

Application *modernisation* at the speed of AI.

Executive summary

A guide to the what, why and how of AI-led application modernisation in 2026.

Legacy systems impose significant constraints on agility, innovation and risk management. They are costly to maintain, increasingly insecure, and reliant on shrinking specialist expertise. Historically, modernisation has been slow, expensive, and high-risk, resulting in postponed action and growing technical debt.

Artificial intelligence fundamentally changes this dynamic. Tasks such as code analysis, dependency mapping, documentation generation, and test creation – once requiring months of manual effort – can now be completed in hours or days. This acceleration reduces cost, lowers risk, and enables modernisation to become a scalable, repeatable capability rather than a disruptive, one-off endeavour.

The whitepaper identifies 2026 as the breakthrough year in which AI-enabled modernisation reaches enterprise maturity. AI moves beyond experimentation to become a durable engineering capability, orchestrating end-to-end development tasks while maintaining governance, architectural discipline and observability. Continuous modernisation replaces big-bang rewrites, enabling iterative uplift across large estates.

Leaders are guided through key strategic considerations, including defining an AI-enabled future state, aligning modernisation with business priorities, determining whether to modernise or replace systems, and using AI-assisted feasibility assessments to quantify risks and dependencies.

Two primary pathways are highlighted: portfolio-wide scans for quick wins and deep dives into mission-critical monoliths.

The whitepaper introduces a six-step modernisation methodology covering discovery and assessment, target architecture definition, AI-driven code transformation, testing and remediation, deployment and change management, and continuous improvement – balancing automation with essential human oversight.

Strong governance and guardrails are emphasised to ensure secure, compliant and reliable AI-enabled transformation, including human-in-the-loop review, dependency validation and safeguards against hallucinated or misaligned outputs.

Finally, the paper outlines organisational readiness requirements: skills uplift, cultural alignment, readiness assessments, pilot projects and scalable operating models such as modernisation factories.

When executed effectively, AI-led modernisation enables organisations to reverse the maintenance-to-innovation ratio, unlock trapped value and establish a durable foundation for AI-enabled growth.

[Access report](#)