issues resolved per hour by 14 to 15% on average. The largest gains appeared among less-experienced and lower-skilled workers.

Brynjolfsson, Li & Raymond - NBER / QJE

Up to

83 %

DOCUMENTATION TIME REDUCTION · REPORTED

Clinical documentation

AI note-generation tools show value because they enter a painful, repeated workflow. The benefit is not only better text generation, but less time spent on documentation and more capacity for clinical work.

Stanford AI Index - Medicine chapter

20 to 25 %

OUTPUT GAIN · FOUR-YEAR HORIZON

Manufacturing automation

Robot adoption in manufacturing shows a similar pattern: value becomes visible when automation changes the production system itself. The gains are measured at firm level, not only at task level.

Koch, Manuylov & Smolka - Economic Journal

> The common pattern is not "AI in general." It is AI embedded into a measurable operating system: a task, a loop and a defined outcome.

ADOPTION ≠ ROI

AI usage is widespread. Measured financial impact is still uneven.

Adoption numbers show that AI has entered the enterprise. They do not yet prove that AI has changed enterprise economics.

The harder question is whether AI has moved a financial or operating variable that management already tracks.

ORGANIZATIONAL ADOPTION

88%

of surveyed organizations used AI in at least one business function in 2025.

Stanford AI Index 2026 - Economy

NO TANGIBLE EBIT IMPACT YET

>80%

of companies using generative AI report no tangible enterprise-level EBIT impact so far.

McKinsey - The State of AI, 2025

AGENTIC AI · THE LONG-HORIZON GAP

In short task windows, leading AI systems can look extremely strong. But performance often changes when the task becomes longer, messier and closer to real operational work.

2-hour task budget: top AI systems scored about 4× higher than human experts.
32-hour task budget: human experts outscored AI about 2:1.

Many demos look convincing before they meet long-horizon work, unclear constraints and real accountability. That is the gap between a benchmark result and a business outcome.

RE-Bench · Stanford AI Index 2025 - Technical Performance

WHERE CAPITAL, DEPLOYMENT AND POLICY DIVERGE

The AI economy is splitting by strength.

The global AI race is not one race. Different regions are building different advantages.

The US leads in capital and notable model production. China leads in deployment surface, especially through manufacturing and robotics. Europe's opportunity is different: converting industrial depth and public infrastructure into measurable AI adoption.

UNITED STATES

Capital & models

$285.9 B

Private AI investment remains heavily concentrated in the US, reinforcing its lead in notable AI model production, compute access and venture-backed AI companies.

CHINA

Deployment surface

54 %

China's advantage is not only model development. It has a large industrial base where automation can be deployed, tested and scaled across real production environments.

EUROPE

Industrial base & policy

19

AI Factories

Europe is building 19 AI Factories across 16 Member States to give startups, SMEs and industry access to AI-optimised supercomputing, technical support and applied AI infrastructure.

PRIVATE AI INVESTMENT, 2025 - US$ BILLIONS

Reading: The US advantage is capital concentration. China's advantage is deployment surface. Europe's opportunity is industrial application. For AI ROI, the key question is which region can connect models to measurable operating loops fastest. **Sources:** Stanford AI Index 2026 - Economy chapter. IFR World Robotics 2025. European Commission - AI Factories, AI Continent & Apply AI Strategy.

THE INVESTMENT QUESTION

Does AI change a measurable production loop?

The interesting question is not whether a company uses AI. It is whether AI shifts a variable that the operating model already tracks.

If the answer is yes, the AI layer may become part of the production system. If the answer is no, it may remain a useful tool without clear economic leverage.

VARIABLES THAT COUNT

Lower downtime	Higher throughput
Fewer defects	Faster documentation
Better scheduling	Lower service cost
Shorter learning curves	Reduced rework

> The evidence is stronger where AI enters a controlled workflow with clear operating metrics.
>
> That is the form of AI adoption I would take most seriously today: less visible than demos, harder to fake and more closely tied to real economic value.

Sources cited throughout: NBER, QJE, Economic Journal, Stanford AI Index, McKinsey, IFR World Robotics, European Commission.