

# Checklist: Steps To Operationalize AI Innovation Through Application Modernization

Organizations must increasingly adopt a mindset of continuous modernization to keep pace with shifting customer expectations, drive innovation, and fuel profitable growth. Just moving to the cloud is not enough: Modernization, incorporating advances like generative AI (genAI), is playing a critical role in driving competitive advantage. But how can enterprises succeed with modernization? Success entails orchestration across all aspects of the business, including the right strategy, processes, people and skills, and technology.

There's an urgent need to modernize application assets. Advances in genAI promise to yield intelligent applications that can provide a new level of customer experience, leading to more profitable and loyal customers. Done right, application modernization offers a clear path to innovate with transformative AI, capitalize on more agile operations, and achieve greater competitive advantage now and in the future.

In March 2024, Forrester conducted a study of 611 respondents to evaluate application modernization efforts at global organizations. The study surveyed IT and business decision-makers who have decision-making influence over technology strategy at their organization and yielded the following key findings and recommended next steps.



## KEY FINDINGS

- **Cloud migration is merely the first step to application modernization.** At present, challenges in adopting cloud technology — such as inflexible legacy software systems, a lack of AI implementation, and lagging investment in internal-facing systems — hold firms back from reaping the benefits of application modernization efforts. Those who view cloud as a means, not an end, are in a better position to achieve digital transformation success.
- **Cloud migration alone leaves critical value on the table.** Companies looking to compete and thrive must look at cloud as not just a tool; it's a platform to power innovation. Adopting a culture of continuous modernization is where they derive business value.
- **Application modernization is harnessing AI for business outcomes.** One in five respondents is already achieving successful modernization. How? Through 1) a clear technology strategy built around AI and training; 2) integrated AI and key metrics tied to business outcomes; and 3) upgraded technology stacks supported by strategic partnerships.
- **Real application modernization requires cloud-first strategy and processes and effective technology integration.** Implementing a cloud-enabled business strategy requires modernizing and aligning applications, operations, and practices across the business to be cloud-first. This drives innovation, agile operations for shifting market dynamics, process and operational improvements, and business growth.

“[Application modernization] is primarily driven by the need to enhance operational efficiency, improve scalability, and stay ahead in a rapidly evolving digital landscape. We aim to leverage cutting-edge technologies to streamline processes, foster innovation, and ensure a robust foundation for growth.”

MANAGER, US TECHNOLOGY FIRM

# CONSIDER KEY QUESTIONS AND PRACTICAL NEXT STEPS AS YOU CHART YOUR APPLICATION MODERNIZATION COURSE

Forrester designed the following checklist to help decision-makers navigate a series of key considerations on their application modernization journey.

By focusing their efforts on strategy, process, and technology, decision-makers can transform their modernization initiatives and reap the full payoff of application modernization done right.

## STRATEGY

Application modernization is not just a technical exercise involving applications and data. Forrester clients consistently report that the most significant application modernization challenges involve setting an effective strategy, addressing cultural change, and surmounting organizational barriers, such as rigid silos and the lack of senior executive buy-in.

As you begin to evaluate your organization’s current strategic readiness capabilities, think about the following questions:

STRATEGIC CONSIDERATIONS	
1.	Do we clearly understand how a modernized technology stack correlates to business outcomes like lower costs, faster time to market with differentiated offerings, business continuity, organizational agility, improved employee productivity, and competitive advantage?
2.	Are critical technology initiatives funded effectively with clear economic responsibility for key stakeholders? Have we sought to fund modernization through cost savings achieved in cloud migration?
3.	Is there sufficient buy-in from executives for the modernization program?
4.	Have we built a business case based on business-relevant benefits like the above, not just loosely defined benefits like increased agility or collaboration?
5.	Is there a strong, organizationwide awareness of the importance of technology initiatives and how they can deliver benefits to key business processes?
6.	Does the enterprise work with service partners — e.g., consultants, systems integrators, and managed service providers — that are helping shape our strategy?

The right strategy is essential to successful modernization. Ensuring these activities link to business outcomes is also critical. Forrester clients frequently tell us that justifying modernization efforts is a major challenge. Not all stakeholders understand intuitively the value of cloud migration and modernization or cloud-native development. They won't necessarily buy vague justifications of business agility or greater adaptability. Moreover, organizational culture is a significant potential barrier to mastering modern development practices and advanced team-based models, so change management must be part of your modernization efforts. You may need external partners to help facilitate the change.

## WHERE TO START/WHAT TO DO NEXT

- **Make sure you have adequate buy-in from the business.** Application modernization initiatives can be difficult to justify in the absence of clear and compelling business benefits. Ensure that you ground your modernization strategy in business benefits that executives can readily understand.
- **Ensure that organizational units and technology stacks align well.** Effective communication is essential to success; it is often the precursor to effective alignment, in which expectations and outcomes are broadly understood. This also extends to technology, in the sense that reasonable expectations for technology's contributions to business outcomes are shared across organizational silos. Governance bodies of all types should be cross-functional in nature.

## PROCESS

Many customers report that their biggest obstacles to application modernization are organizational and political in nature. Do the organization's business and technology processes provide an environment conducive to modernization as well as support for the future of the modernized applications? This extends to both high-level processes, including governance and supplier management, as well as ongoing development and operational processes.

As you begin to evaluate your organization’s current operational readiness, think about the following questions:

### PROCESS CONSIDERATIONS

1. Does my organization measure the outcomes of its end-to-end processes using appropriate metrics — e.g., objectives and key results (OKRs) or flow/agile/DevOps metrics — and continually optimize them?
2. Does my organization have connected operating models and governance mechanisms that are invoked at regular intervals?
3. Have we evaluated our development processes to identify potential bottlenecks that could delay release frequencies?
4. Are the right stakeholders across all major groups — e.g., business, technology, and operations — involved?
5. Are my organization’s development and operation practices — e.g., agile development, DevOps, platform engineering — sufficient to support the desired business outcomes?
6. Does my organization operate with a culture of cross-team collaboration while avoiding technology or business silos?

The importance of the process dimension is often overlooked in the rush to realize results. A strong process foundation — ranging from planning through execution to ongoing operations — is critical to ongoing progress. Modernization “build” activities must also map effectively to operations. Enforcing dictums like “you manage what you build” won’t always work. Moreover, you can’t leave decisions about the “run” to the end. If key operational issues aren’t addressed early, they can lead to substantial delays in modernization programs and compromise overall success.

### WHERE TO START/WHAT TO DO NEXT

- **View cloud migration as a means, not an end.** “Lift and shift” migration can yield benefits in terms of facilitating the closure of data center facilities, but merely migrating to the cloud won’t equip workloads to thrive in a cloud-native environment. View migration and application modernization as essential stages in your modernization journey.

- **Make use of modern development and operational approaches.** Historically, technology operations groups have been organized on the basis of siloed technology skill sets. Embrace cross-functional team-based structures that encourage technical breadth in addition to technical depth. DevOps, for example, aims to eliminate unnecessary organizational handoffs and silos, while site reliability engineering (SRE) has emerged as a de facto standard for cloud operations.

## TECHNOLOGY

Just because customers often say their biggest challenges are organizational or political, this doesn't mean the technical challenges are necessarily trivial. In fact, technology sprawl, or a highly fragmented technology environment, can complicate application modernization efforts. Moreover, technology is in a period of rapid evolution, with genAI capabilities offering many new possibilities.

As you begin to evaluate your organization's current technology readiness, think about the following questions:

### TECHNOLOGY CONSIDERATIONS

1. Does my organization have the skills/talent required to achieve its technology objectives? Does it have a plan to upskill talent or use external partners to enable these objectives?
2. Has the organization evaluated the current state of its applications and data and determined the outcomes required to achieve modernization goals?
3. Does my organization's technology infrastructure allow us to be flexible and respond to changing business and customer needs?
4. What does the organization consider the role of services partners and how does it think they can help achieve breakthroughs in modernization?
5. Does my organization have a clear idea about the role that cloud-based technology solutions play in achieving business goals?
6. Is the enterprise evaluating the potential role of AI and genAI as well as opportunities for their deployment across technologies and business scenarios?
7. Has my organization embraced the Zero Trust security model, including security at the applications layer? If not, is the organization prepared to build in security as a fundamental building block of application modernization?

The technology environment can serve as either a facilitator of or a barrier to application modernization progress. Modernization does not necessarily mean choosing a single vendor. The reality of today's technical architecture is usually multivendor, including multicloud. However, customers should simplify their environments as much as possible by choosing integrated technology "stacks," even if they rely on multiple participating suppliers, open standards, or even open-source software. AI and genAI, of course, merit special attention given that their potential for disruption is enormous, even if largely undetermined so far.

## **WHERE TO START/WHAT TO DO NEXT**

- **Limit technology sprawl.** Too much technology diversity can compromise efficiency. Organize technology into coherent and integrated technology stacks, backed up by strategic partnerships with relevant vendors. Customers can benefit from participating in various programs that encourage innovation.
- **Embrace a broad but holistic approach to AI and genAI.** GenAI, in particular, is a wild card in terms of its potential for dramatic productivity gains, but its ultimate impact is not yet known. Be ready to consider its impact broadly and pay attention to emerging use cases.
- **Organize your approach to ensuring security early on in your transformation.** Security concerns, while legitimate, can slow down modernization efforts. If they are not involved early, security teams may force you to move back to square one. Make sure you consider security from multiple dimensions and build it in from the beginning of the modernization process.

## Appendix A: Methodology

### SUMMARY OF RESULTS FROM THE MICROSOFT-COMMISSIONED THOUGHT LEADERSHIP STUDY, “UNLOCK COMPETITIVE ADVANTAGE WITH APPLICATION MODERNIZATION”

Microsoft commissioned this study to evaluate application modernization efforts at global organizations.

To achieve these objectives, Forrester conducted an online survey with 611 IT and business decision-makers at the manager level or above who have influence or decision-making ability over technology strategy at their organization.

To read the full results of this study, please refer to the Thought Leadership Paper commissioned by Microsoft titled, “Unlock Competitive Advantage With Application Modernization.”

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