

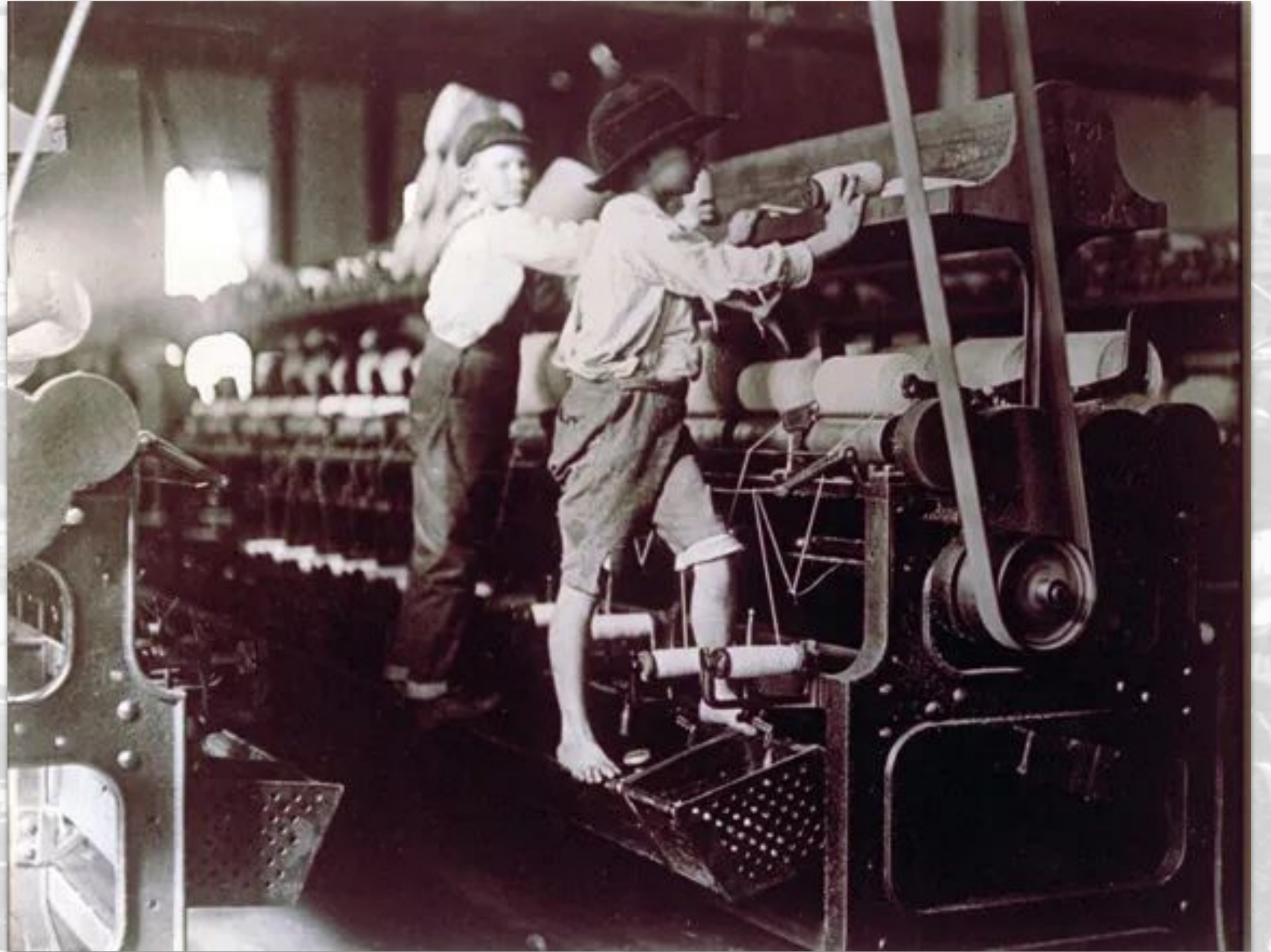
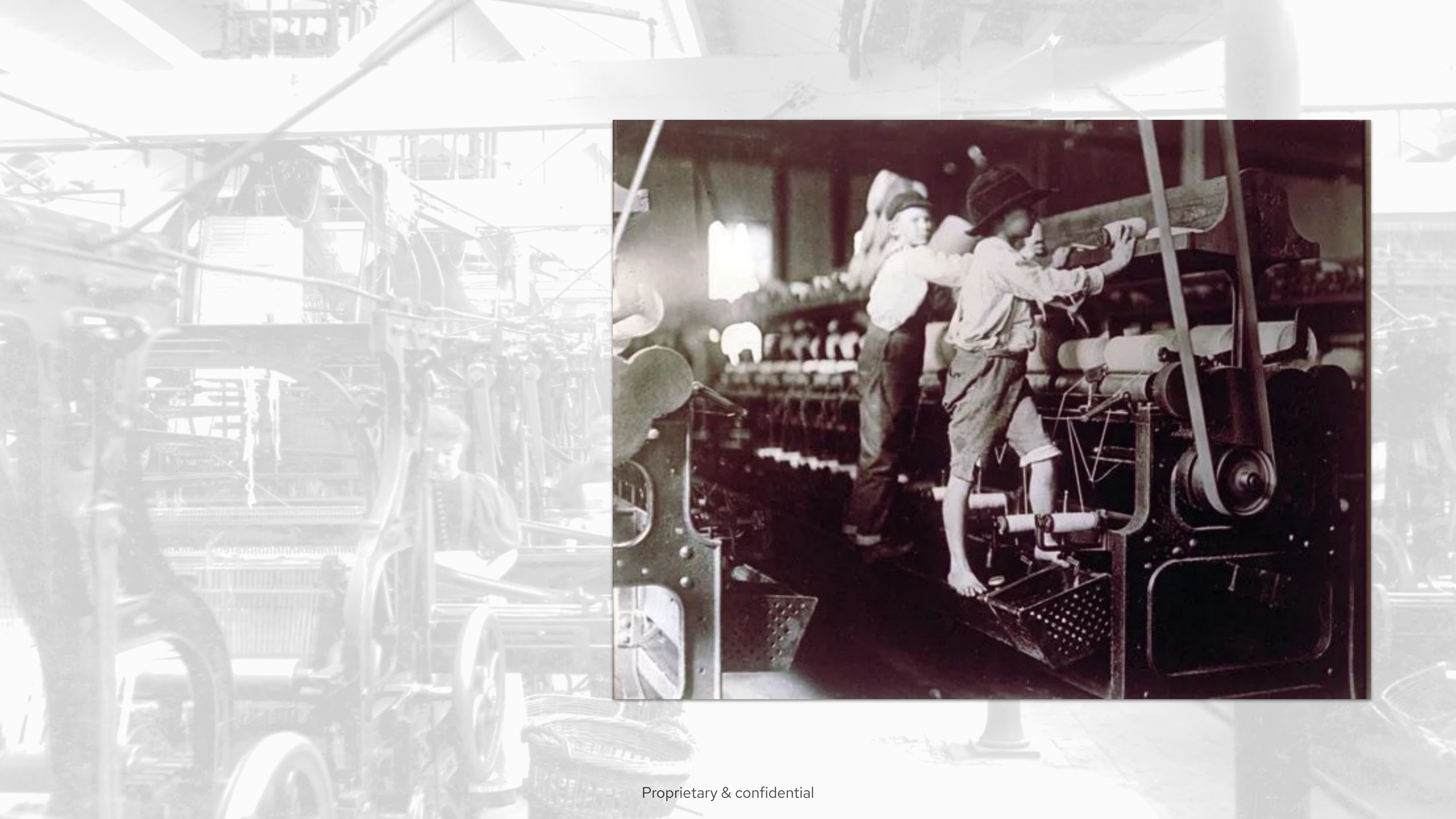


Proof, not hope:

“In production” as the modernization
metric that matters most

Edward Hieatt

Chief Customer Officer
Mechanical Orchard



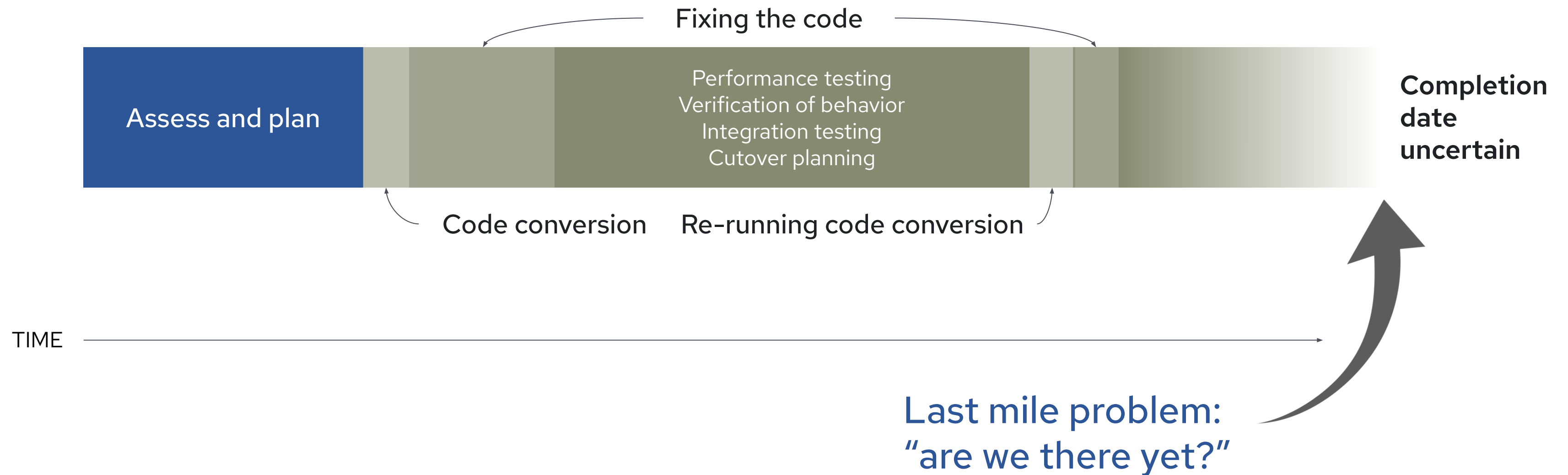
Complicating factors

- 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.

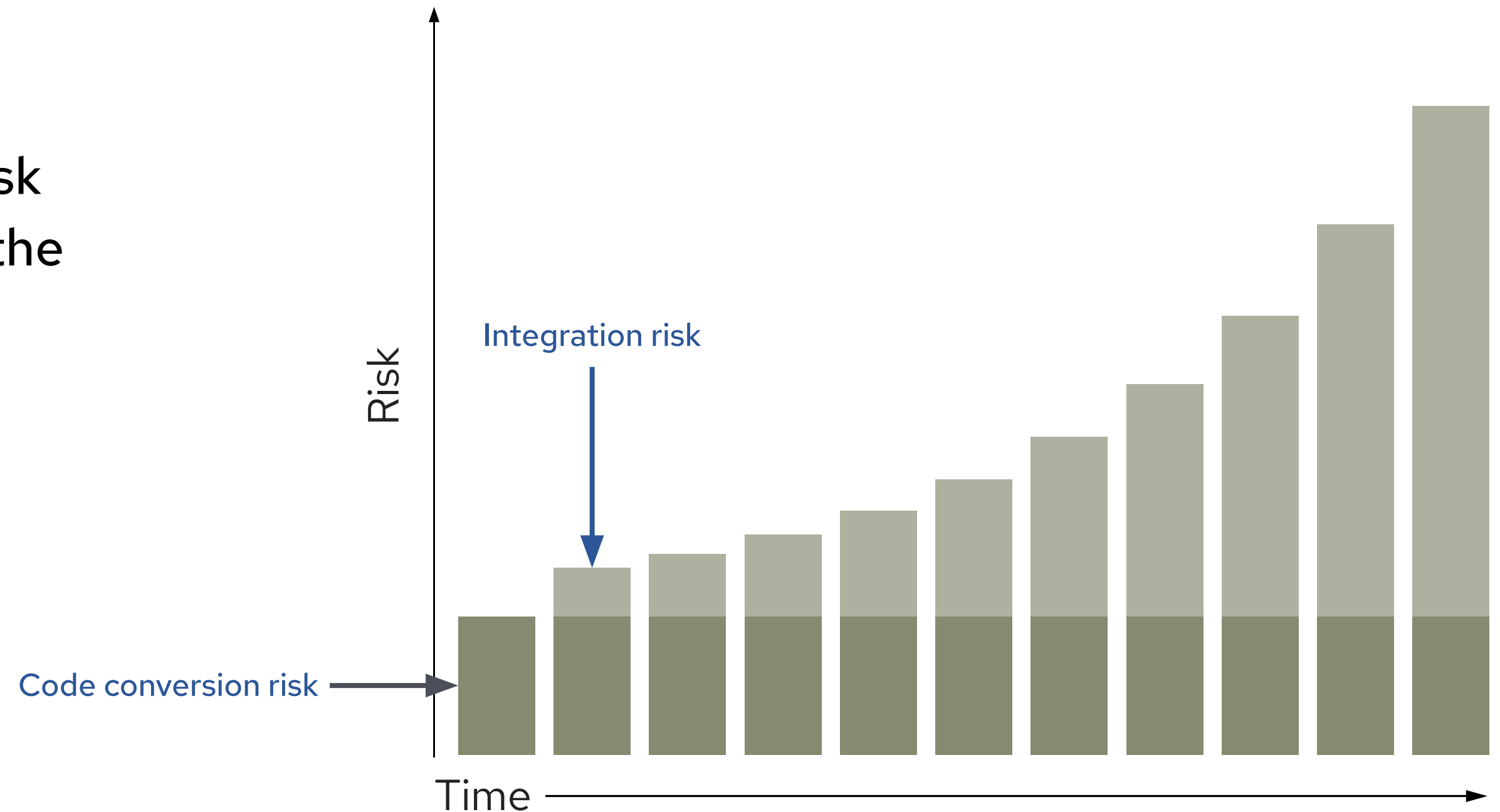
Traditional rewrites focus on code conversion, to the detriment of what the system actually does




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

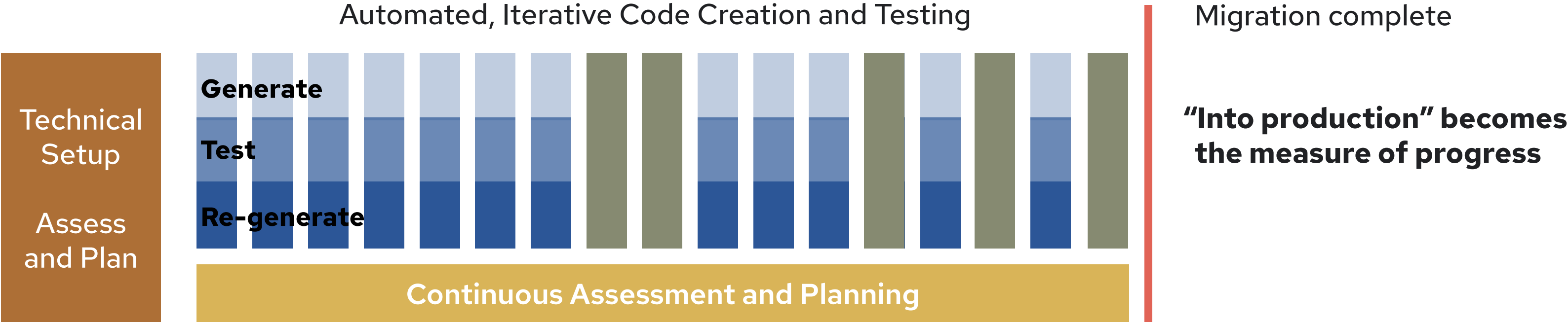


The background of the image is a composite of two distinct textures. The left half is filled with a dense, vertical pattern of thin, slightly irregular lines in shades of brown, tan, and dark grey, creating a wood-grain-like effect. The right half features a soft, painterly depiction of a sunset or sunrise sky, with warm orange and yellow hues blending into a pale, hazy blue. The overall composition is split vertically, with the text centered across both sections.

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

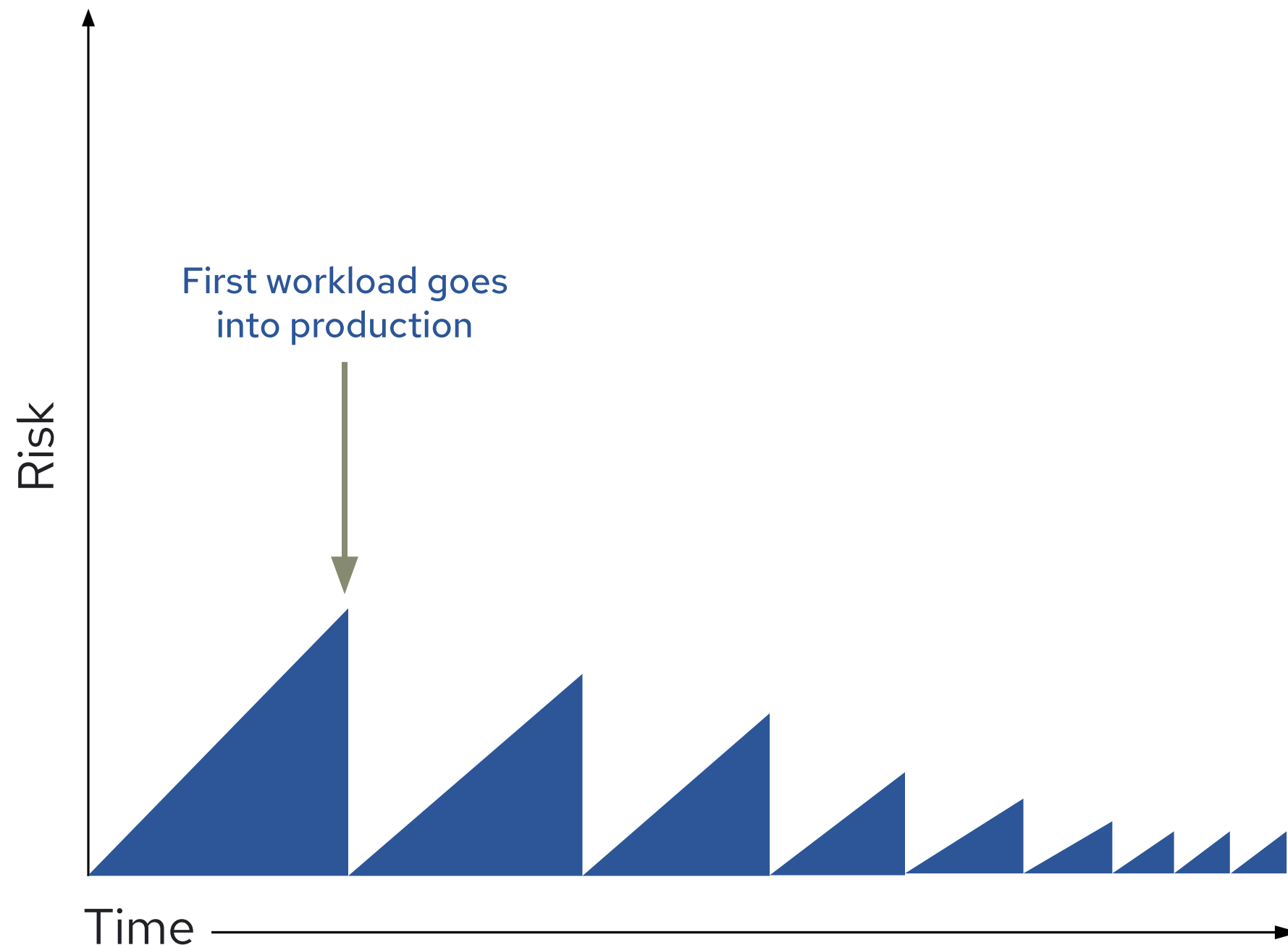
Ramit Sethi

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



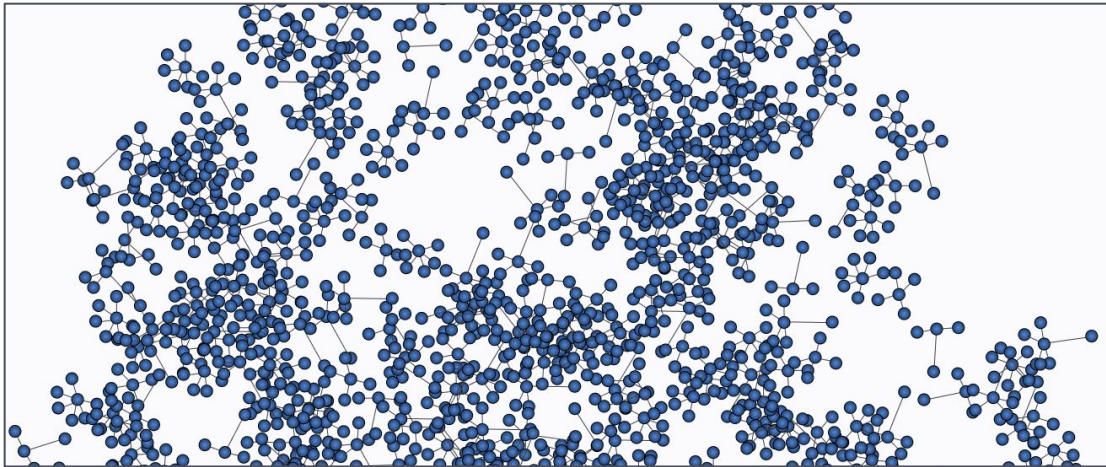
As each workload goes into production, the risk falls back down.

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

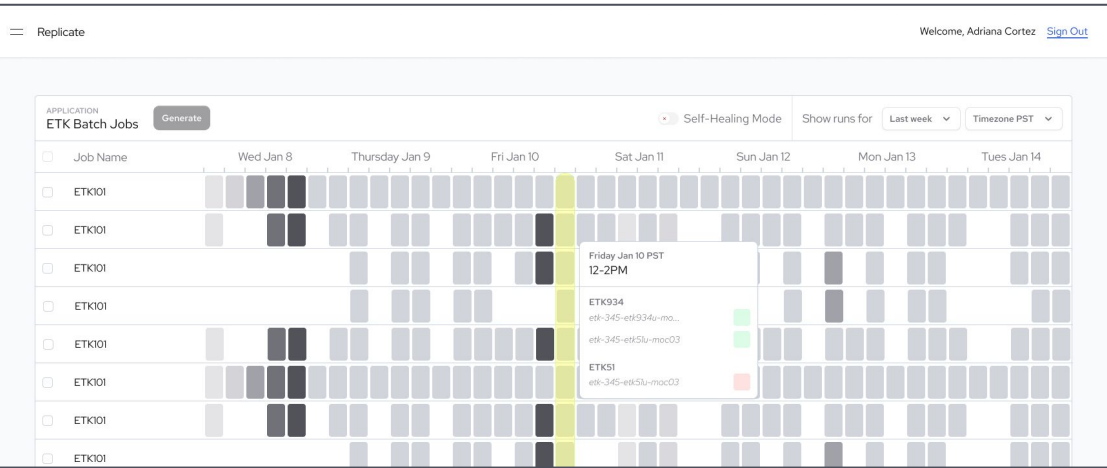
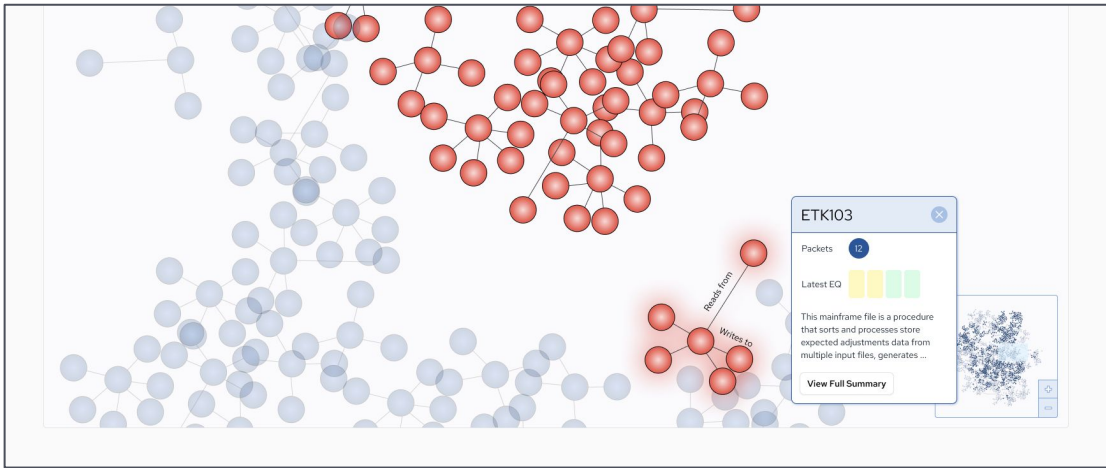
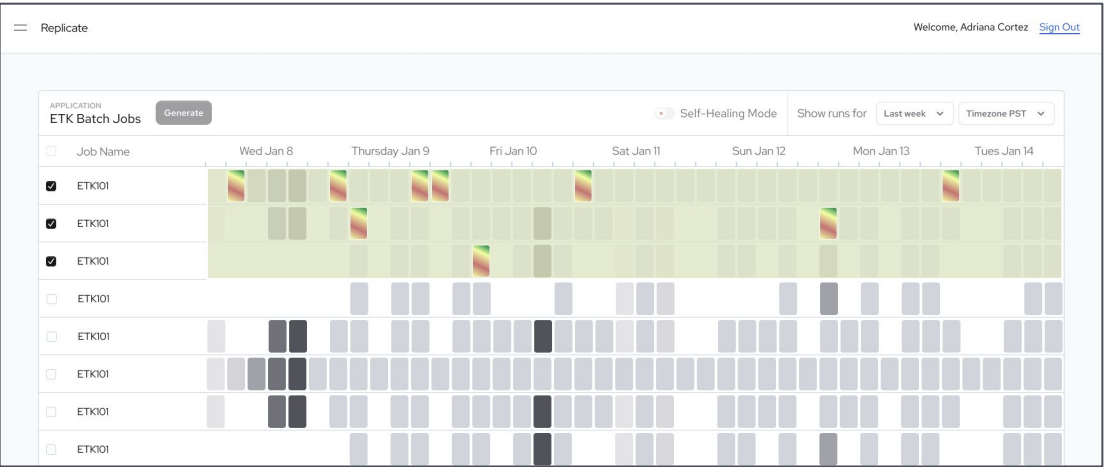


```
[Done] data-usages.json is ready.
-----
Writing Call Tree JSON file to call-trees.json
Wrote 1 entries
[Done] call-trees.json is ready.
-----
Writing Errors and Warnings JSON file to errors-and-warnings.json

*****
Generating Basic Job Structure
*****

Your file structure for job 'etk141' has been generated.

The following files have been created:
lib/mo/jobs/etk141/etk141.ex
```



System Flow
Comprehension

Generate & Verify

Launch & Operate

IMOGEN

Mainframe modernization platform
from Mechanical Orchard



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

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Proprietary & confidential

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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