The Five Principles of a Successful IT Transformation

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Executive Summary:

Around 89% of global enterprises have either initiated or plan to implement an IT transformation. Electing not to undertake an IT transformation is a big gamble. Companies risk failing to meet customer expectations, and falling behind their competition as a result. The 2019 Digital Trends Report from Adobe revealed that organizations who undertook forms of IT transformation were 64% more likely than their peers to have exceeded their top business goal.

An IT transformation is a comprehensive reassessment and reconfiguration of an organization's IT systems. The goal of an IT transformation is to optimize efficiency and delivery by replacing and modernizing outdated technologies. IT transformations enable enterprises to embrace new technologies, devise and execute new business models around these technologies, improve the efficiencies of internal and external processes, and meet rapidly changing customer expectations in our highly technological era.

IT transformations are complex endeavors that loop in multiple departments. But whatever your vertical, the five principles of a successful IT transformation are the same: Prepare properly, find the right new technologies, harness the power of DevOps, ensure data security, and implement automated tuning and optimization across your big data stacks.

Technological paradigms shift fast. Our current era of automation, cloud technologies, and hyper-digitization presents massive opportunities to enterprises. The challenge, however, is to leverage transformative technologies while remaining stable. An IT transformation can help enterprises remain competitive at a global scale, and the transition away from legacy systems can be smooth—if done right.

What Is IT Transformation?

TechTarget defines IT transformation as “a complete reassessment and overhaul of an organization's information technology (IT) systems in order to improve their efficiency and delivery in a digital economy.” An IT transformation is one component of the broader initiative that is a digital transformation.

Led by CIOs and other business leaders, an IT transformation is informally referred to as a *rip and replace*. This is because the goal is to “rip out” outdated network architecture, hardware, software, data access and storage protocols, and IT service management, and “replace” them with more modern versions.

Organizations typically transform IT so that they can stay competitive within an increasingly digitized and competitive market. IT transformations aim to turn the IT department into a flexible and proactive part of the business that is able to respond quickly and skillfully to ever-changing digital business needs.

1 Prepare and Strategize

First things first: Create a roadmap for your organization's IT transformation. You can't just wake up one Tuesday and decide "okay, we're going to do an IT transformation today." An IT transformation is a heavy duty, and potentially expensive, undertaking.

A Deloitte study into the digital maturity of companies discovered that digital and IT maturity has a lot to do with communication. 81% of digitally mature organizations develop "clear and coherent" digital transformation strategies and effectively communicate these strategies to their teams. Only 15% of digitally immature organizations reported the same. A mere 63% of respondents at these immature organizations said they were aware of their leadership's plans and goals. For digitally mature enterprises, the figure was 90%.

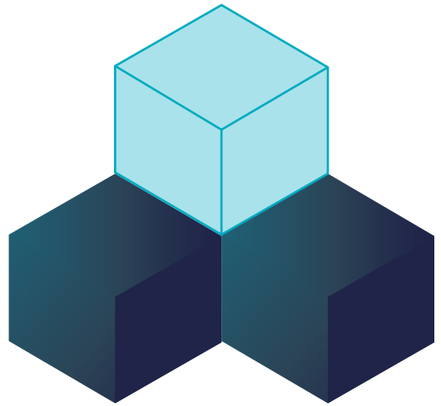
The takeaway? Planning matters, and communication matters. You need goals and strategies that are clear and coherent, and those need to be communicated to everyone. Before you begin transforming any element of your IT department, you should have:

A. An articulation of where you're trying to go

What does IT transformation mean for your company? How much of a transformation do you want to make? What is "good enough"?

B. The strategy you want to employ to arrive at your goal

How long will the transformation take? Do you intend to change everything in one go, or will you do it step-by-step? What are the key areas you want to focus on to achieve success?



C. The key activities that will happen during your transformation process

What are the cornerstones of your IT transformation? What challenges do you expect to face? How do you intend to overcome these challenges?

The takeaway? Planning matters, and communication matters. You need goals and strategies that are clear and coherent, and those need to be communicated to everyone. Before you begin transforming any element of your IT department, you should have:

D. The standard performance measurements/metrics
What's the ideal SLA-level performance for IT operations? How do you say if an application is lagging? What's the inventory of current application workloads?

E. The milestones along the way
What are your intermediate goals as you approach full transformation? Might you need to set some "normalization periods" in between the milestones, in order to avoid overfatigue from the changes?

2

In With the New: Containers and Software-Defined Infrastructures

A central feature of any IT transformation is the replacement of outdated equipment and processes. Two of the most powerful and consistently successful technology classes, that have proven themselves across all forms of IT transformation, are containers and software-defined infrastructures.

Containers are improving upon virtual machines and taking virtualization to a higher level of efficiency. Enterprises can now break applications down into loosely-coupled, independent features for faster delivery and more frequent updating. Containers are the future. A recent Gartner report concluded that “by 2023, more than 70% of global organizations will be running more than two containerized applications in production, up from less than 20% in 2019.”

Software-defined infrastructures (SDI), on the other hand, are replacing the rigid, high-latency hardware architectures of the past.

Based on workplace requirements or individual user needs, dynamic and easy-to-use resource pools can be quickly deployed and managed to provide compute, networking, and storage capacity to the IT side of the business.

Smart enterprises are all leveraging SDIs. The software-defined data centre market is projected to grow at a CAGR of 23.6% by 2023.

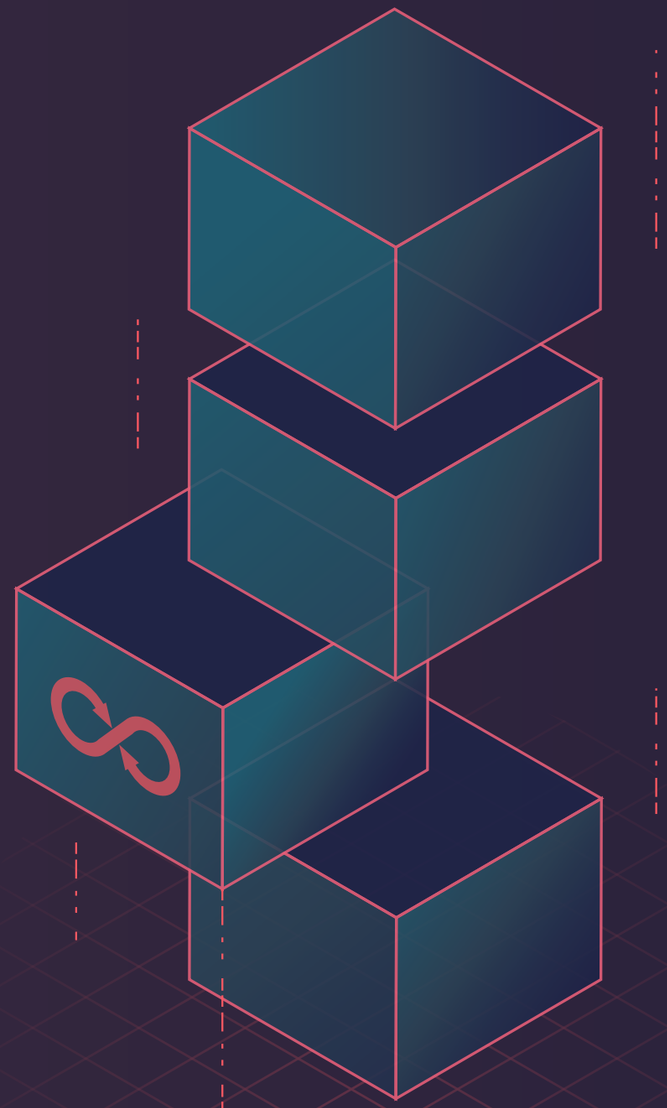
3 DevOps Is a Must

If you haven't already moved towards a DevOps model, now's the time. DevOps plays a crucial role in any digital or IT transformational effort. It's hard to imagine any organization achieving digital transformation without different teams collaborating, building, and operating complex IT systems.

With the advent of DevOps, the IT industry has transformed into a more cohesive and collaborative environment for software developers and operations professionals alike. The unification of previously siloed teams has accelerated the integration and deployment of new functionality, giving birth to what is now called the Continuous Integration and Continuous Development (CI/CD) toolchain.

One great example of this is the DevOps team of Facebook. With a growing number of currently 2.4 billion users, Mark Zuckerberg's brainchild needs to constantly and rapidly develop, upgrade, integrate, and test applications. DevOps enables that, and it is considered an essential piece of the IT transformation puzzle.

DevOps teams operate by constantly finding ways to align tools, people, resources, and technology toward higher level KPIs. Moving your teams toward a DevOps model is crucial for any IT transformation. The "DevOpsologist" Helen Beal puts it nicely: "DevOps' role in digital transformation is to help organizations understand the patterns and practices that are likely to improve their performance in the face of digital disruption, thus improving their competitive posture."



4 Ensure Digital Security

Not only does IT transformation have to deal with new pieces of development and deployment of tech, it also has to consider and ensure the security of your data.

IT transformation technology can empower all new forms of security. The cloud can help companies collect, store, and analyze cyberdata at scale in a way that is invaluable for securing both perimeterized and deperimeterized assets.

However you are approaching your IT transformation: Keep security in mind. Make sure CISOs, CIOs, and even compliance teams are properly looped in and heard. Don't mistake prudence for overcaution. Listen to your security experts; they may have been waiting years for the chance to shake up their tech stack. If you listen to them, you can ensure that your transformed IT capabilities not only maintain your security posture, but even enhance it.

5 Big Data Applications: Automated Tuning and Optimization Is a Must

“Through 2020, 80% of organizations will overshoot their cloud IaaS budgets due to a lack of cost optimization approaches”
– Gartner, 2019

Whether you’re still on-prem and planning to move into the cloud, or you’re already there, here’s an unsettling truth: Enterprise organizations often use considerably more compute than they anticipated.

As Gartner predicts, most companies run the risk of overprovisioning and overspending, especially when they don’t employ cost optimization. That’s because they lack full and actionable visibility into the utilization and provisioning of their cloud applications.

But for large companies, trying to optimize your applications, especially your big data applications, can be a daunting task.

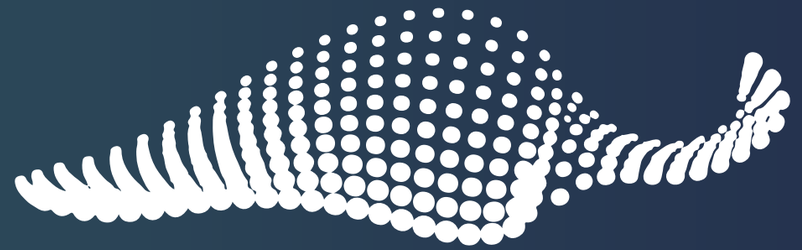
Application performance management and monitoring (APM) tools provide you with some visibility into your data applications. Once, this was a big innovation. But today, merely monitoring isn't enough. APM is great, but what companies really need is deeper metrics, recommendations, and auto-tuning. You need to act, not simply watch.

Today's solutions for managing and monitoring application workloads, database queries, and stream processing systems need to be able to act quickly and decisively. Keeping these workloads running smoothly can greatly impact your SLAs and application performance. Pepperdata gives you observability and continuous tuning for your big data analytics stack. With full visibility, you can:

- quickly diagnose system performance issues, and make resource decisions;
- run more workloads with continuous tuning;
- understand query execution and database performance; and
- get a 360-degree view of your applications in real time.

Pepperdata clients have reported a 30-50% improvement on their throughput, achieved 100% visibility for a more accurate chargeback, and saved millions of dollars on their infrastructure and resource spend.

Preparing your company for an IT transformation can be a daunting task. It involves serious planning, accurate costing, and a lot of personnel. But for most organizations, an IT transformation is a necessary step if you want your company to be as efficient as possible, achieve peak performance, and stay globally competitive. Follow these five steps, and you'll put yourself in a strong starting position.



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