AN XSI WHITEPAPER · JULY 2026

Do You Have an Apprentice?

XSI Apprentice™ — demonstrate a repetitive task once, and it learns to do it under your sign-off. Governed by construction.

ABSTRACT

The Third Option

Teams have wanted to automate the boring, repeating parts of the job for as long as the job has existed. What has stopped them is the choice on offer: a brittle macro that breaks the moment a screen changes, or an unsupervised bot that acts on its own. XSI Apprentice is a third option — a governed programming-by-demonstration tool. A worker demonstrates a task once, Apprentice synthesizes it into a Microsoft Agent Framework workflow, and the workflow runs only under two human gates. Apprentice does the repetition. The worker keeps the judgment. And it tracks the hours it gives back. This paper explains how it works, why "apprentice" is the design and not the marketing, and how — as the first agentic application for XSI-AIMS — it is witnessed and governed by construction.

THE PROBLEM

Two Options That Both Cost You

The Macro

Record the clicks, play them back. Brittle. Change one screen and it breaks, silently. You find out when the work comes back wrong.

The Unsupervised Bot

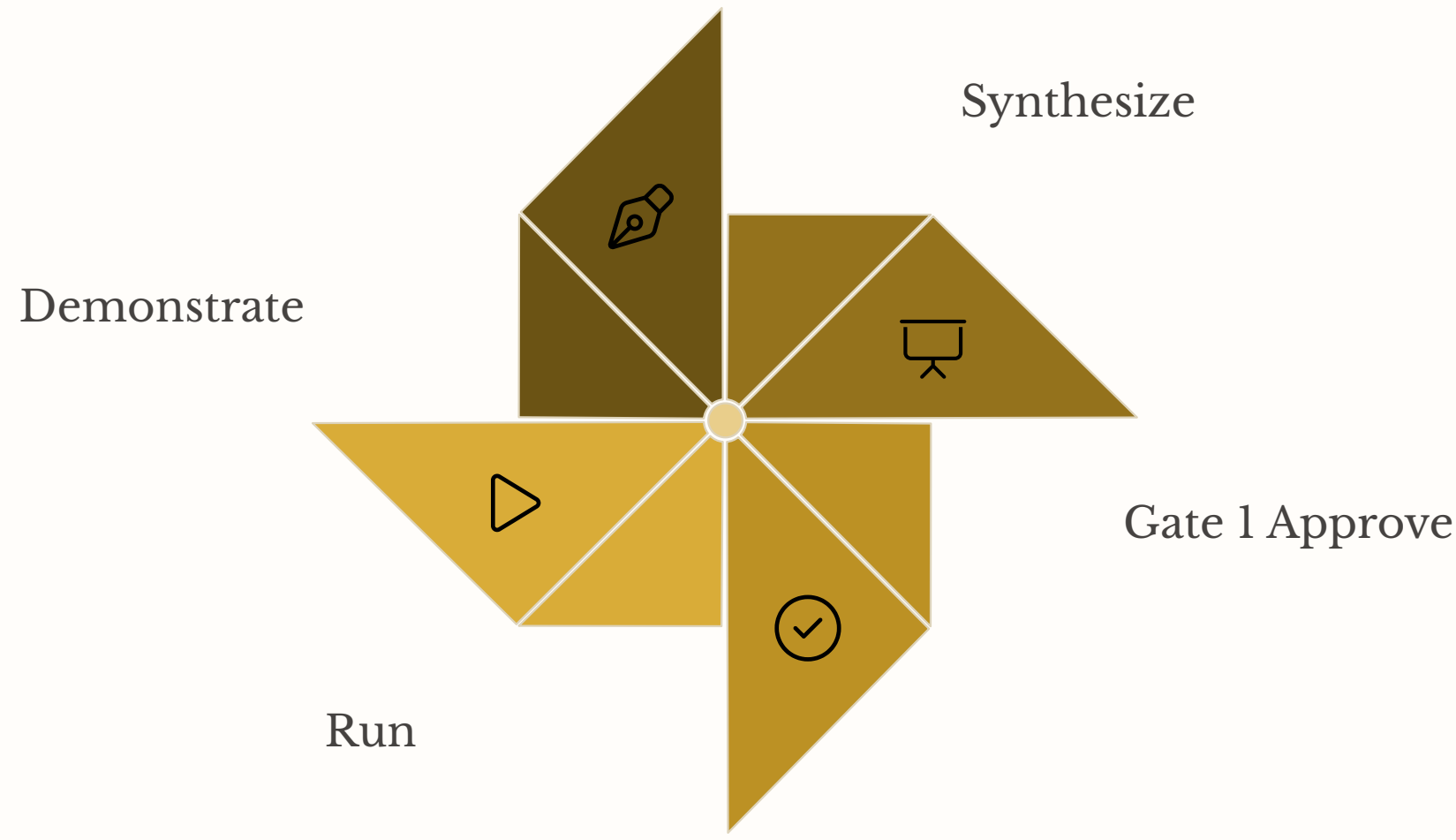
Hand it the keys and hope. It acts on its own, and the first time it does something you didn't expect, on live systems, you learn the cost of "hope."

One option is too dumb to trust. The other is too autonomous to trust.

> An apprentice is neither.

HOW IT WORKS

How Apprentice Works



The loop is intentional: when a task changes, the worker retrains Apprentice from the new demonstration, and the same two human gates apply before anything runs again.

1

Demonstrate Once

A worker shows Apprentice the task a single time.

2

Synthesize a Workflow

Apprentice turns the demonstration into a real, inspectable workflow graph on the Microsoft Agent Framework — not a recording of a mouse.

3

Gate 1: Approve

The workflow never runs on its own. A worker approves it before it goes live.

4

Run

Apprentice executes the approved workflow.

5

Gate 2: Review

The worker reviews the work product on every run.

6

Hours Saved

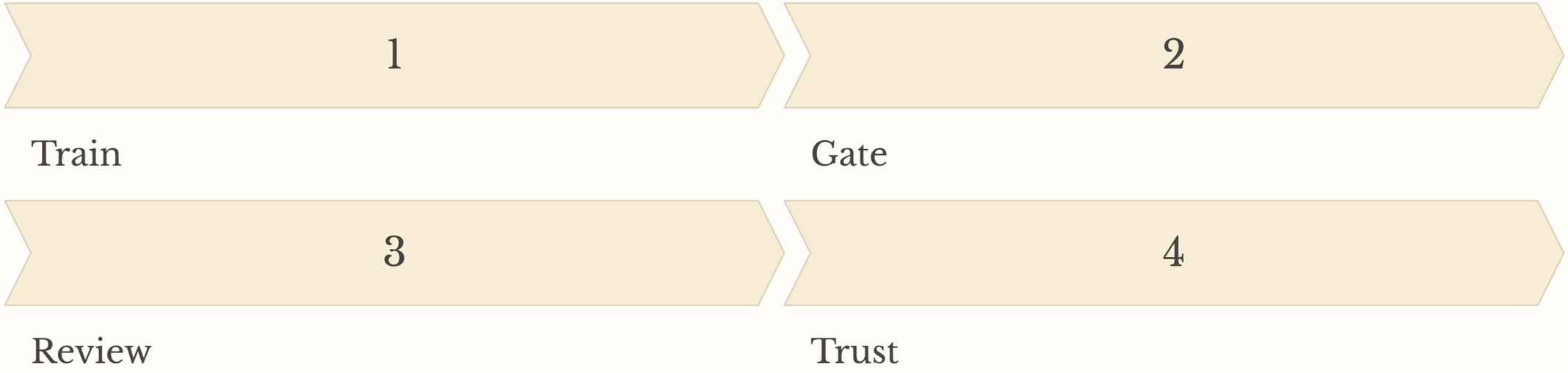
Built-in accounting reports the time Apprentice gives back.

THE DIFFERENTIATOR

Why "Apprentice," Not "Bot"

The word is the design. An unsupervised bot asks for trust on faith. An apprentice earns trust by doing the work in front of you, under your sign-off, until you are ready to give it more rope.

That is the governance model, in order:



Nothing Apprentice does is unwitnessed, and nothing ships without a human saying yes — which is what makes it automation a regulated team can actually adopt, not fear.

> An apprentice earns trust by doing the work in front of you, under your sign-off, until you are ready to give it more rope.

WHY XSI

The Flagship Agentic Application

XSI Apprentice is the first of XSI's agentic applications for XSI-AIMS — tools built for the virtual worker and governed by the standard. Because Apprentice registers through XSI-AIMS, every step it takes is witnessed and governed, and the humans who run it see and steer the work through one pane of glass — XSI Helm.

The apprenticeship is not a metaphor bolted onto a product. It is what governed-by-construction looks like when a tool is built for a worker you intend to trust over time.

Witnessed by Construction

Every step Apprentice takes is registered and visible through XSI-AIMS.

One Pane of Glass

Workers see and steer all activity through XSI Helm — no hidden actions.

Governed by Standard

Built for the virtual worker and governed by XSI-AIMS from the ground up.

HONEST BOUNDS

What Isn't Here Yet

The Synthesis Is Maturing

The governance came first, and it's built — the synthesis is maturing. The path that watches a demonstration and turns it into a workflow is still being hardened, and this paper says so plainly rather than dressing it up.

Repetition, Not Judgment

Apprentice removes the repetition, not the judgment. It is not here to replace the worker — it is here to give the worker their afternoons back. The human stays the master.

For the Work You Can Show It

Programming-by-demonstration handles repetitive, demonstrable tasks. Novel work still goes to a person.

CLOSE

Build One With Us

Do you have an apprentice? Not a macro that breaks when the screen moves. Not a bot you have to hope about. An apprentice you train, sign off on, and come to trust — doing the work you've done a thousand times, and handing you back the hours. You're still the master. It's just no longer a beginner.

In preview now.

See it — Do you have an apprentice? Request access