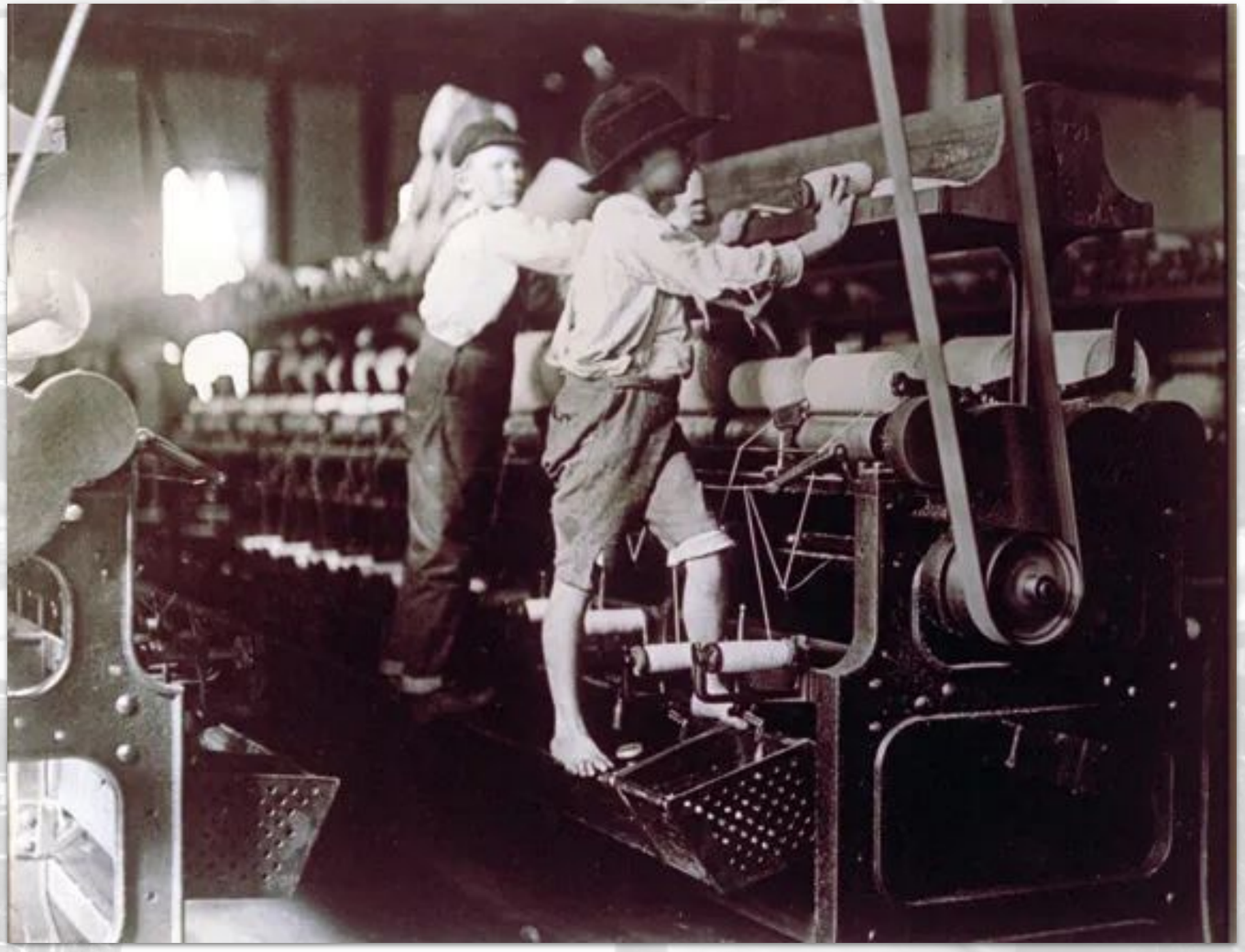
Proof, not hope:

“In production” as the modernization metric that matters most

Edward Hieatt
Chief Customer Officer
Mechanical Orchard



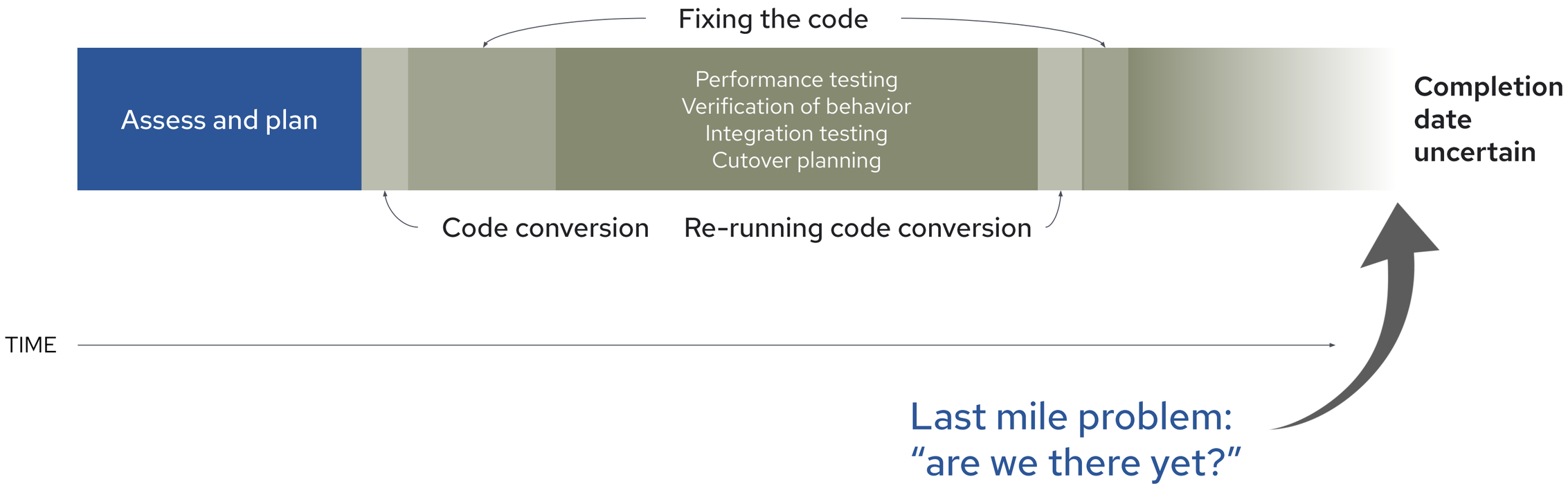
Complicating factors

- Age and complexity of the system
- Criticality of the system
- Past efforts inadequate
- Past efforts failed

Rewriting critical mainframe applications
yields the greatest reward–
but incurs the highest risk.

Until now.

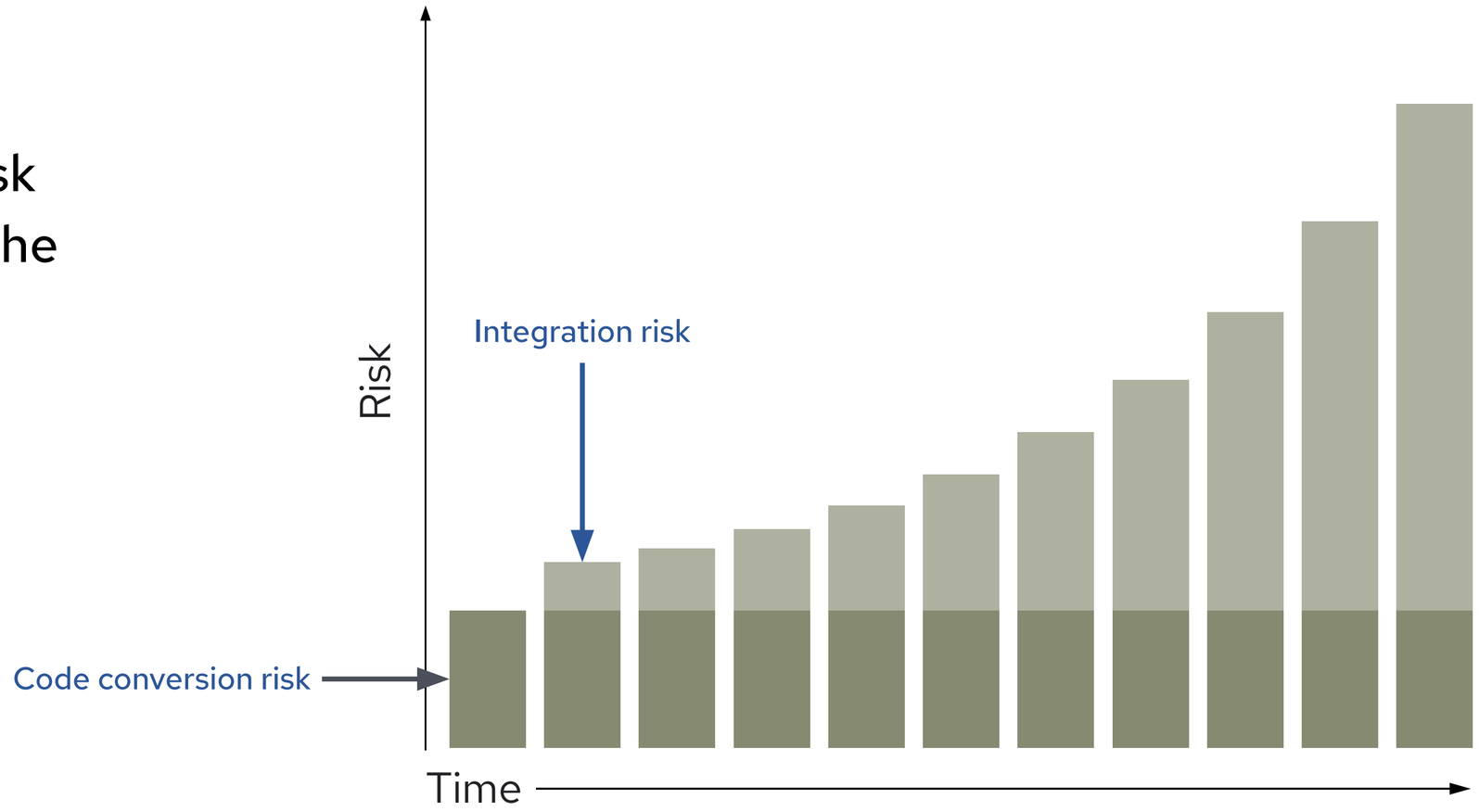
Traditional rewrites focus on code conversion, to the detriment of what the system actually does

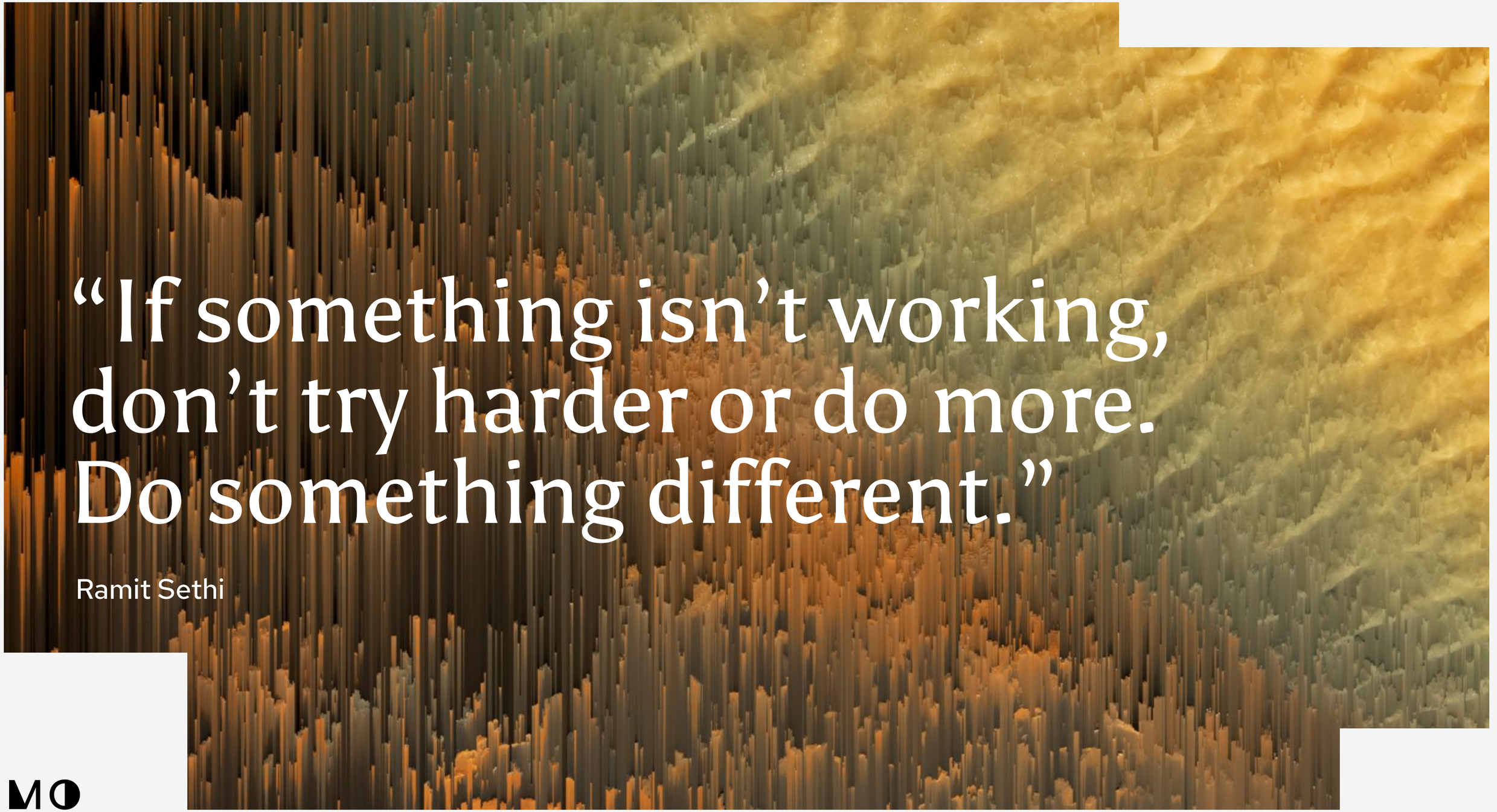


The last mile problem is not a technology problem.

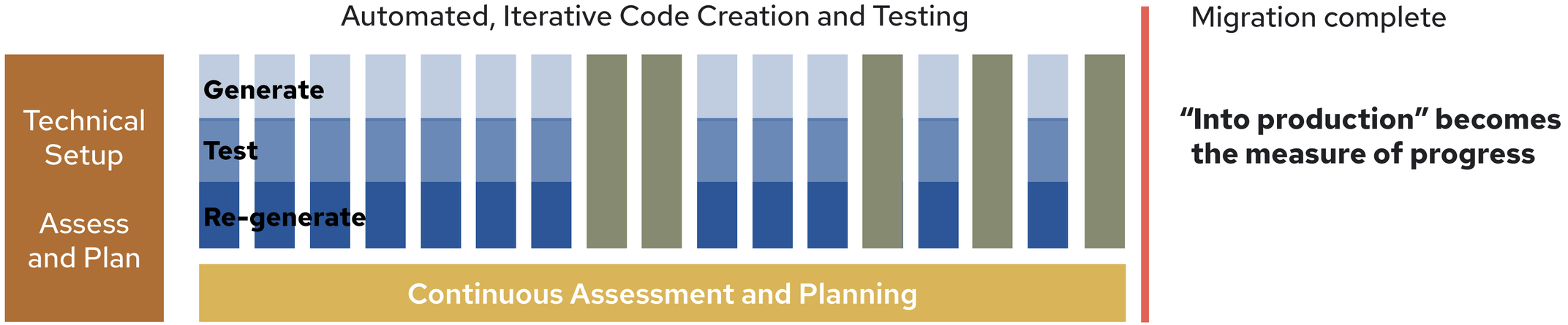
It’s a risk problem.

While the code conversion risk remains relatively constant, the integration risk skyrockets



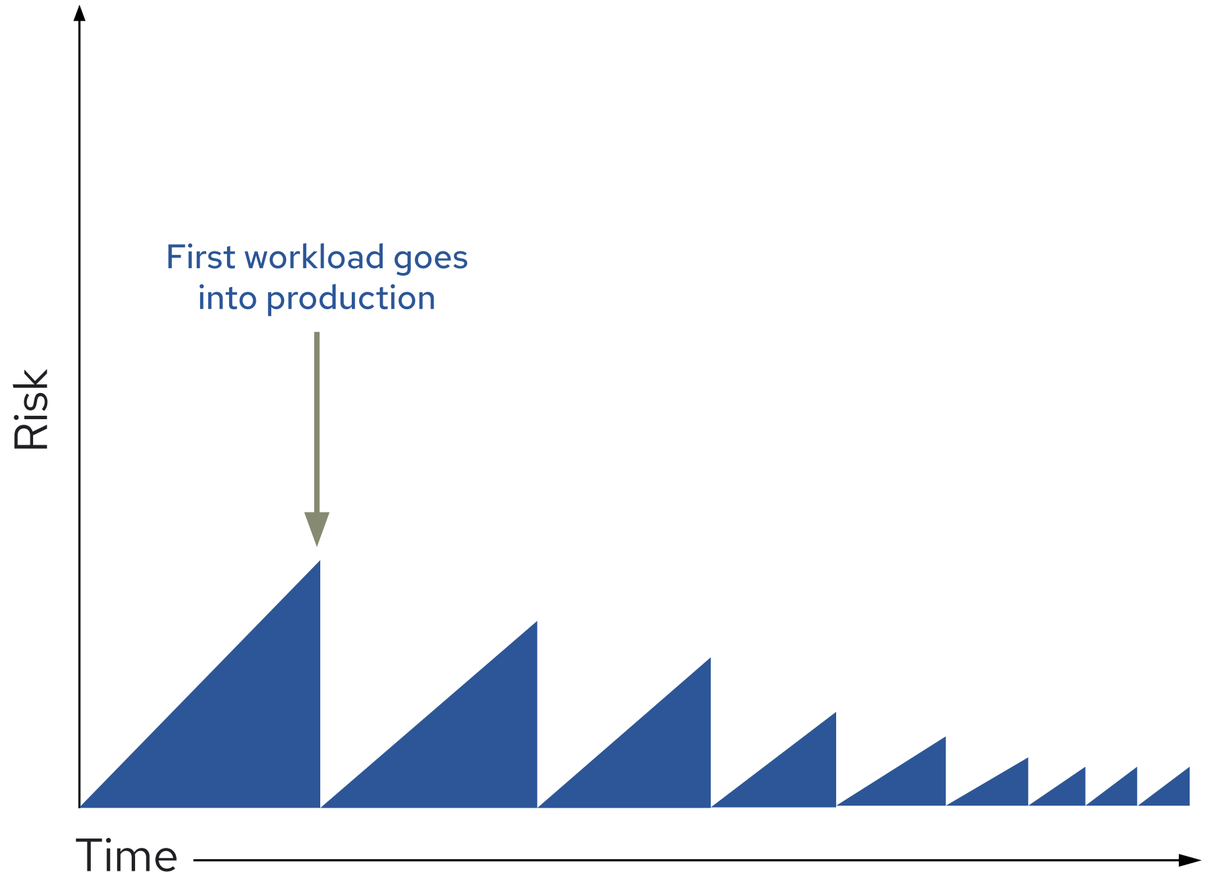

“If something isn’t working,
don’t try harder or do more.
Do something different.”
Ramit Sethi

Mechanical Orchard's AI platform, Imogen, accelerates and reduces the risk of each slice



Once it's in a modern language off the mainframe, it's much simpler to understand, apply AI, re-architect. In short, you can achieve continuous modernization

Integrations are embedded in the behavioral specification



As each workload goes into production, the risk falls back down.

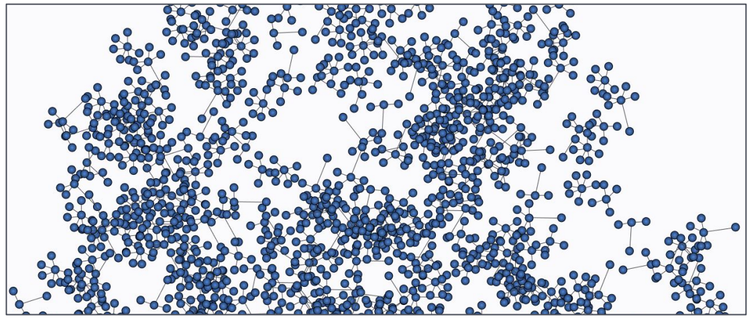
Subsequent workloads ‘learn’ from previous efforts and are faster and even less risky.

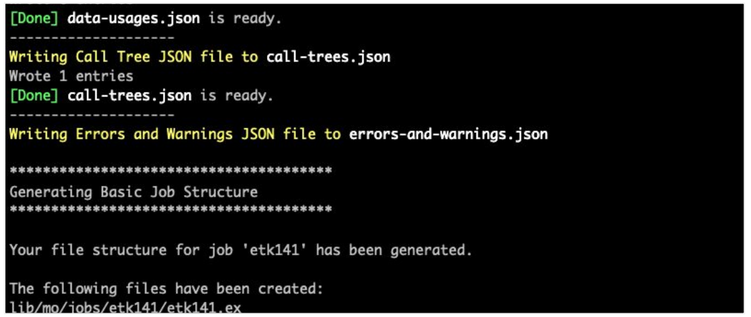
Each workload in production proves the rewrite is working.

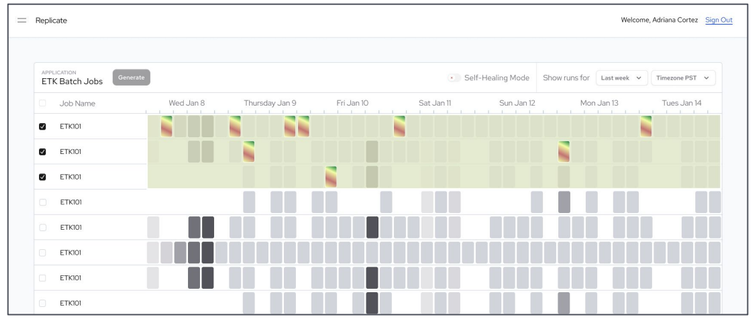
These underlying principles restore control and certainty—and make continuous modernization possible

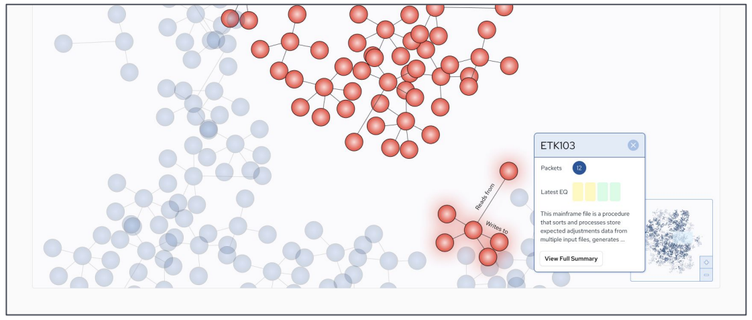
Principles	The running system defines the behavior	Reverse-engineer a behavioral twin	Deploy incrementally into production
Processes	Capture the behavior of the system using data flows	Use generative AI to converge on the precise outputs	Orchestrate between old and new environments
Outcomes	Preserve existing integrations and processes, minimize disruption	A modern, understandable codebase, cleared of technical debt	Proof of concrete progress as workloads cutover

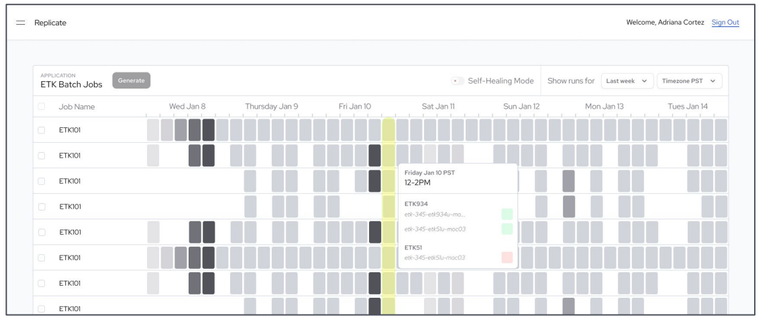
System View → Application View → Data Collection → Replication → Verification → Operate & Innovate











System Flow Comprehension

Generate & Verify

Launch & Operate

IMOGEN

Mainframe modernization platform
from Mechanical Orchard

Gartner
COOL
VENDOR
2025

Mechanical Orchard was named a Cool Vendor in the 2025 Gartner® Cool Vendors™ in AI Code Assistants report.

Gartner, Cool Vendors in AI Code Assistants, Arun Batchu, Deacon D.K Wan, et al., 3 June 2025

Case study: F500 retailer

Challenge

10M LOC of COBOL supported by small mainframe team with low system context.

Constrained ability to innovate in a competitive market.

Solution

Build and operate a cloud-native, innovation-ready digital replica.

Continuously decommission the mainframe and unlock the capacity to innovate.

Outcomes

- Successfully retired and modernized a major global inventory system with zero disruption and top-tier SLA performance.
- Batch job cycle time improved 265%; throughput up 347%.
- Two of the largest remaining apps are on track for full modernization by Jan 2026 - 65% faster than traditional approaches.

“You have gone further than any modernization effort we’ve ever experienced.” – Chief Enterprise Architect

Regain control.
Realize continuous modernization.

Visit us at
mechanical-orchard.com

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