Unlock Flexibility And Adaptability With A Comprehensive IT Transformation Strategy
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Executive Summary

To keep up with today’s demanding customers, organizations are constantly changing and upgrading their products and services — however, in many cases, the underlying technology has remained stagnant. Businesses must fast forward every piece of their IT technology stacks, from data storage solutions to front-facing data insights managers, to stay relevant for their customers and for their employees. While they are eager to modernize their IT infrastructure, many leaders struggle with the scale and scope of this transformation. However, with the proper planning and coordination, businesses can harness the power of these critical infrastructures to accelerate business outcomes.

In January 2018, Intel commissioned Forrester Consulting to evaluate IT transformation strategies and implementation, including the challenges faced and benefits realized. Forrester conducted an online survey with 606 respondents with responsibility over IT strategy at their organizations in the US, UK, Germany, India, China, and Japan. We found that while some aspects of IT modernization can be challenging and complex, companies recognize that a comprehensive strategy will allow them to stay competitive and innovate.

KEY FINDINGS

› Organizations are willing to invest significantly to transform their IT. Nearly 80% of companies surveyed plan on increasing IT budgets to embark on IT initiatives, recognizing that refreshing infrastructure is crucial to empowering employees to innovate.

› However, because IT modernization encompasses the whole stack, organizations struggle with scope, prioritization, and technical debt. Weighed down by competing agendas and the breadth of IT transformation, IT leaders struggle to implement and integrate new technologies into existing systems and processes.

› With a comprehensive strategy, companies understand that they can unlock flexibility and profitability across their organization. Companies recognize that a flexible and adaptable infrastructure platform can empower employees with new tools to find insights and drive innovation and business value.
Business Success Requires IT Transformation

Organizations are challenged now more than ever by increasing competition; businesses recognize that they must not only collect data but also harness that data to grow and innovate. To meet these increasing demands, they recognize that they must re-think their IT strategies and invest in modern, innovative technologies to fundamentally transform their IT infrastructure.

› **Innovation, profitability, and customer experience are the key drivers of IT transformation.** Fifty-two percent of organizations surveyed state that innovation was their top driver for undergoing IT transformation; 46% stated reducing costs (see Figure 1). Interestingly, 39% indicated that specifically improving product and service innovation was driving them to transform their IT infrastructure and processes.

› **Improved compliance, cost management, and the ability to innovate also correlated to measures of a successful IT transformation.** Organizations claimed that successful IT transformations are marked by improved security/compliance, better overall IT cost management, improved ability to innovate, and improved IT infrastructure management and flexibility to customize workload strategy.

› **To meet these goals, organizations understand that they must invest in new technologies to truly transform their IT.** To that end, in the past 12 to 24 months, 78% of organizations have increased their IT budget — a remarkable 32% have increased their budget by over 11%. And this trend is only continuing — in the next 12 to 24 months, over 80% of organizations anticipate further increasing their IT budget, and a full 46% anticipate the increase being more than 11% (see Figure 2).

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**Figure 1**

“Which of the following objectives are the key drivers of your firm’s IT transformation?”

<table>
<thead>
<tr>
<th>Objective</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve existing IT capabilities</td>
<td>52%</td>
</tr>
<tr>
<td>Reduce costs</td>
<td>46%</td>
</tr>
<tr>
<td>Improve the customer experience</td>
<td>42%</td>
</tr>
<tr>
<td>Product and service innovation</td>
<td>39%</td>
</tr>
<tr>
<td>Revenue growth</td>
<td>39%</td>
</tr>
</tbody>
</table>

Base: 606 global enterprise IT managers responsible for IT transformation
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018

**Figure 2**

“Over the past 12 to 24 months, has your company's budget changed for IT initiatives? How do you anticipate it will change in the next 12 to 24 months?”

<table>
<thead>
<tr>
<th>Budget Change</th>
<th>Past 12 to 24 months</th>
<th>Next 12 to 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased over 20%</td>
<td>6%</td>
<td>14%</td>
</tr>
<tr>
<td>Increased between 11% to 20%</td>
<td>26%</td>
<td>32%</td>
</tr>
<tr>
<td>Increased between 1% to 10%</td>
<td>46%</td>
<td>35%</td>
</tr>
<tr>
<td>Stayed the same</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Decreased between 1% to 10%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Decreased between 11% to 20%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Decreased over 20%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Base: 606 global enterprise IT managers responsible for IT transformation
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018

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Unlock Flexibility And Adaptability With A Comprehensive IT Transformation Strategy
Broad-Reaching IT Transformations Pose A Challenge For Organizations

To truly transform, IT organizations must consider every aspect of the technology stack. However, because of the breadth of these initiatives, many organizations struggle to prioritize and build the right processes and skills to not only implement new technology, but also harness their full potential.

**Most IT transformations encompass the entire infrastructure stack.** Companies surveyed are implementing or expanding the implementation of an average of 5.7 new infrastructure technologies; and they are planning to implement or pilot another 4.8 different technologies (see Figure 3). Across all these initiatives, organizations prioritized networking and storage investments, confirming the criticality of these technologies that unpin the success of hybrid cloud architectures and advanced analytics. Software-defined networking solutions can enable more policy-based orchestration and centralize network operations across a hybrid infrastructure environment. While scale out service-based storage solutions will provide more flexibility and scalability to support unpredictable and growing data volumes.

![Figure 3](image-url)

**Figure 3**

“What are your plans to invest in and/or deploy the following technologies?”

<table>
<thead>
<tr>
<th>Technology</th>
<th>Expanding or upgrading implementation</th>
<th>Currently implemented, not expanding/upgrading</th>
<th>Currently piloting/testing</th>
<th>Planning to implement in the next 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software defined networking solutions</td>
<td>30%</td>
<td>24%</td>
<td>20%</td>
<td>16%</td>
</tr>
<tr>
<td>Scale out server-based storage solutions</td>
<td>25%</td>
<td>27%</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td>Converged infrastructure systems</td>
<td>24%</td>
<td>26%</td>
<td>21%</td>
<td>13%</td>
</tr>
<tr>
<td>Network function virtualization</td>
<td>24%</td>
<td>24%</td>
<td>22%</td>
<td>15%</td>
</tr>
<tr>
<td>IoT analytics</td>
<td>23%</td>
<td>19%</td>
<td>25%</td>
<td>18%</td>
</tr>
<tr>
<td>Predictive analytics</td>
<td>21%</td>
<td>22%</td>
<td>23%</td>
<td>16%</td>
</tr>
<tr>
<td>Engineered systems that are optimized around key workloads</td>
<td>23%</td>
<td>23%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>Automation software</td>
<td>22%</td>
<td>20%</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Container solutions and services</td>
<td>17%</td>
<td>23%</td>
<td>22%</td>
<td>16%</td>
</tr>
<tr>
<td>Artificial intelligence</td>
<td>22%</td>
<td>16%</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>Density optimized or specialized packaging for servers</td>
<td>21%</td>
<td>20%</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>Hyperconverged infrastructure systems</td>
<td>18%</td>
<td>19%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>General purpose graphics processing units</td>
<td>15%</td>
<td>24%</td>
<td>17%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Base: 606 global enterprise IT managers responsible for IT transformation
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018
However, most IT decision makers have trouble integrating new technology systems into their existing systems and processes. Forty-seven percent noted that integration of new technology into existing systems was their top challenge in executing their IT modernization strategies. Forty-one percent stated that staying on-budget was a top concern, and more than a third of IT decision makers were challenged by their aging or outdated infrastructure.

Simultaneously, decision makers are held back by competing agendas. Stakeholders at organizations are often not well-aligned on what entails a successful IT transformation (see Figure 4). This disconnect can cause significant challenges in defining strategy and execution plans. The top-rated people-centric challenges in executing IT transformations for organizations surveyed was the lack of alignment between IT and business units (38%) and the lack of proper skills (38%). Concerning processes, 39% of organizations stated that their top challenges centered on the implementation of new processes and capabilities. Without the right skills or ability to re-architect processes, implementing the myriad of planned technologies seamlessly into existing technology systems will be impossible.

Organizations are challenged by data management, and the networking and storage problems that come with the increased volume of data used to power business initiatives. Teams throughout the IT organization are challenged to secure and manage ever-increasing volumes of data, cited as the top storage related challenge. After data privacy, managing the growth of data volume and variety was the top analytic-specific challenge indicated as well. Specifically, networking teams felt the burden of increasing data storage and movement, and are struggling to maintain security, cost and performance across infrastructure deployments. IT decision makers recognize that they must take control of their infrastructure to enable data and analytics that will power their businesses forward.

Figure 4
“How would you measure a successful IT transformation?”

<table>
<thead>
<tr>
<th>Metric</th>
<th>C-level executive</th>
<th>Vice president</th>
<th>Director</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved security and compliance</td>
<td>42%</td>
<td>36%</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>Better IT cost management overall</td>
<td>36%</td>
<td>38%</td>
<td>45%</td>
<td>47%</td>
</tr>
<tr>
<td>Improved ability to innovate</td>
<td>44%</td>
<td>41%</td>
<td>35%</td>
<td>41%</td>
</tr>
</tbody>
</table>

Base: 606 global enterprise IT managers responsible for IT transformation
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018
A Comprehensive IT Transformation Strategy Can Propel Your Business Forward

With a comprehensive IT modernization strategy, organizations can unlock flexibility and adaptability across their infrastructure to combat a shifting threat and competitive landscape, deliver innovative products, and increase profitability. This strategy includes investments in both technology as well as the employees responsible for it. Eighty percent recognize that improving the skills across their IT organization to better manage and implement these new technologies is important.

› Most organizations recognize that hybrid cloud is the critical infrastructure foundation for their IT transformation. Cloud resources are leveraged to improve application performance with agile, flexible, and secure infrastructure. Ninety-five percent of surveyed organizations recognize that cloud is a key component of their IT transformation; for 42% of those respondents, improved application performance is the top anticipated benefit of cloud.

› Hybrid cloud models are seen as solutions that can ease the integration of new platforms, as well as improve adaptability and scalability of existing systems. Eighty-one percent of leaders recognize that it is important or very important for their IT organization to develop a comprehensive cloud strategy for IT infrastructure to successfully transform their IT. However, cloud platforms typically only represent a fraction of the enterprise environment. Thus, forty-three percent of respondents noted that they are growing, expanding, or evolving their hybrid cloud infrastructure to manage this multiplatform environment in order to harness new solutions like big data platforms for data insights or analytics.¹

› With scalable, adaptable infrastructure in place, organizations can harness the power of data through analytics. Organizations recognize the value of harvesting insights from data through analytics. Forty-six percent of IT leaders stated that they expect to increase business revenue and profitability through improved analytics. Closely behind was the ability to leverage analytics to better inform business decisions (45%) and improve customer experience (43%) (see Figure 5). In order to leverage data assets, organizations must increase scalability, interoperability, and interconnectivity of infrastructure systems to be able to support increased data volumes and advanced analytics.
Figure 5

“What benefits do you anticipate, or have you seen, from improved analytics?”

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>Increased revenue and profitability</td>
</tr>
<tr>
<td>45%</td>
<td>Better informed business decisions</td>
</tr>
<tr>
<td>43%</td>
<td>Improved customer experience</td>
</tr>
<tr>
<td>41%</td>
<td>Improved product line management</td>
</tr>
<tr>
<td>39%</td>
<td>Improved innovation and enhanced R&amp;D</td>
</tr>
<tr>
<td>39%</td>
<td>Improved competitive standing</td>
</tr>
<tr>
<td>36%</td>
<td>Ability to identify new markets or sales opportunities</td>
</tr>
<tr>
<td>33%</td>
<td>Improved AI readiness</td>
</tr>
</tbody>
</table>

Base: 528 global enterprise IT managers responsible for IT transformation embarking in analytics solutions

Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018

46% of organizations anticipate increased profitability through improved analytics

45% anticipate better informed business decisions
Key Recommendations

Transformation for success in the digital era starts with a comprehensive business strategy, powered by innovative technology that will require a modernization of existing IT processes and priorities. In order to support the business, IT organizations must embrace change and transform their infrastructure environments to be able to support new initiatives that can help the business launch new services, appeal to new customers and innovate faster than competitors. Forrester’s in-depth survey of infrastructure decision makers about IT transformation yielded several important recommendations:

**Put the business at the center to help align priorities and investments across teams.** IT transformation starts with the challenge of how to help your company innovate and better serve your customers. With so many competing investments and priorities, business and IT leaders must agree on business objectives to align priorities, initiatives, and foster a supportive and collaborative environment.

**Secure executive support to ease cultural resistance and encourage change.** In order to adopt new technologies, individuals must learn new skills and take on new responsibilities. But change is hard for anyone, and infrastructure teams will need executive support to help shepherd new models and processes.

**Start with foundational technologies that can support advanced cloud and analytics capabilities.** Software-defined and scalable compute, storage, and networking are the foundation behind any new technology. Investing in these technologies first will enable your organization to test and implement a wider variety of technologies.

**Invest in technologies to protect and leverage your data.** Advanced analytics have the largest potential to influence business outcomes, however most companies lack that capability to access the data across their organization. Businesses must invest in technologies that can secure, scale, and improve the accessibility of their data for existing platforms as well as technologies for advanced analytics.

**Invest in skills and process re-architecture to capitalize on the value of new technologies.** New technology is moot without skilled employees who know how to use it. Slow or misaligned processes can also negate the benefits of fast and agile resources. Organizations must prepare through re-training, re-tooling, and process re-architecture in order to fully leverage the potential of new technologies.
Appendix A: Methodology

In this study, Forrester interviewed 606 IT decision makers in the US, UK, Germany, China, Japan, and India to evaluate the IT transformation plans and requirements. Survey participants included decision makers in network infrastructure and operations, strategy/enterprise architecture, security, software/applications, database administration, application management, hardware, general oversight, and project management teams. Respondents were offered a small incentive a thank you for time spent on the survey. The study was completed in January 2018.

Appendix B: Demographics/Data

![Demographics map]

**Industry**

- Manufacturing and materials: 17%
- Financial services and insurance: 12%
- Technology: 11%
- Retail: 7%
- Energy, utilities, and waste management: 7%
- Transportation and logistics: 6%
- Telecommunications services: 6%
- Healthcare: 5%
- Consumer product manufacturing: 5%
- Business or consumer services: 5%
- Other (please specify): 3%
- Government: 3%
- Construction: 3%
- Travel and hospitality: 2%
- Electronics: 2%
- Education and nonprofits: 2%
- Chemicals and metals: 2%
- Agriculture, food, and beverage: 2%
- Legal services: 1%

**Annual revenue (USD)**

- 20,000 or more employees: 16%
- 5,000 to 19,999 employees: 23%
- 1,000 to 4,999 employees: 45%
- 500 to 999 employees: 17%
- $5B: 15%
- $1B to $5B: 19%
- $500M to $999M: 24%
- $400M to $499M: 12%
- $300M to $399M: 14%
- $200M to $299M: 7%
- $100M to $199M: 4%
- $1M to $99M: 4%

**Seniority**

- Manager: 29%
- Director: 30%
- Vice president: 12%
- C-level executive (e.g., CIO, CTO): 29%

**Law of responsibility for IT strategy**

- 23% I share responsibility for defining, deploying, and managing our IT strategy at my organization.
- 77% I have primary responsibility for defining, deploying, and managing our IT strategy at my organization.

Base: 606 global enterprise IT managers responsible for IT transformation
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, January 2018

Appendix C: Endnote

¹ Base: 515 managers or above with either purchasing/budgetary authority or make/influence decisions about cloud platforms for their organization; Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, May 2017