

# Reducing technical debt with agentic AI

Your guide to Application Managed  
Services success





# Contents

- Why technical debt accumulates ..... 4
- The AI advantage: smarter, more efficient operations and applications ..... 5
- Four steps to reducing technical debt ..... 6
- Key capabilities that address technical debt..... 7
- Measurable results with agentic AI and Application Managed Services ..... 8
- Preparing for Application Managed Services ..... 9
- Take the next step .....10

# What technical debt?

## A practical guide to minimizing debt with AI-powered Application Managed Services

Your applications drive strategic business value. Yet many organizations find their digital transformation stalled by technical debt — accumulated compromises that make innovation expensive and risky.

For IT leaders, this creates an impossible choice: invest scarce resources keeping legacy systems running or bet on transformation while existing applications deteriorate. The result? Rising costs, increased security vulnerabilities and frustrated teams stuck in reactive mode.

**Agentic AI changes this equation.** [Unisys Application Managed Services](#) powered by intelligent automation systematically reduces technical debt while maintaining operational stability — freeing resources for strategic initiatives without risky big-bang overhauls.

**This guide shows you how.**

You'll discover:

- Why technical debt accumulates faster than teams can address it
- How agentic AI differs from traditional automation
- Four practical steps to reduce debt systematically
- What to evaluate when choosing a provider
- How Unisys' approach fits your maturity and budget

**The outcome:** Lower operational costs, reduced risk and IT teams focused on innovation rather than firefighting.

# Why technical debt accumulates

Technical debt accumulates for reasons that seem logical in the moment: budget constraints, competing priorities and a focus on new initiatives. Skip documentation today, delay code refactoring, postpone testing updates — each deferral compounds into challenges affecting your entire technology stack and business operations. Three forces that perpetuate the cycle:

## The portfolio gap

Without visibility into your application portfolio, you can't identify where technical debt exists. Which systems have outdated code? Missing documentation? Inadequate testing? Legacy infrastructure? Many organizations lack detailed catalogs of these critical details, making it nearly impossible to prioritize remediation effectively.

## The skills challenge

As systems age, finding people who can maintain them becomes increasingly difficult and expensive. Organizations running legacy platforms face a shrinking talent pool as experienced professionals retire and fewer new technologists learn outdated languages. This scarcity drives up costs and slows response times when issues arise.

## The modernization paradox

Traditional modernization requires significant upfront investment in teams, consultants and timelines to refactor outdated code, rebuild testing frameworks, update documentation and migrate from legacy architectures. Budget constraints that create technical debt prevent funding remediation, delaying modernization.

**The opportunity:** By addressing these patterns early, your organization can reduce operational costs and improve system reliability.

# The AI advantage: smarter, more efficient operations and applications

Agentic AI represents a fundamental shift in how organizations manage applications and address technical debt. Traditional automation follows predefined scripts — if condition A, then action B. This approach works well for known, repeatable tasks but breaks down when facing the complexity and variability of technical debt.

**Agentic AI can analyze, decide and act independently.** It learns from patterns, adapts to context and handles complex operational tasks that once required extensive manual effort.

## How agentic AI differs from traditional automation

- Goes beyond scripted responses to handle complex, variable scenarios
- Analyzes context and business impact before acting
- Improves over time by learning from patterns and outcomes
- Enables self-healing systems that fix known issues automatically

## Why it's ideal for Application Managed Services

- Reduces operational costs through automated issue resolution
- Improves consistency in monitoring and diagnostics
- Scales across complex application portfolios
- Enables proactive problem management instead of reactive firefighting
- Addresses multiple operational challenges: performance, security, availability and user experience

This combination of intelligence, automation and continuous learning makes agentic AI particularly effective for reducing the operational burden of technical debt in Application Managed Services.



# Four steps to reducing technical debt

When powered by agentic AI, Application Managed Services help IT leaders address technical debt through better visibility, proactive management and automation — without requiring massive transformation projects. Here's how you can get started:

1

## Operational insights

Application Managed Services provide 24/7 monitoring and AI-powered diagnostics to reveal application health, code quality issues, performance issues and security vulnerabilities across your entire portfolio.

2

## Prioritization and planning

AI-powered triage and CXO dashboards identify which applications consume the most resources or pose the greatest risks.

3

## Proactive management and remediation

Self-healing automation and AI copilots address issues before they escalate. Expert support tiers handle complex scenarios requiring deeper expertise.

4

## Continuous optimization

Living knowledge bases and proactive problem management prevent repeat issues. Unisys also offers ongoing modernization capabilities for organizations that are ready to evolve their legacy systems.

# Key capabilities that address technical debt

Application Managed Services leverage agentic AI to continuously identify, prioritize and remediate technical debt across application portfolios. Here's how these capabilities help reduce the operational burden and risk of technical debt:



## Automated code and architecture analysis

- Continuous monitoring identifies performance bottlenecks, incomplete documentation, vulnerabilities and inefficiencies
- AI diagnostics detect systemic issues before they escalate
- Automated assessments flag technical debt in real time
- Architecture analysis reveals dependencies and integration risks



## DevSecOps integration

- Security controls are embedded throughout operations with automated policy enforcement
- Self-healing automation and AI-assisted patching remediate vulnerabilities
- Compliance validation generates audit-ready evidence
- Shift-left approach reduces deployment risk and accelerates safe release cycles



## Real-time dashboards and insights

- CXO and line-of-business dashboards connect IT spend to business outcomes
- AI-generated reports, forecasts and what-if scenarios support informed decision-making
- End-to-end visibility spans the entire technology stack and user experience
- Performance tracking shows how applications align with business objectives



## Governance and compliance support

- Portfolio management provides life cycle oversight and risk assessment
- Transparent governance frameworks ensure regulatory compliance without slowing operations
- Automated compliance checks validate industry standards, including HIPAA, FISMA and GDPR
- Strategic alignment connects business needs with technology capabilities

# Measurable results with agentic AI and Application Managed Services

Application Managed Services powered by agentic AI deliver measurable improvements across cost, risk, agility and speed. Reduced operational burden frees resources for strategic initiatives, improved reliability strengthens customer confidence, and better visibility enables smarter investment decisions. As AI-powered automation matures, these benefits compound over time.

## Cost savings

- Lower maintenance expenses through automation and self-healing
- Reduced support tickets and manual work
- Transparent dashboards connecting IT spend to business outcomes

## Risk reduction

- Proactive vulnerability detection and remediation
- Automated compliance and audit-ready evidence
- Fewer outages through continuous monitoring

## Improved agility and innovation

- IT teams freed from maintenance to focus on strategic priorities
- Faster issue resolution for quicker business adaptation
- Continuous evolution keeping systems current

## Faster time-to-market

- Streamlined operations and automated quality gates that reduce deployment risk
- Shift-left approach accelerating releases
- AI-assisted development that drives improvements without disruption



# Preparing for Application Managed Services

Making the move to AI-powered Application Managed Services requires thoughtful preparation. Use this framework to assess your readiness and select the ideal partner.

## What IT leaders should evaluate and prepare

- Complete application portfolio visibility: what you have, where it runs, how it's built
- Maintenance costs as percentage of IT budget
- Security vulnerabilities, compliance gaps and code quality issues
- Team capacity spent on repetitive tasks vs. strategic work
- Current monitoring tools and integration requirements
- Business-critical applications needing highest reliability
- Expected service levels and performance targets





## Questions to ask your Application Managed Services provider

- How does your agentic AI and self-healing differ from traditional automation?
- How do you ensure security, compliance and regulatory adherence?
- What support expertise and resolution speeds do you provide?
- What operational and cost visibility will we have?
- How do you integrate with existing tools and partner ecosystems?
- What pricing and engagement models are available?
- How do you reduce technical debt systematically?

# Take the next step

Unisys brings deep application management expertise and AI-powered innovation to identify, prioritize and remediate technical debt. Our approach combines skilled talent, industry accelerators and an extensive partner ecosystem to deliver scalable, secure solutions.

## Why Unisys?

<div></div> <div><h3>AI-powered operations</h3><p>Utilize Agentic AI to minimize support tickets and manual work by leveraging automated playbooks, self-healing systems and intelligent triage that addresses issues before they impact users.</p></div>	<div></div> <div><h3>Transparent cost visibility</h3><p>Connect IT investments to business outcomes with clear dashboards that show how each application, team and department uses resources and drives value.</p></div>
<div></div> <div><h3>Flexible partnerships</h3><p>Benefit from engagement models that work directly with your organization or alongside partners such as Microsoft, AWS, Google, ServiceNow and Oracle, plus innovative startups.</p></div>	<div></div> <div><h3>Industry expertise</h3><p>Rely on industry-specific intellectual property and specialized domain knowledge tailored to each client's unique operational and regulatory requirements.</p></div>

Start reducing technical debt and improving application performance. [Contact us](#) to see how **Application Managed Services** can help you assess your current portfolio, identify high-impact opportunities and build a roadmap for sustainable improvement.

For organizations ready to take modernization a step further, Unisys Application Development and Transformation can help you build new capabilities and evolve architectures — balancing operational excellence with strategic innovation.



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