

THE DARK TESTING FACTORY



Stop running tests. Start owning quality.

Autonomous testing at scale, guided by human context and judgment

What is the **dark testing factory**?

The dark testing factory is a self-operating quality system that plans, designs, executes, and maintains tests autonomously, end to end. The name comes from manufacturing: a dark factory is a production line automated enough to run without people on the floor and the lights are turned off. Applied to software testing, it means repeatable testing effort becomes reusable software and knowledge. In the dark testing factory, testing shifts from labor that repeats to software that scales.

It is not a smarter test runner or another agentic feature. It is autonomous testing as an operating model—one that runs continuously, adapts to change, and gets more capable with every cycle.



Inside **the factory**

The factory runs on three layers that work together as one continuous system—governing, executing, and learning in a closed loop:

- **Control Tower:** The governance layer. Sets risk profiles, escalation rules, and approval thresholds—defining when the factory can act autonomously and when it escalates to a human.
- **The Fabric:** The operating layer. A closed loop of agents, automations, and humans that handles intake, risk assessment, test design, data and environment prep, execution, result analysis, defect filing, and test maintenance.
- **Data Layer:** The knowledge substrate. Stores requirements, test cases, test sets, results, and defects, and feeds past outcomes back into the risk model so each cycle is more informed than the last.

How the lights get dimmer in a **dark testing factory**

2

Removes humans from routine operation

Runs continuously inside the delivery pipeline

Closes the quality loop end to end

Schedules testing based on risk, not fixed cycles

Scales coverage without proportional headcount growth

Improves through every human intervention

People don't disappear—they move up

A dark testing factory is not humanless. Humans step back from execution-level work—running regression cycles, chasing environment issues, filing defects by hand—and into higher-value work.

With the lights off, testers spend their time defining intent, resolving ambiguity, supplying missing business knowledge, and handling exceptions where judgment matters. Every human intervention teaches the factory something reusable.

Build your dark testing factory today in UiPath Test Cloud

The building blocks are available today:

- **Test Manager** — Quality knowledge: requirements, test cases, test sets, results, and defects.
- **Maestro** — Orchestration for long-running autonomous flows across agents, automations, and humans.
- **Agent Builder** — Specialized agents tailored to testing needs, systems, and workflows.
- **Studio** — Automation execution across applications, environments, and tools.

Start dimming the lights, today

Early dark testing factories are already emerging: environments spin up and tear down automatically, agents generate and deploy test data, and results are analyzed and routed without manual handoff.

[Read this white paper](#) to learn how you can start to “turn the lights off” today with UiPath Test Cloud.

