

**Atos**

 **Microsoft**

# Future-Ready IT:

How to turn your legacy into an advantage





“Legacy” isn’t just about old mainframes or forgotten systems. It exists in every company, even digital natives. You might run an AI-powered customer app yet still depend on an aging database or manual data process behind the scenes. These hidden gaps can create blind spots that increase cyber risk, add technical debt, and stall innovation. The opportunity lies in addressing them early: turning legacy from a liability into a strategic advantage.

# Even modern IT still has legacy limitations

**No organization plans to build legacy systems.** They emerge organically. Even fast-moving startups find that after years of rapid scaling, they’ve inherited outdated tools, unpatched components, or brittle integrations. A McKinsey study found that 20–40% of technology estate value is trapped in tech debt, even among digital leaders.

## Common hidden legacies include:

- **Aging middleware:** Modern UIs often hide outdated integration layers that can’t support real-time analytics.
- **Manual processes:** Automated front ends still rely on manual data re-entry, slowing performance and introducing errors.
- **Unscalable databases:** Old databases limit modern app performance, creating recurring “next year’s problem.”
- **Shadow apps:** Departmental tools like Access databases or custom CRMs that fall out of support and become security risks.

Gartner predicts that this year, 85% of enterprises will face operational failures due to hidden legacy issues within hybrid cloud infrastructure.<sup>2</sup>

And nearly 70% of IT leaders say legacy systems prevent them from adopting modern tech like AI. In other words, legacy doesn’t just slow you down; it can block innovation and open the door to cyber threats.

## Start by identifying your blind spots.

Use discovery tools like Atos’ Application Cloud Assessment Tool (ACAT) to map outdated technologies, assess dependencies, and highlight what needs attention. Some organizations run “kill a server” tests, which turns off systems to see what breaks. It’s bold, but it reveals what’s quietly holding your business together. You can’t fix what you can’t see.

<sup>1</sup> <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/tech-debt-reclaiming-tech-equity?>

<sup>2</sup> <https://www.gartner.com/en/newsroom/press-releases/2023-01-31-gartner-survey-finds-nearly-half-of-customer-service-reps-avoid-adopting-new-technologies?>

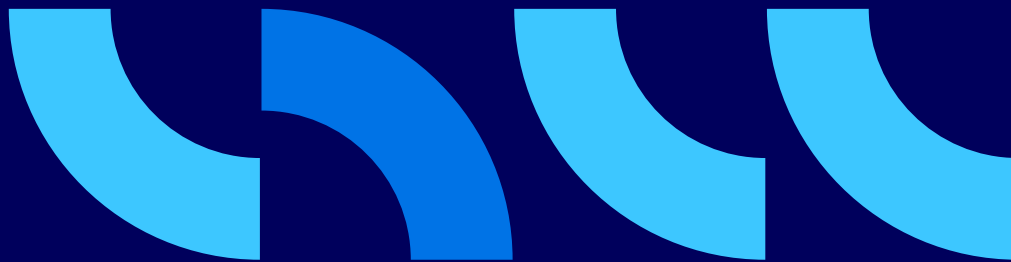


# From technical debt to business value

**Fixing old code is old news. Modernization is very much about unlocking business outcomes:** speed, savings, security, and agility. Leading CIOs treat modernization as an investment, not a cost.

## Case Study

One bank discovered developers spent 70% of their time wrestling with legacy code. After targeted modernization, that flipped: 70% of time went to innovation, 30% to maintenance. The result was twice as many new digital products launched, directly impacting revenue. Paying down tech debt bought them agility.



**Time-to-value** is another critical metric. Legacy-heavy organizations may take a year to roll out a new feature; modernized ones do it in weeks. Shorter time-to-value means faster business response and better competitiveness.

**Customer experience (CX)** is equally linked to modernization. Nearly half of enterprises can't retire legacy apps because they're deemed business critical. Unfortunately, those apps often deliver clunky experiences. More than half of companies acknowledge that legacy systems are contributing to customer churn.<sup>3</sup> IT transformation improves digital journeys and customer satisfaction, transforming modernization into a CX initiative.

**Risk reduction** also drives tangible business value. Modernizing outdated systems removes known vulnerabilities, reducing breach exposure and downtime. One retailer modernized POS systems that still ran Windows XP; post-modernization, their mean time between incidents doubled. Fewer incidents meant lower remediation costs and stronger brand trust.

**Sustainability** adds another layer of value. Legacy infrastructure consumes more power and generates higher emissions. Migrating to modern cloud environments reduces energy use and supports corporate ESG goals. CIOs can now measure IT carbon impact, showing how modernization contributes to sustainability targets and cost reduction.

**When making the business case, translate tech outcomes into measurable impact:**

- "This project will cut customer onboarding from two weeks to two days."
- "This modernization will free 15% of IT spend for innovation."
- "After modernization, we'll match our competitors' bi-weekly release cycles."

This shift, from a tech debt mindset to a tech equity mindset, frames modernization as building long-term business value.

<sup>3</sup> <https://www.cmswire.com/customer-experience/technical-debt-is-a-cx-issue-heres-why-that-matters>



# The modernization roadmap: building a future-ready foundation

Modernization is a continuous journey. And when there's a clear roadmap, it's much easier to maintain momentum and deliver value at every stage.

## Year 0-1: Establish the baseline and quick wins

Start with a full portfolio analysis to identify what's outdated, critical, or at risk. Use AI-based assessment tools to map dependencies and rank systems by business impact. Target early wins: projects that are low risk but high visibility, such as automating manual workflows or upgrading unstable systems. These prove value quickly and build internal support. Address major vulnerabilities immediately. If it can't be patched, replace or isolate it fast.

## Year 2-3: Core transformation and AI enablement

Next, tackle the core legacy systems. Think ERP, banking platforms, or supply chain tools. Decide the best approach per system, be that rehost, refactor, rebuild, or replace. Prioritize cloud-ready architectures to enable scalability and integrate AI. Modernizing data architecture in parallel ensures your data is accessible and AI-ready.

During this phase, introduce event-driven architectures and APIs so systems can feed real-time data to analytics or AI platforms. Teams will also adapt to faster release cycles and DevOps methods, embedding agility into culture as well as technology.



## Year 4-5: Optimization and continuous improvement

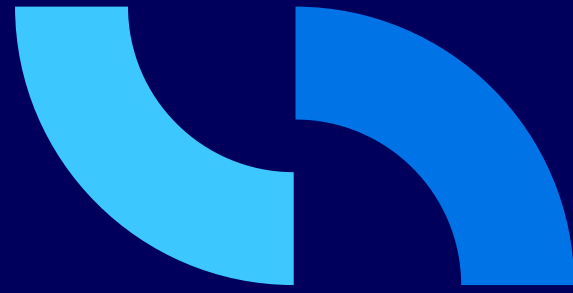
By this stage, most legacy components should be modernized or scheduled for replacement. The focus here shifts to optimizing costs and extracting full value: eliminate unused resources, decommission old hardware, and measure success using business metrics such as time-to-market, cost savings, and customer satisfaction.

Tackle the remaining long-tail systems and formalize modernization as an ongoing discipline. Set policies to review systems regularly so you don't recreate tomorrow's legacy. Organizations that reach this stage often achieve a 50/50 split between innovation and maintenance spending; a major shift from the traditional 70/30 ratio.

## Beyond Year 5: Modernization as a practice

Modernization becomes a continuous capability, not a project. As new technologies emerge, the organization has the skills, visibility, and processes to evolve naturally. Establish governance through architecture review boards and continuous learning programs to prevent new tech debt from building up.

Modernization should become part of strategic planning: every new initiative must consider not just how to build the new, but how to keep it adaptable. Metrics such as technical-debt-to-IT-budget ratio help track progress and sustain investment in innovation.



# Legacy as a launchpad

**Legacy systems do deserve some credit. Many of them have kept businesses running for decades.** Modernization isn't about tearing them down, but evolving them. Like urban renewal, you keep what's strong, fix what's outdated, and preserve valuable logic. Some organizations retain mainframes for stability but expose their functions through APIs, combining reliability with agility.

Modernization can also uncover innovation opportunities. One company moving from legacy databases to a unified data lake discovered patterns in historical data that led to a new AI-powered service. Another turned an ERP overhaul into a business process redesign, cutting 30% of manual steps and introducing real-time order tracking. Legacy systems often contain buried value waiting to be unlocked.

## Cybersecurity: The hidden benefit of modernization

**Legacy systems are often the weakest link in cybersecurity.** Outdated encryption, unsupported software, and forgotten accounts create easy entry points for attackers. Modernizing naturally strengthens security by eliminating known vulnerabilities and adopting modern controls such as zero trust, automated patching, and continuous monitoring.

Organisations that integrate modern AI-assisted security and automation are saving on average around USD \$1.8 million per breach thanks to faster detection and response.<sup>4</sup> With global cyberattacks rising year-over-year, proactive modernization supports risk management and reputation protection.

<sup>4</sup> <https://msp-channel.com/news/68341/security-ai-and-automation-lowers-data-breach-cost>



## The bottom line

**Being future-ready doesn't mean eliminating legacy, but rather managing it as intelligently as possible. IT leaders should look to legacy modernization as fuel for innovation.**

Modernization reduces cost and risk. But more importantly, it unlocks speed, creativity, and business agility. It frees teams to focus on what's next: be that launching new AI-driven services, expanding into new markets, or delivering better customer experiences.

Your legacy is an important part of what got your business this far. Now it's time to make it the foundation for your next decade of growth.

Start now, measure what matters, and treat modernization as a continuous advantage. The future belongs to those who evolve, turning yesterday's systems into tomorrow's strength.

**Discover our new modernization accelerator:  
The Atos Digital Transformation Engineer**



## About Atos

Atos Group is a global leader in digital transformation with c. 72,000 employees and annual revenue of c. € 10 billion, operating in 68 countries under two brands – Atos for services and Eviden for products. European number one in cybersecurity, cloud and high-performance computing, Atos Group is committed to a secure and decarbonized future and provides tailored AI-powered, end-to-end solutions for all industries. Atos is a SE (Societas Europaea) and listed on Euronext Paris.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

