

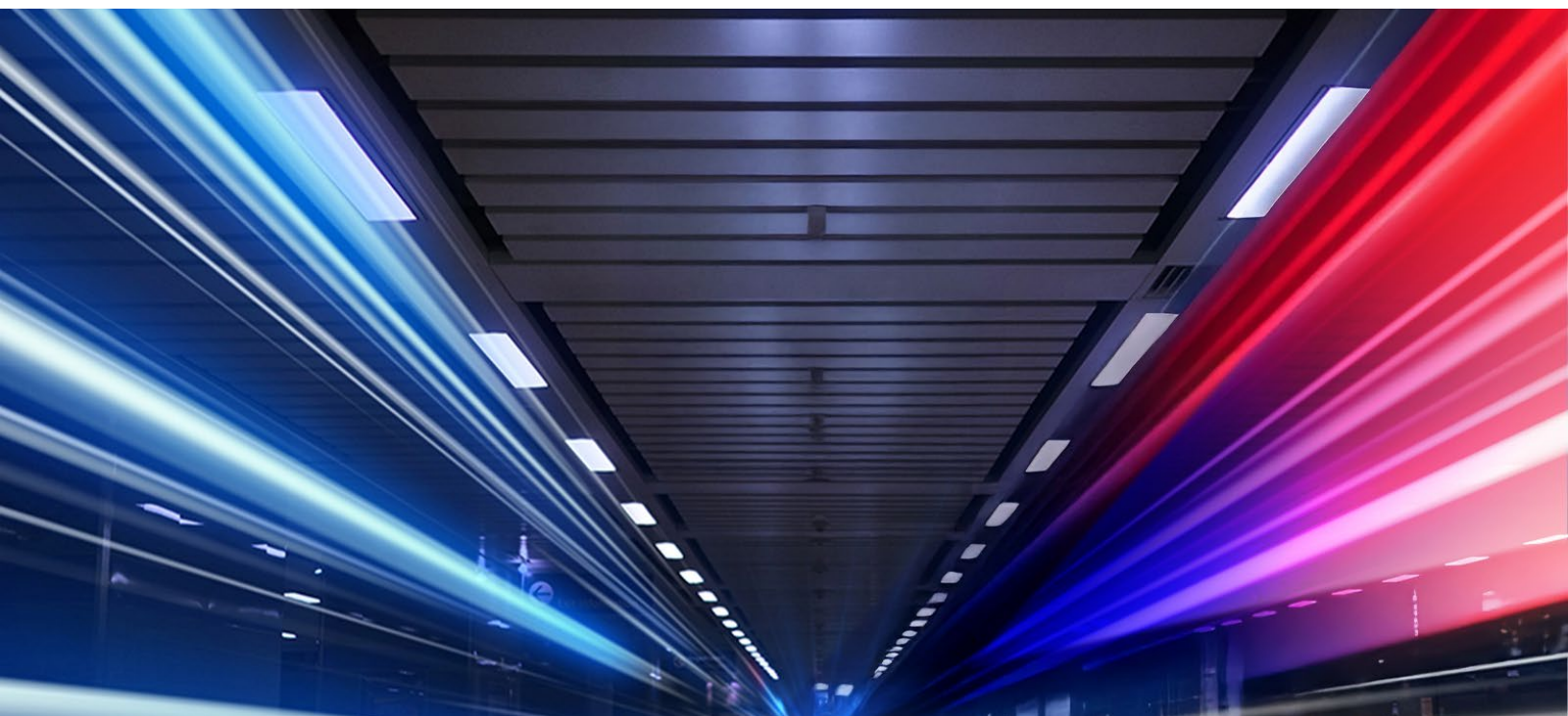


AI's two-year timeline: The path to meeting the legacy modernization mandate

According to our latest research, AI has turned legacy modernization into a burning platform. But slow progress on reducing tech debt is putting AI endeavors at risk. To meet their hoped-for timeline, businesses need to prioritize their initiatives to generate the resources needed to complete their modernization agenda.

Table of contents

Executive summary	3
The flywheel: Funding the legacy modernization mandate	5
Phase 1: A focused effort to win early operational gains	9
Phase 2: Paying down tech debt and embracing new technologies	11
Phase 3: Unleashing the enterprise from legacy to pursue new markets	13
Speeding legacy modernization to meet the rapid trajectory of AI transformation	15



Executive summary

Integrating AI into the business has quickly become a top-three driver for businesses to modernize their legacy systems. Long backburnered on the business agenda, legacy modernization has become an immediate need.

But while most senior leaders are giving themselves two years to accomplish a wide array of ambitious goals, such as modernizing their front- and back-office legacy systems, doing so depends on a similarly aggressive timeline for retiring tech debt—something most businesses won't come close to achieving even on a five-year horizon.

We have created a viable path forward. Our self-propagating flywheel approach prioritizes initiatives that will spur the cost savings, revenue and productivity gains that will support the more ambitious and expansive modernization goals needed to compete in an AI-driven landscape. Our approach is based on analysis of the modernization drivers, concerns and challenges of 1,000 leaders at businesses worldwide.

Legacy modernization: It has sat on the corporate agenda since the first mainframe was installed. But over the years, it has tended to be more of a “later” than a “now” thing.

Delays are no longer tenable. AI has quickly risen to top-three status as a legacy modernization driver, and senior leaders now view their legacy systems as a burning platform. A full 85% have serious concerns about the ability of their current tech estate to support AI.

Such concerns have lit a fire under their modernization efforts, or at least their modernization intentions. Many claim they'll complete a wide range of legacy modernization initiatives within two years.

But how? Not only do numerous and complex challenges stand in the way, but on a closer look at enterprise modernization plans, the vast majority (79%) will retire less than half of their technology debt by 2030.

The upshot: Businesses know they need to integrate AI, and they know their legacy systems cannot support it. But while they're attempting to fast-track legacy modernization efforts, their ability to fund it through legacy tech debt cost savings will be insufficient.

To succeed with modernizing their legacy systems and meet their goals in two years' time, business leaders will need to be ruthless in prioritizing what needs to happen, and when.

To get a clear view of the legacy modernization mandate and where businesses stand in their pursuit of it, we conducted a study of 1,000 senior executives at Global 2000 organizations. For the purposes of this study, we defined legacy modernization as any system, application or infrastructure that an organization believes will impede its future technology strategy, particularly its ability to incorporate AI and respond to changing customer demands.

What we found is:

AI has turned legacy modernization into a mandate

85% of senior executives are concerned or very concerned that their existing technology estate will imperil their ability to integrate AI into the organization. Additionally, 76% say they will struggle to support consumer adoption of AI.

The two-year clock is ticking

When asked about the timeframe in which they would achieve their legacy modernization milestones, respondents had very optimistic expectations. Within the next two years, at least three-quarters of respondents said they'll complete all the modernization goals listed in our survey.

However, major impediments may slow organizations' ability to meet that timing goal

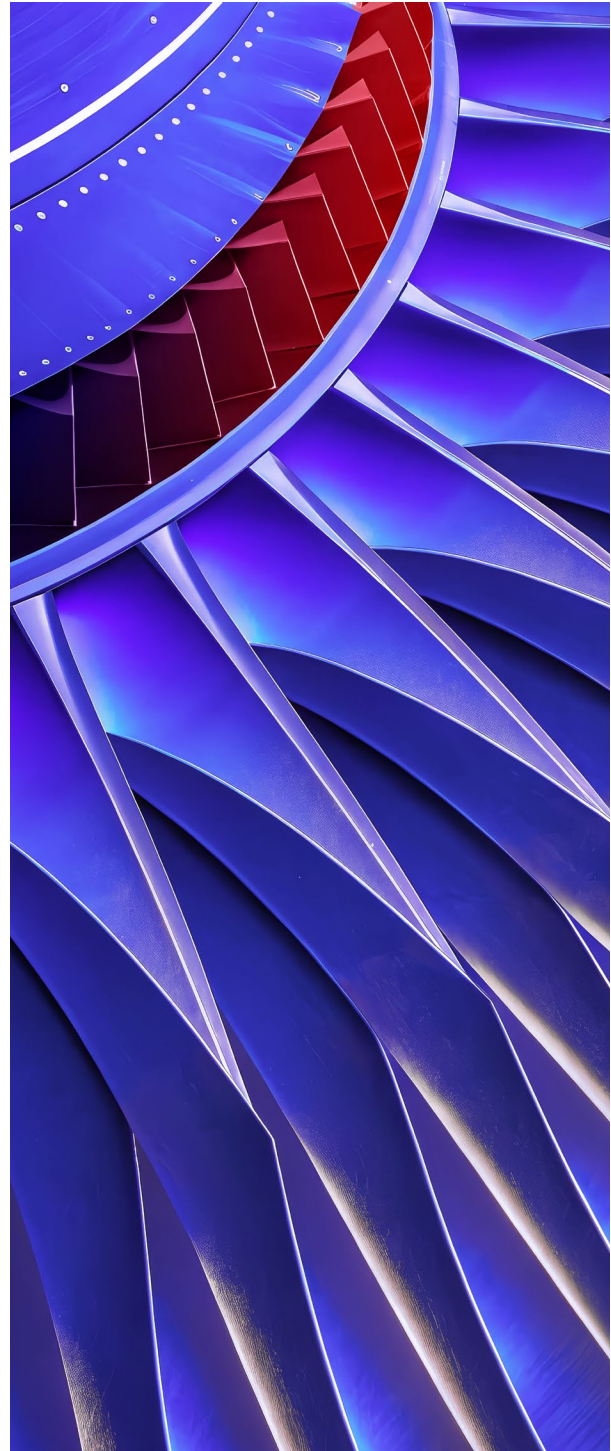
When asked about factors impeding their technology modernization efforts, the top three responses were the complexity of the endeavor (named by 63% of respondents as a major obstacle) and whether they have or can afford the resources, both the talent (50% of respondents) and capital (48%) to get there.

Further, businesses are hitting a major roadblock when it comes to retiring tech debt

Respondents see reducing technology debt as not only a major financial objective but also as an essential component for meeting downstream legacy system migration goals. However, when asked about their tech debt retirement trajectory, it became clear most will not retire this tech debt even five years from now.

In our study, we've identified a viable pathway for businesses to gain the cost savings, revenue and productivity gains needed to support a rapid legacy modernization program. The key will be to use the benefits and savings derived from early modernization efforts to fund the later initiatives, in effect, creating a flywheel that accelerates progress.

In this report, leaders will learn how they can set their organization up for success by aligning legacy modernization priorities with this flywheel strategy, which once set in motion will propagate ongoing resources to support their modernization goals.



The flywheel: Funding the legacy modernization mandate

Here is why the self-propagating momentum of a flywheel is so important. Our survey offered a good picture of where businesses stand on their legacy modernization goals today. However, it also found that companies will be hard-pressed to reduce tech debt within their aggressive deadlines based on stated budgeting assumptions.

Respondents believe they'll complete a wide range of legacy modernization initiatives in two years' time

What is the timeline for your company to achieve the following legacy modernization milestones?

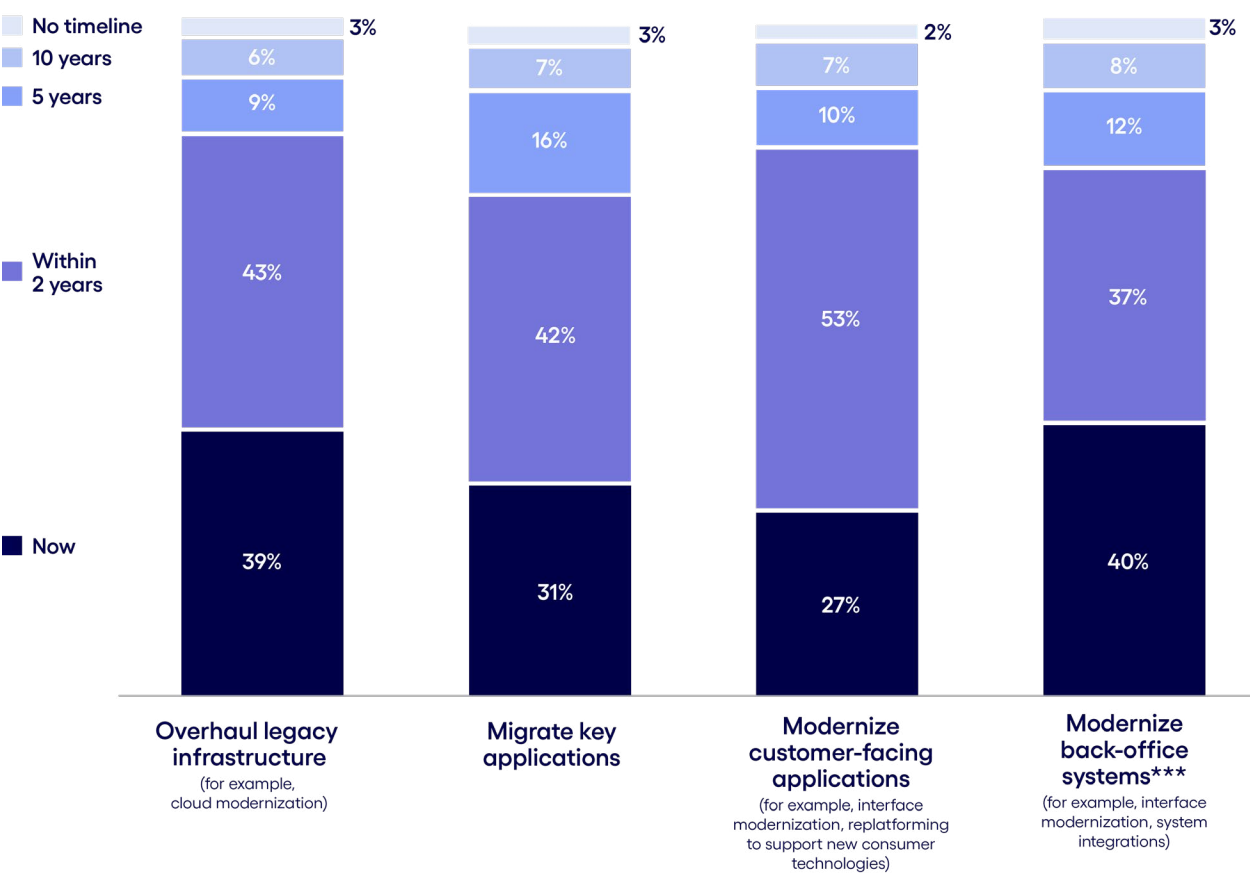


Figure 1
Base: 1,000 business and technology leaders at Global 2000 organizations
Source: Cognizant

And organizations are poised to pull back on legacy spending to accomplish those goals

Respondents indicated they will halve the amount of budget allocated to maintaining existing systems, from 61% today to just 27% by 2030.

Thinking about your organization's entire technology budget, please estimate how it is distributed across the following (today, and your expectations for 2030).

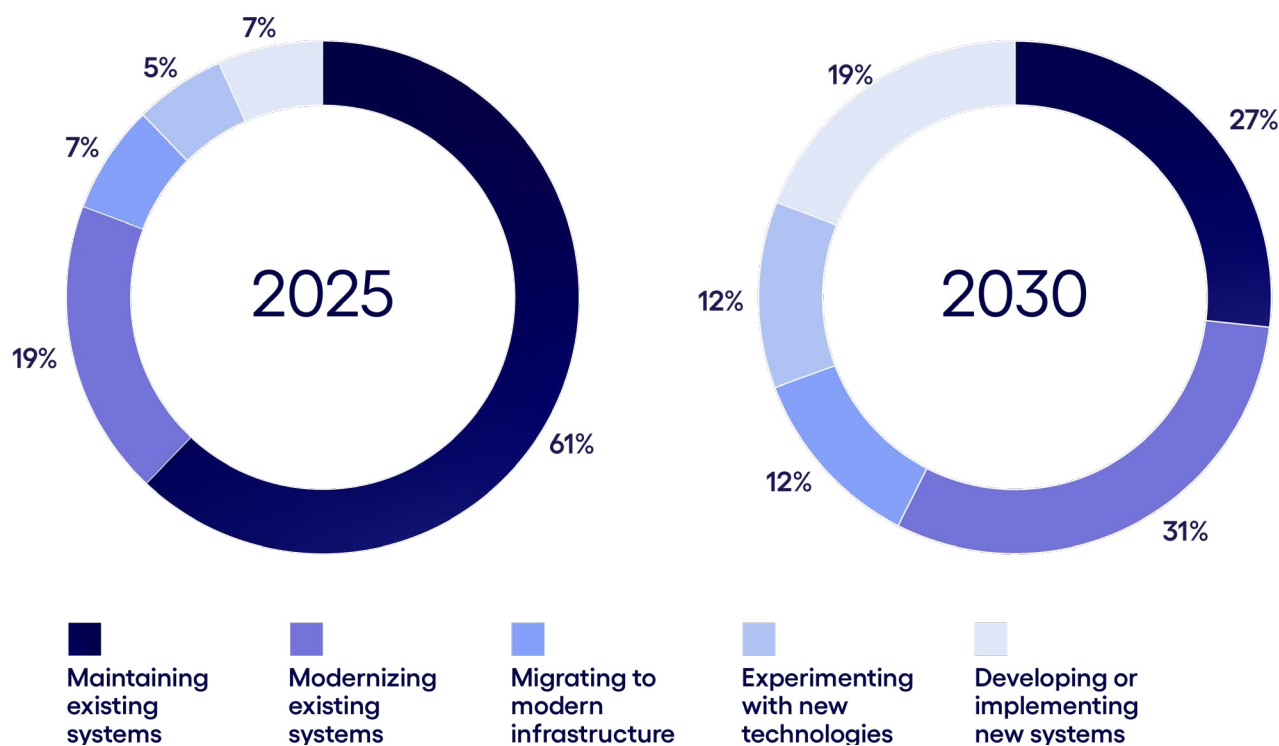


Figure 2

**Legacy spending is the hosting, licensing, maintenance, integration and security costs needed to keep these systems up and running.*

Base: 1,000 business and technology leaders at Global 2000 organizations

Source: Cognizant

However, anticipated technology debt reduction will not cover the cost of modernization

The vast majority of companies (93%) have retired 25% or less of their tech debt. While almost half (45%) say they will achieve that milestone by 2030, only 18% will have retired half or more of their technology debt in that timeframe. In actuality, tech debt will cover less than even half of the modernization cost burden for most businesses.

What percentage of your company's legacy migration budget is funded by (potential) savings from retiring technology debt now, and in 2030?

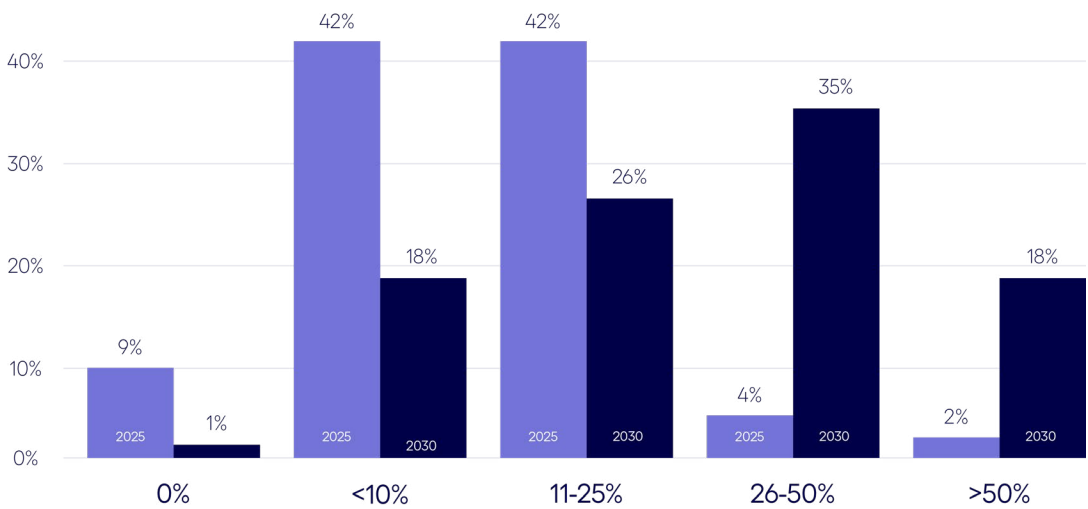


Figure 3

**Tech debt is the accumulated cost incurred by making quick fixes to existing systems rather than applying those resources to new, more powerful and ultimately less costly platforms.*

Base: 1,000 business and technology leaders at Global 2000 organizations

Source: Cognizant

Taken together, these funding intentions suggest that companies are unlikely to achieve their stated milestones in two years' time.

This is where the flywheel comes in (see Figure 4). It directly addresses the entrenched difficulty of investing in “the new,” while also continuing to pay for the old during the transition period—all with flat or only modestly increasing budgets.

With the flywheel approach, the first priority is to free up operational dollars, both by reducing operating costs and by increasing incremental revenues. These savings can then be applied to the second priority, tech debt, making it possible to begin investing in agentic development cycles and meaningfully scale AI across the business.

With these spending reductions in hand, organizations can then focus their investments on the third priority: new initiatives focused on growth. This includes delivering new types of products and services, meeting new customer expectations and keeping ahead of competitor capabilities.

Every turn of the gear increases the velocity of the legacy system migration. Ultimately, it will result in an organization moving more rapidly toward building a new technology platform, with which it can AI-enable the business and position itself to capture new markets.

The modernization flywheel



Figure 4

Source: Cognizant

What follows is a closer look at how businesses should proceed with their legacy modernization priorities based on this flywheel model. Our analysis is further informed by respondents' own assessment of the following:

- **Modernization impact:** The main business drivers fueling their legacy modernization needs
- **Concern about their existing technology:** Whether their current technology imperils their ability to meet those business goals
- **Velocity:** Whether they feel they're moving too fast or too slow on those modernization initiatives

In many cases, respondents' views are aligned with the priorities we've outlined in the flywheel and deepen our understanding of how businesses should proceed.

Phase 1: A focused effort to win early operational gains

Top priorities for Phase 1

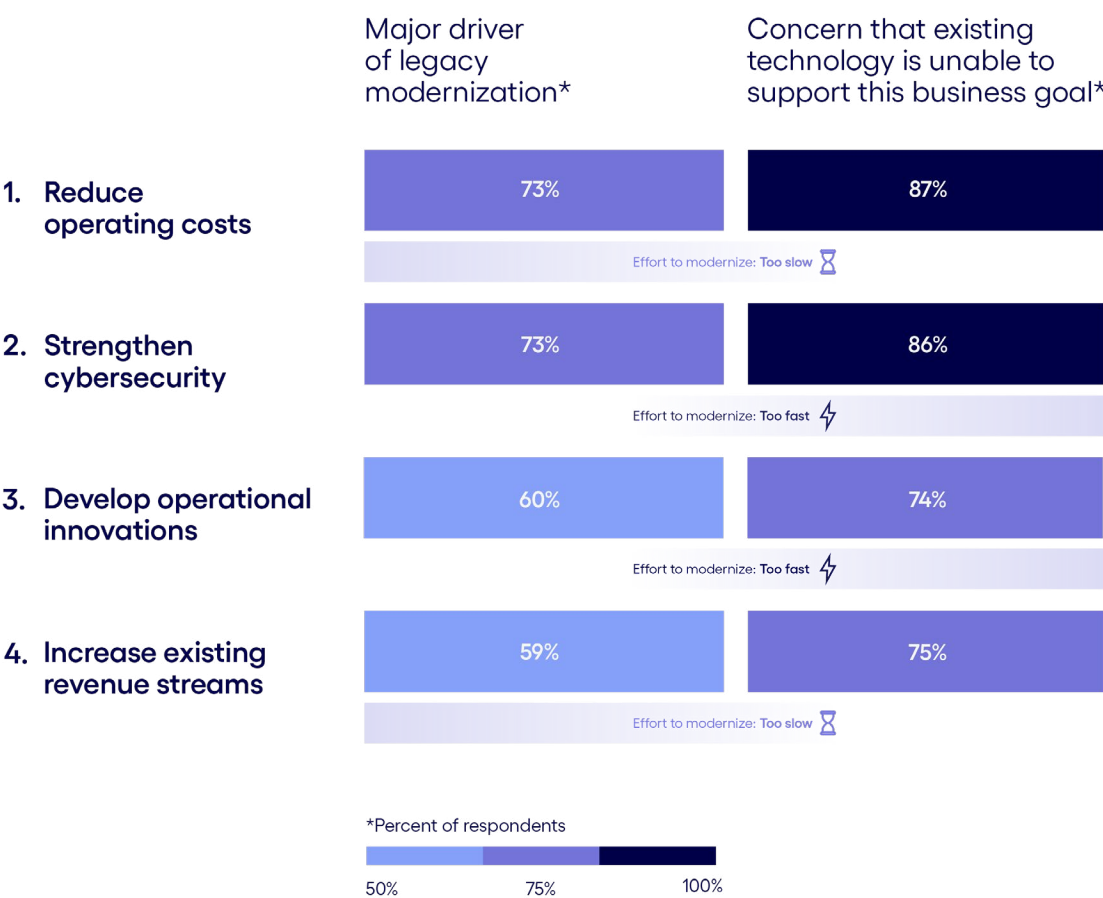


Figure 5
Base: 1,000 business and technology leaders at Global 2000 organizations
Source: Cognizant

The objective in this phase is to free operating capital by boosting productivity and growing revenue. The quick returns will act as a springboard for ongoing legacy transformation and sustained momentum.

For respondents, the top drivers, by far, are reducing operating costs and strengthening cybersecurity (see Figure 5). In both areas, respondents expressed high concern that their existing technology was ill-equipped to support these efforts. The next two priorities—operational innovation and boosting revenue—are also needed to lay the foundation for the more ambitious modernization programs in the next phase.

Respondents rank AI integration highly enough to be a Phase 1 modernization pursuit. And it's true that businesses can and should use AI in this phase for targeted initiatives. However, deep integration of AI would be complex, costly and prone to failure when attempted on older systems.

To realize the needed operational gains in this phase, businesses should focus on:

Freeing up capital through operational improvements

As we've said, most leaders expect to fund half or less of their modernization budget with retired tech debt by 2030. This means they'll need to make significant progress in realizing operational improvements.

When we asked respondents to name the business areas that would be most positively impacted by modernization, their top three responses all related to operational improvements:

- **Increased IT agility** (named by 73% of respondents). More agile and responsive IT makes it possible to more quickly and cost-effectively deliver products and services, optimize staff allocation and minimize costly support interventions.
- **Enhanced operational visibility** (highlighted by 74%). A manufacturer, for instance, might connect its disparate ERP/MRP systems into a modern data platform and layer in AI to flag risks in real time, driving out waste and expense and avoiding costly interruptions to business operations.
- **Workforce productivity** (highlighted by 66%). A healthcare provider, for instance, might modernize its patient records system by connecting its legacy systems to cloud apps and then use AI to prevent medical errors and redundant services. Staff are then free to spend more time on patient care, boosting productivity and reducing operational costs.

Focusing on top-line growth

On the flip side of the cost-cutting coin, organizations can also gain needed modernization funding with incremental improvements to their revenue. In this earlier stage of legacy transformation, business leaders are far more interested in growing existing revenue streams (named as a key driver by 59% of respondents) than in developing new revenue channels (mentioned by just 48%).

Strengthening cybersecurity defenses

In a world where cybercrime is increasingly AI-enhanced, any legacy modernization effort needs to be bolstered by strong AI-orchestrated defenses. Respondents are highly concerned about the ability of their legacy systems to defend against these new threats; outdated systems and unsupported applications represent substantial vulnerabilities. While more leaders say they're moving too fast than too slow in this area, a full 50% are comfortable with the pace of progress. But there's no sitting still: Ongoing and iterative efforts will be needed to foster a resilient security posture.

Phase 2: A concerted effort to pay down tech debt and embrace new technologies

Top priorities for Phase 2

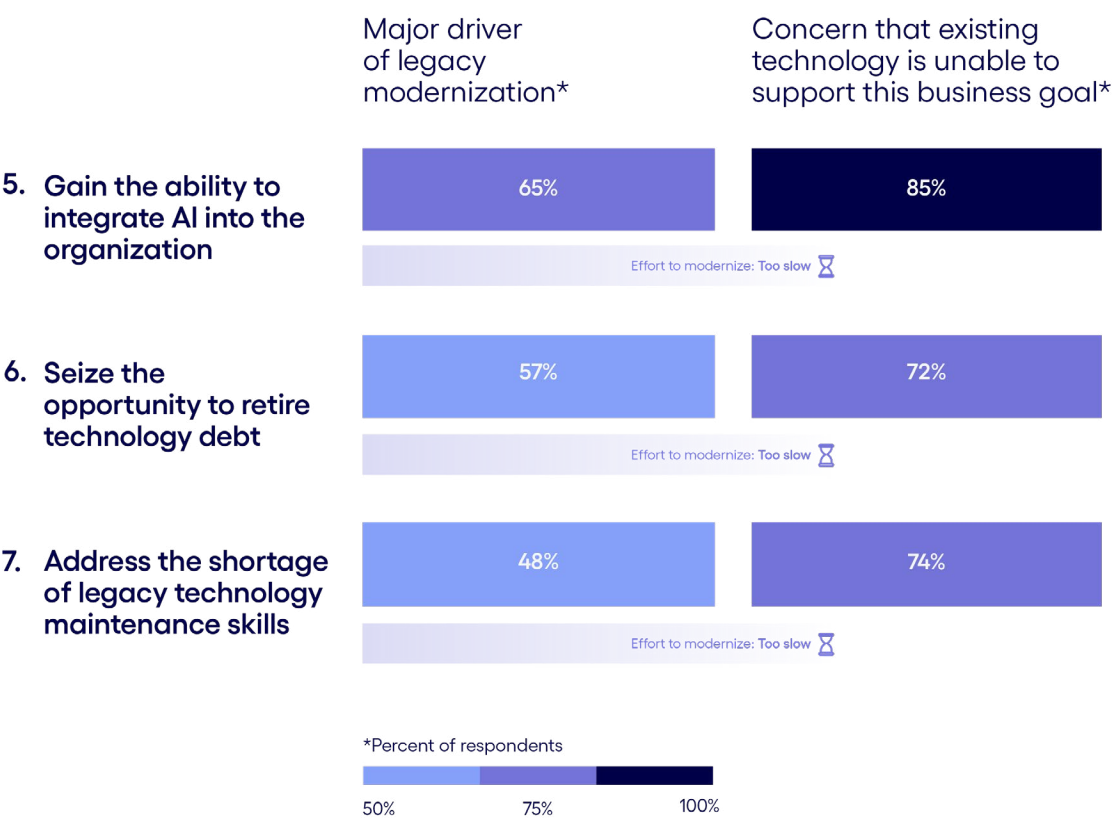
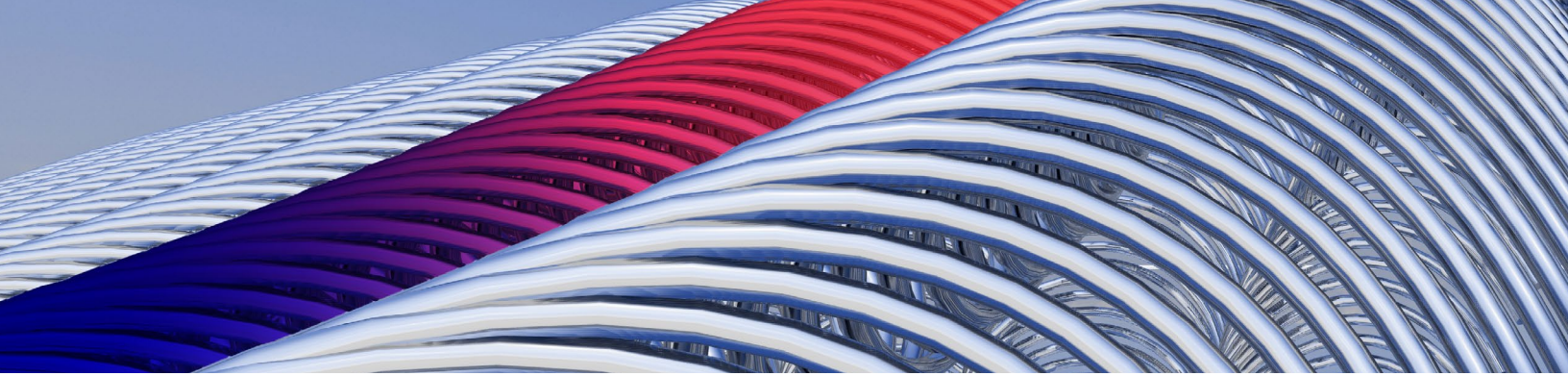


Figure 6
Base: 1,000 business and technology leaders at Global 2000 organizations
Source: Cognizant

In this second phase, modernization initiatives can be significantly upleveled, both because of the work that’s been done on the technology foundation itself and the resources that have been freed to invest in more cost-intensive programs.

At this stage, it’s also possible to move AI into a more integral role. Integrating AI is seen as a major business driver for legacy modernization, even higher than reducing tech debt (see Figure 6). However, these initiatives are intertwined, as each bolsters the other: AI is a vital tool for reducing tech debt, and retiring tech debt lays the foundation for more integration of AI. Unsurprisingly, executives feel pressured to speed up their efforts in both areas.



Initiatives best pursued in this phase include:

Systematically focusing on eliminating tech debt

As our study found, respondents plan to halve the percent of their technology budget allocated toward legacy spending by 2030. They believe this will free them to swing their spending to modernization endeavors.

For example, they plan to boost spending on modernizing and migrating legacy systems from 26% of the budget today to 43% in 2030. Spending on new systems and technology experimentation will grow from 12% of the budget to 31%. These spending swings will need to happen in this phase to support the modernization initiatives in Phase 3.

Embedding AI to transform legacy modernization efforts

In the previous phase, AI is aimed at supporting discrete initiatives to drive out cost; at this stage, businesses will be in a better position to work toward integrating AI organization-wide.

Additionally, AI is a key component in legacy modernization and, thus, in reducing legacy tech debt. When asked what impact AI would have on their legacy modernization objectives, fully 93% of respondents said it will help overhaul legacy infrastructure.

We see AI as having two major roles in legacy modernization. One is to help businesses understand how their legacy systems work by creating documentation for these older systems, which is often nonexistent. Generative AI can crawl through source code, translate it into natural language and aggregate it into business specifications.

Second, AI can greatly reduce the development work required to recreate a system by converting code predictably and repeatedly at scale. All in all, AI can help businesses achieve their modernization plans in 30% less time and for 30% lower costs, which makes these programs more attractive to pursue.

Closing the skills gap

Another motivation for reducing tech debt is the shrinking availability of people with legacy technology skills, which drives up maintenance costs and stresses succession planning. For example, the community of COBOL developers is declining significantly over time, while the demand for the skill set remains flat—[fueling a shortfall of close to 100,000 workers by some estimates](#). In fact, when asked to name the top impediments to modernization, fully 85% of respondents highlighted the cost and availability of talent, and a great majority, 98%, plan to seek outside talent by using a systems integrator.

AI can help close this skills gap in a variety of ways, such as assisting developers with decoding business logic, supporting real-time coding or streamlining data migration. This can not only boost productivity but also enable organizations to accelerate legacy modernization despite a shrinking pool of specialist workers.

Phase 3: Unleashing the enterprise from legacy to pursue new markets

Top priorities for Phase 3

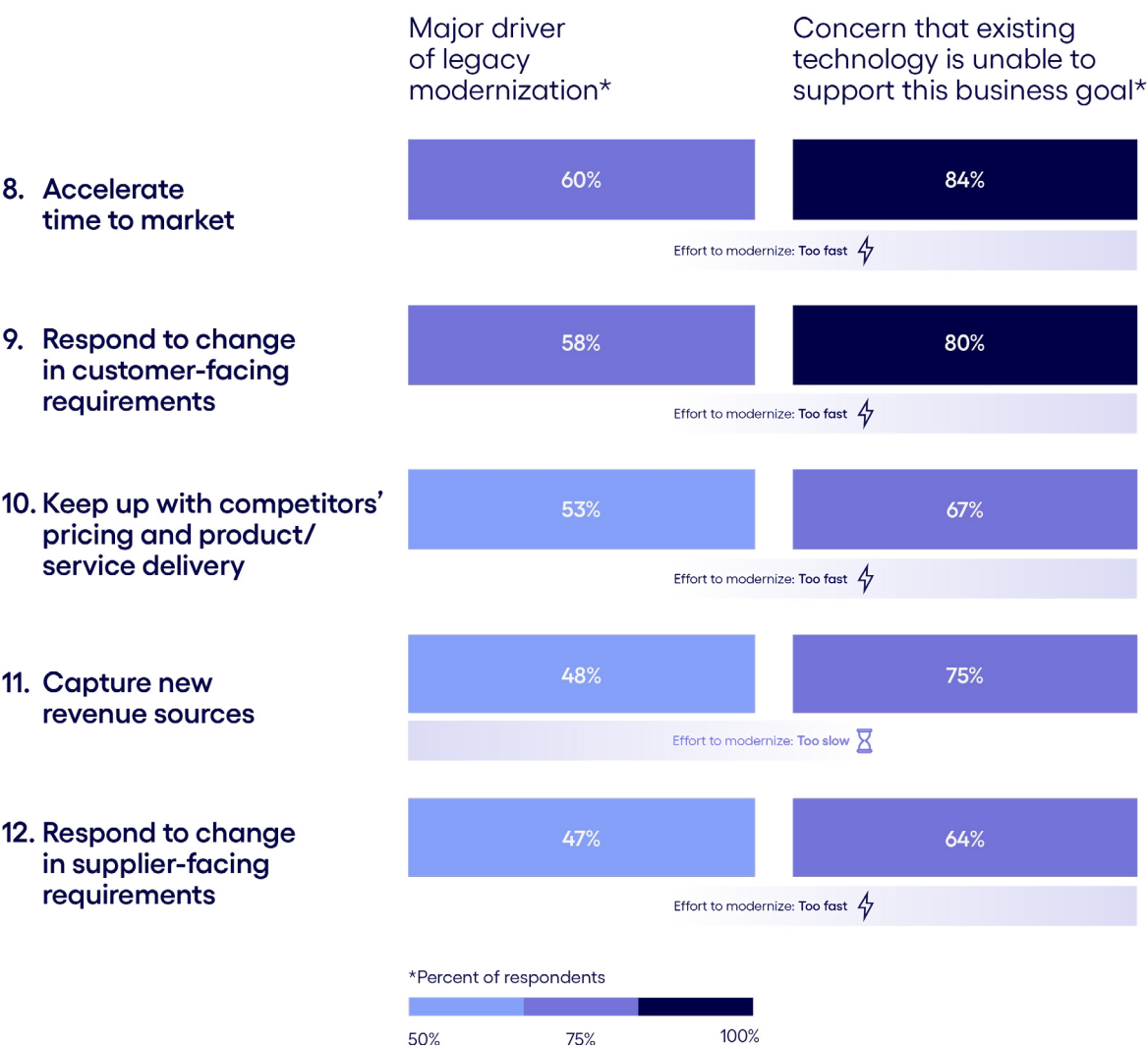


Figure 7
Base: 1,000 business and technology leaders at Global 2000 organizations
Source: Cognizant

By the third phase, organizations are equipped with the necessary resources—time, capital and a more ready infrastructure—to address more ambitious modernization pursuits.

Over 80% of respondents are acutely concerned that some of these initiatives—particularly accelerating time to market and responding to change in customer-facing requirements—cannot be supported by their current technology estate.

Top initiatives to focus on in this phase include:

Engaging with customers in new ways

As companies shed technology debt through earlier modernization efforts, they are far better positioned to respond to changing customer-facing requirements—and not a moment too soon.

Our prior research on consumer adoption of AI highlights how businesses must rethink customer engagement to capture the market opportunity of consumers enthusiastic about AI. By 2030, AI-powered consumers could drive up to 55% of spending.

When asked whether their current tech estate could support consumer adoption of AI, only 24% of respondents answered in the affirmative. However, with capital freed up to support new technologies, organizations can offer experiences that are more seamless, personalized and attuned to the AI-powered consumer.

Enabling new competitive capabilities

The ability to compete in a fast-changing business landscape is also top-of-mind in this phase, from accelerating time to market to anticipating new pricing and product innovations. With a more agile infrastructure, businesses can rapidly address new market demands or supplier constraints.

This work is urgently needed. In our study, just 28% of organizations believe their existing tech estate is sufficient for meeting changing customer expectations, such as dynamic pricing, and just 25% feel their current systems could fully respond to uncertainty, such as by using predictive analytics to navigate supply chain disruption.

In many cases, these initiatives can be successful only because of goals met in previous stages. For example, reduced operating costs, driven by lower levels of tech debt, can enable greater price competitiveness, which is named by over half of the respondents as a major business driver.

Pursuing new business opportunities

At this stage, leaders gain the opportunity to pursue entirely new markets and revenue streams, the one area in this phase where respondents felt they were moving too slowly and in which 75% felt unequipped to do with their current tech infrastructure.

Free from legacy constraints, they are able to use advanced technology and agile infrastructure to develop innovative digital services and products, thereby accessing additional markets and customer segments. And enhanced system integration with partners facilitates fresh revenue opportunities through collaboration within broader ecosystems.

Supporting AI-enabled experiences

Many, if not all, of the business objectives in this phase require the operational integration of advanced AI and, increasingly, multi-agent AI systems. Few businesses today—just 17% in our study—are confident that their existing infrastructure can support agentic AI, in which complex workflows are carried out autonomously with AI agents.

Consumers will soon have personal AI agents that work with business AI agents to orchestrate the purchase journey. Agentic AI will usher in new levels of productivity for business, and respondents are all too aware it's time to get ready.

Speeding legacy modernization to meet the rapid trajectory of AI transformation

The findings of our research are unequivocal: While businesses are eager to adopt AI, their current technology infrastructure cannot support it. At the same time, their modernization efforts are at risk of moving too slowly to keep pace with AI's rapid evolution.

Instead, businesses need to map their modernization timeline to AI's. Consider that, in our 2024 and 2025 research studies, "[New work, new world](#)" and "[New minds, new markets](#)," we modeled a timeline for when AI-powered change will take hold. Enterprise adoption of AI, we believe, will unfold over a seven-year time period, moving from experimentation today, to confident adoption by 2030, to embedded organizational collaboration by 2032. Consumer adoption of AI, meanwhile, will drive even faster change; by 2030, we believe AI will be fully embedded in the consumer journey.

If businesses can come even close to reaching their hoped-for two-year timeframe for legacy modernization, it will set them up for success for a world increasingly driven by AI.

This will require fast action—but not in an “everything-all-at-once” way. Businesses need to take a decisive, disciplined approach that ensures they've laid the groundwork—capability- and resource-wise—for the expansive and impactful initiatives they'll be ready to tackle in the later phases of the modernization journey.

The window to act is narrow, but those who move with both purpose and precision will be equipped to thrive in the fast-approaching AI-driven world.

[Unlock innovation with AI-led legacy modernization](#)

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