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Modernize Your
CODE

The Role of
Specialized **AI**
in **Application
Modernization**

Maximize your
IMPACT

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Executive Summary

Organizations are under pressure to modernize mission-critical applications while contending with mounting maintenance backlogs, security vulnerabilities, and a persistent shortage of skilled developers.

Relying on generic AI tools or "lift-and-shift" migrations often results in disappointing outcomes, as these approaches fail to address the real operational and compliance challenges posed by legacy systems. Stefanini's approach - combining specialized AI with deep domain expertise - accelerates and de-risks modernization, bridging the gap between outdated infrastructure and future-ready agility.

Our proven SAI APP platform empowers enterprises to deliver faster releases, higher-quality code, and measurable business value, even in the most complex, regulated, or resource-constrained environments.
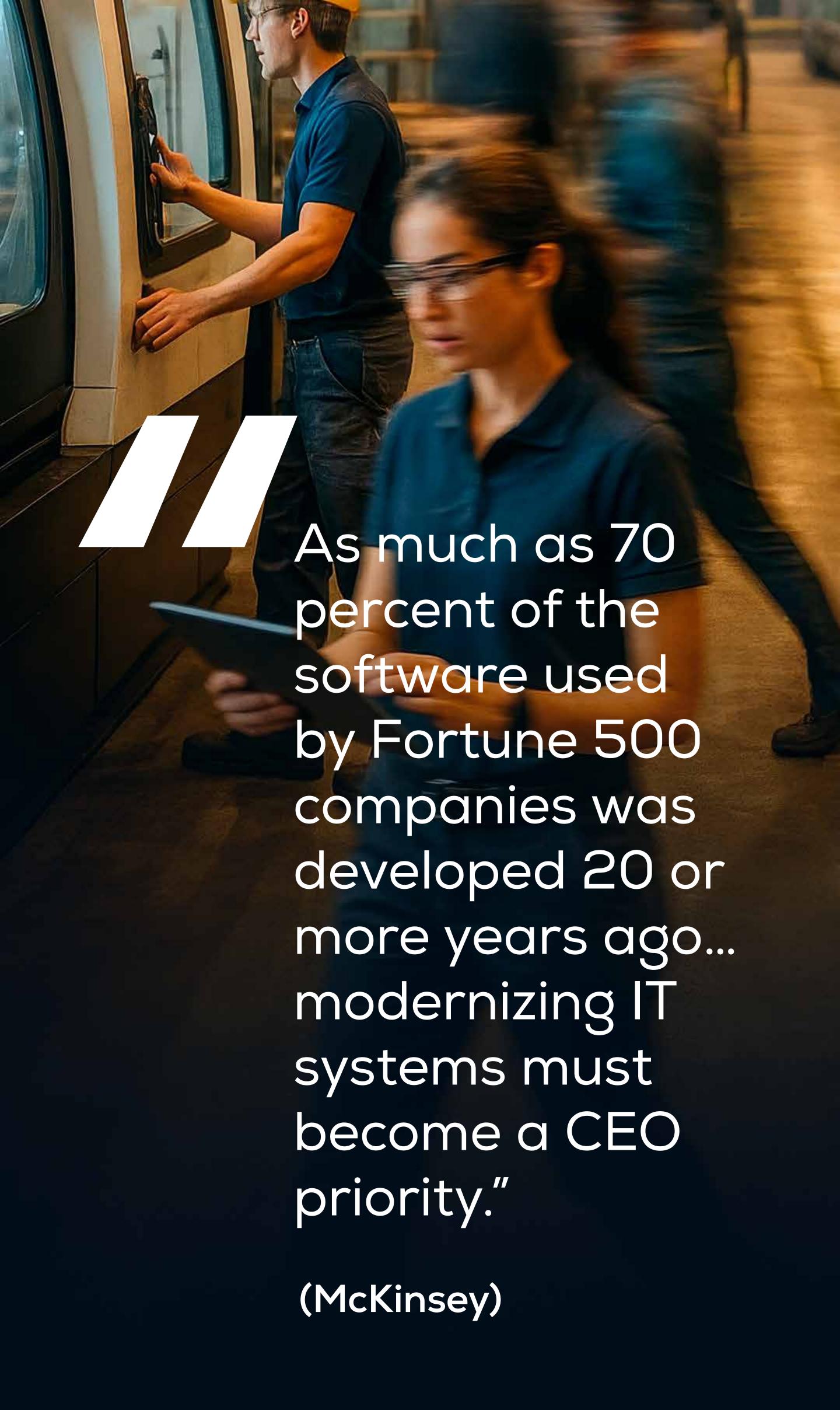
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Modernizing the Mission-Critical: Why Specialized AI Matters Now

Across every industry, organizations are under pressure to modernize aging software systems, but the path ahead is winding and uncertain. Chronic maintenance backlogs and technical debt slow progress, while manual processes leave release cycles slow and error prone. Integrating legacy applications with new platforms remains a struggle, and inconsistent security and compliance standards expose organizations to unnecessary risk. All of this is compounded by an acute shortage of skilled developers, making it even harder to keep up.

While generic AI tools promise easy automation, they rarely address reality on the ground. For mission-critical, regulated, or highly customized environments, only specialized AI, purpose-built for complex modernization, can tackle these challenges. By combining business context with advanced automation, specialized AI bridges the gap between legacy complexity and future-ready agility, delivering results where generic tools fall short.

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"As much as 70 percent of the software used by Fortune 500 companies was developed 20 or more years ago... modernizing IT systems must become a CEO priority."

(McKinsey)

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Top Challenges Addressed by **AI-Assisted Modernization**

AI-assisted application modernization directly addresses backlogs, speeds up delivery, bridges legacy-to-modern gaps, strengthens security, and alleviates resource shortages - unlocking faster, safer, and more cost-effective digital transformation.

Our experience across industries highlight**s**
five recurring challenges:

1 Chronic Maintenance Backlogs and Technical Debt: Legacy systems often accumulate years of technical debt, making them costly and time-consuming to maintain or update.

2 Slow, Error-Prone Release Cycles: Manual coding, testing, and deployment processes slow down releases and increase the risk of defects reaching production.

3 Difficulty Integrating Legacy Systems with Modern Platforms: Older applications often don't connect easily with new cloud services, APIs, or third-party tools, limiting business agility.

4 Inconsistent Security and Compliance: Legacy code may harbor hidden vulnerabilities or fail to meet current regulatory standards, exposing organizations to risk.

5 Resource Shortages and Skills Gaps: The shortage of experienced developers slows down modernization and increases costs.

Addressing these challenges requires a tailored approach that blends advanced technology with proven expertise.

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Modernization:
The Cost of Inaction

Rising Maintenance Costs:

Legacy systems become more expensive and fragile every year, draining IT budgets.

Increased Risk:

Outdated software exposes your organization to security breaches, compliance failures, and operational outages.

Lost Revenue & Opportunity:

Slow modernization means missed market opportunities and poor customer experiences, allowing competitors to get ahead.

Talent Drain:

Skilled developers avoid working on obsolete tech, increasing turnover and deepening the talent gap.

Regulatory Penalties:

In regulated industries, failure to modernize can result in costly audit findings and legal consequences.

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The Stefanini Perspective: Specialized AI + Human Expertise

Too often, AI pilots falter because they ignore the unique business context and legacy complexity at play. At Stefanini, our approach is grounded in hands-on experience:

- **AI is a force multiplier, not a replacement for skilled people.**

- **The best results come from specialized AI, tailored to your business.**

- **We focus on high-impact, practical use cases.**

- **Domain expertise is essential to unlock AI's true value.**

SAI APP: Accelerating Every Phase of Modernization

Stefanini deploys specialized AI to drive measurable impact, not just theoretical potential. SAI APP was purpose-built to accelerate every phase of modernization, resulting in safer, faster, and more reliable transformation for organizations where failure isn't an option.

Our proven platform delivers an **80–85% boost in productivity and efficiency**, reducing tasks that once took five to six days to just 24 hours.

SAI APP is essential for organizations that:

• Rely on complex, legacy, or business-critical systems that are expensive and risky to update manually

• Operate in regulated industries (such as finance, healthcare, or automotive) where compliance, traceability, and documentation are non-negotiable

• Face chronic shortages of skilled developers, especially with niche or outdated technologies

• Need to modernize faster: accelerating releases, reducing errors, and improving quality without sacrificing security or compliance

• Struggle with unclear requirements or fragmented documentation, which slow down projects and increase risk.

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CASE STUDY

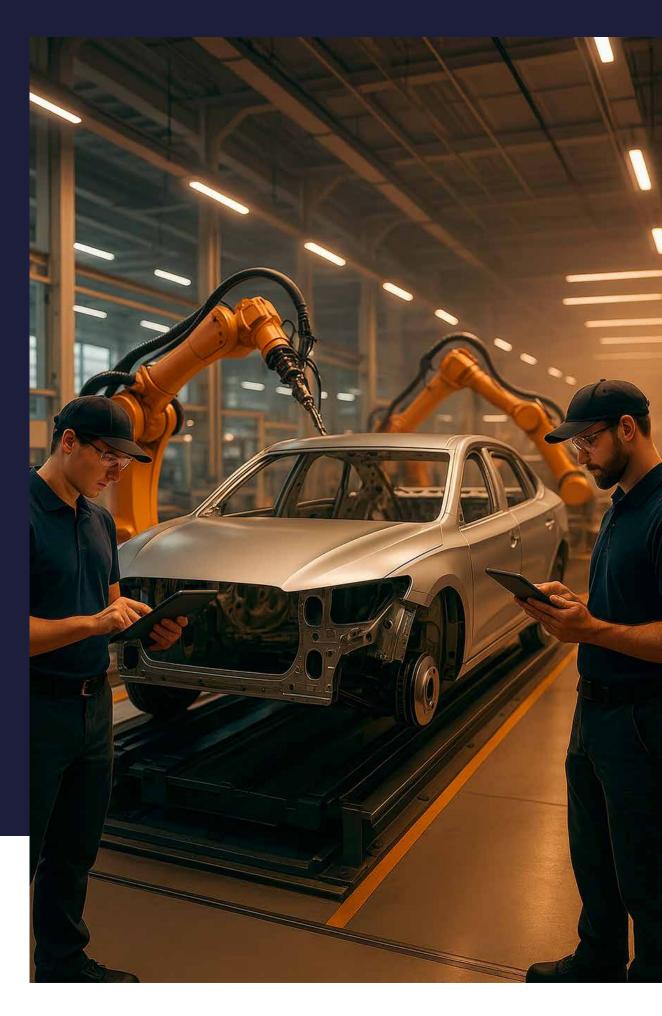## Global Automaker Service Scheduling Modernization

Challenge

A global automotive client's online service scheduling platform was hard to use, frustrating customers and dealers alike. Most bypassed the system, calling dealers directly, and causing scheduling conflicts, inconsistent records, and lost revenue.

Solution

Utilizing SAI APP, Stefanini:

• Redesigned the scheduling experience for customers and dealers.

• Automated requirements gathering, code generation, and test creation.

• Produced complete, clear specifications and robust, well-documented code.

• Automated backend processes and improved data integration.

• Applied agile, AI-accelerated development and continuous improvement.

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Impact

42% increase in online service bookings: The modernized portal boosted customer engagement and operational efficiency.

124% increase in features delivered: Teams doubled their output, releasing more enhancements in less time.

38% increase in team productivity (Story Points): SAI APP enabled faster, higher-value work with improved sprint execution.
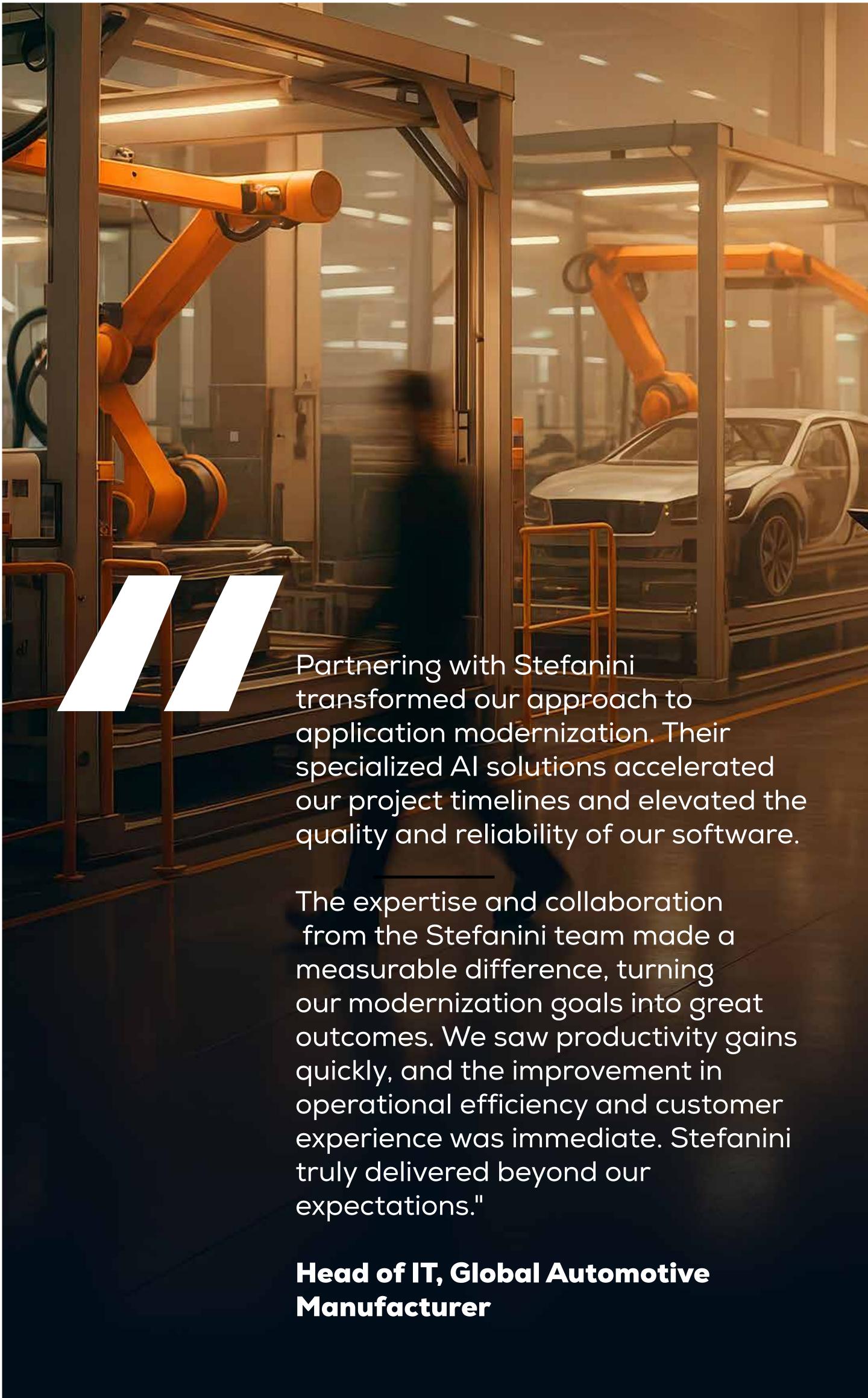
91% increase in test automation: Greater coverage meant fewer bugs and higher release quality.

Key Takeaways

• AI-driven productivity gains aren't instant—most teams see results in about three months.

• Team experience and client readiness have a direct impact on productivity gains.

• Adopt generative AI in phases: begin with pilot projects and set clear processes to integrate AI into current workflows.

• Allow time for teams to adapt to new technology and encourage a culture of innovation and ongoing improvement.

• Build prompt engineering skills to enhance AI interaction and ensure teams understand the technology's capabilities and limitations.

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Partnering with Stefanini transformed our approach to application modernization. Their specialized AI solutions accelerated our project timelines and elevated the quality and reliability of our software.

The expertise and collaboration from the Stefanini team made a measurable difference, turning our modernization goals into great outcomes. We saw productivity gains quickly, and the improvement in operational efficiency and customer experience was immediate. Stefanini truly delivered beyond our expectations."

Head of IT, Global Automotive Manufacturer

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Specialized AI +
Experience: The Only Way Forward

Modernizing core applications is the foundation for smoother operations, faster innovation, and real business growth. The risks and costs of sticking with outdated systems only increase over time.

Our work with a global automotive manufacturer illustrates the impact of AI specialized to accelerate every phase of modernization. SAI APP helped our client double their feature delivery, dramatically increase automation, and boost customer bookings by 42%. With Stefanini, you get a partner who understands the messy realities of legacy environments and can help you move forward with confidence—using AI and proven expertise to deliver the results your business needs, now and into the future.

boost customer bookings by

42%

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Ready to maximize your modernization ROI?

Choose a partner that understands your business and the realities of AI.

Connect with our experts today and discover how specialized AI can transform your business.

Contact us

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