

Quantify How Delaying Modernization Projects Impacts Your Infrastructure Platform

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Initiatives: [Cloud and Edge Infrastructure](#)

In response to the pandemic, organizations are cutting short-term costs by delaying application modernization projects, with little regard for the long-term effects. I&O leaders must perform a risk evaluation of the platform supporting applications to quantify the impact of these delays.

Overview

Key Challenges

- Many organizations focus on the short-term cost savings of delaying application and infrastructure modernization initiatives, often requiring I&O leaders to address unforeseen reliability risks.
- The “health status” of an application depends on its underlying infrastructure, making it difficult for I&O leaders to determine the health of an application without a holistic view of the entire infrastructure stack.
- The myriad risks associated with delaying infrastructure modernization require elaborate mitigation plans, and I&O leaders struggle to limit the organization’s exposure to risk in a cost-effective manner.

Recommendations

I&O leaders responsible for cloud and on-premises infrastructure must:

- Identify risks related to delaying infrastructure modernization initiatives by performing an application and infrastructure platform risk analysis that includes a self-assessment of the organization’s ability to mitigate risks with existing I&O resources.
- Quantify the impact of delaying modernization initiatives on application-related risk by performing a gap analysis of each application and its supporting infrastructure platform.
- Communicate to business leaders the impact of delaying modernization initiatives by building a business case that identifies when the total cost of ownership (TCO) of risk mitigation plans exceeds the initial modernization TCO.

Introduction

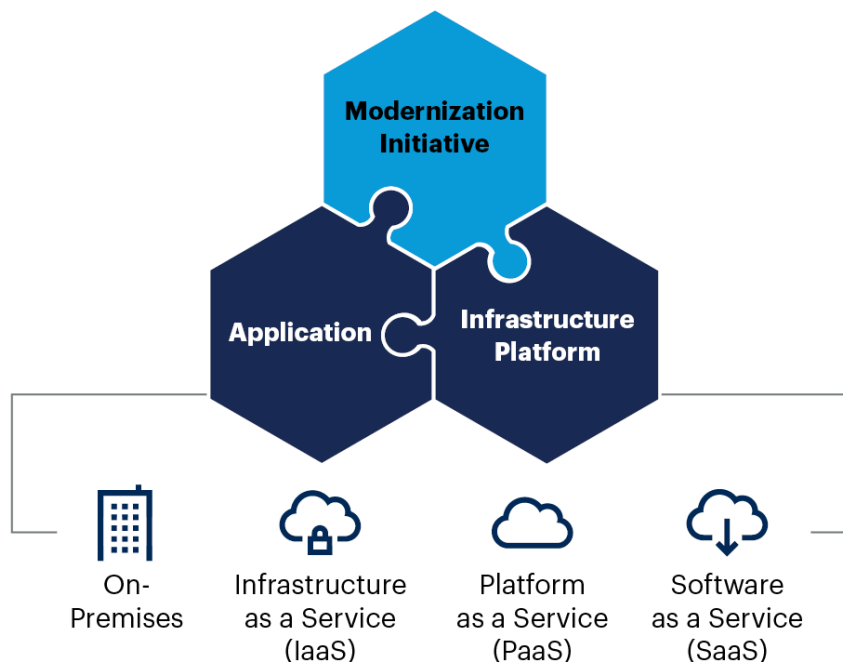
The COVID-19 pandemic has moved the global economy into a period of recession in 2020. Globally, IT spending is down 5% from 2019, the first decline since 2009 (see the Evidence section and “Forecast Analysis: Global Recession Scenario”). As a result, organizations are focusing on cost reduction activities that include delaying or canceling application modernization initiatives. But short-term savings realized from delaying application and infrastructure modernization could pale compared with greater expenses in the mid to long term due to applications running on obsolete technology or platforms that don’t address the service level required.

How can I&O leaders quantify the impact of delaying modernization of applications and their infrastructure platforms? This research explains how adding a qualitative and quantitative risk analysis to existing TCOs and business cases can help I&O leaders identify the risks of delaying application and infrastructure modernization, highlight the need for risk mitigation, and strengthen the case for continuing modernization initiatives.

When modernizing an application, organizations should also consider the infrastructure platform that supports it (see Figure 1).

Figure 1: Modernization Initiatives Are Related to Applications and Their Infrastructure Platforms

Modernization Initiatives Are Related to Applications and Their Infrastructure Platforms



Source: Gartner
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Analysis

Perform an Application and Infrastructure Platform Risk Analysis

As time goes on, the likelihood of incidents grows in the stack supporting the application that couldn't be modernized. For example, the supporting infrastructure could become obsolete and cause failures impacting application availability, or pending upgrades could expose the application to vulnerabilities that must be mitigated with alternative plans.

I&O leaders must quantify how to mitigate these risks and determine whether it is worth unlocking the initial modernization plan or to provision insurance, budget or resources for the mitigation actions.

I&O leaders must lead an internal team that can best provide input data for this self-assessment. This might include enterprise and cloud architects, I&O administrators, business end users, technical support, purchasing departments and others relevant roles (see [“Toolkit: How to Score the Health Status of Your Application Infrastructure Platform”](#)).

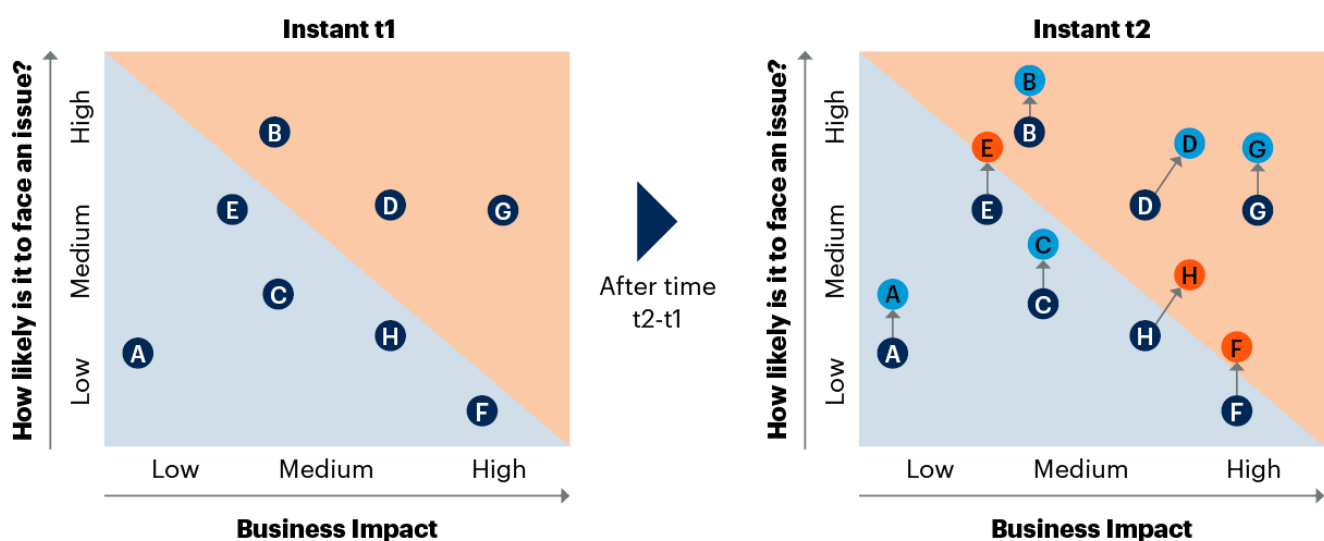
Figure 2 shows a simple risk impact analysis in two different times. The instant time t1 shows a risk analysis before the unexpected cost reduction requirement, just before organizations decided to delay several application modernization initiatives. The instant time t2 shows an example of the risk evaluation of applications under analysis in a future moment in time. As t2 increases, the probability of facing an issue with the application or its supporting infrastructure platform increases.

Figure 2: How Risk Changes When Modernization Initiatives Are Delayed or Stopped

How Risk Changes When Modernization Initiatives Are Delayed or Stopped

Example of Qualitative Risk Analysis

- Area where risk can be managed by I&O leaders
- Area where risk should be mitigated
- Mitigation Initiative (MI)
- MI remains in the same area of risk
- MI shifts to a new area of risk



Source: Gartner
 Note: Letters denote applications.
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Each matrix has two colored areas. The blue area is where risk can be managed by I&O leaders with their current I&O resources. The red is the area where existing I&O resources cannot mitigate the risk. There are three clusters of applications to be analyzed:

- **Applications that remain in the blue area.** Applications like A and C remain in the same blue area at time t^2 , supporting that the delay impacting the application can still be managed by I&O leaders with their current I&O resources.
- **Applications that remain in the red area.** Applications like B, D and G that were already identified as applications requiring a modernization plan. I&O leaders already should be aware of the current risks and consider how the situation will impact the risk evaluation they made initially. The new situation demands a risk reevaluation and a customized mitigation plan to cover new risks like more exposure to known security vulnerabilities, infrastructure obsolescence and more frequent incidents or the lack of support from some providers, to name a few.
- **Applications that have moved from the blue to the red area.** Applications like E, F and H. Initially, I&O leaders could manage their risk with existing I&O resources. But at time t^2 , their situation became critical and no mitigation plan is defined or communicated to the organization.

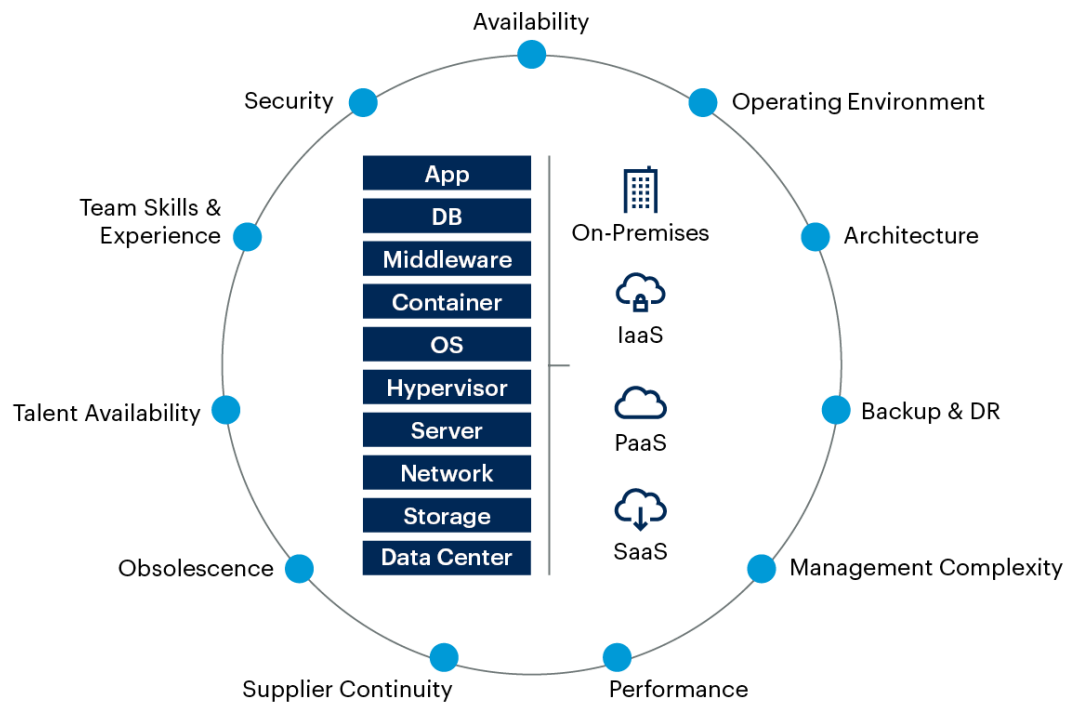
I&O leaders must prioritize risk mitigation in areas where current resources cannot manage risk scenarios.

Build Customized Risk Mitigation Plans

To perform the appropriate mitigation plans, I&O leaders must know the “health status” of the application and its infrastructure platform. To evaluate the health status of an application, I&O leaders must analyze the infrastructure stack that supports the application. Any risks identified in this analysis could have a cascading effect, impacting other dependent applications or workloads (see Figure 3).

Figure 3: Domains of Risk Evaluation for an Application and Its Supporting Infrastructure Platform

Domains of Risk Evaluation for an Application and Its Supporting Infrastructure Platform



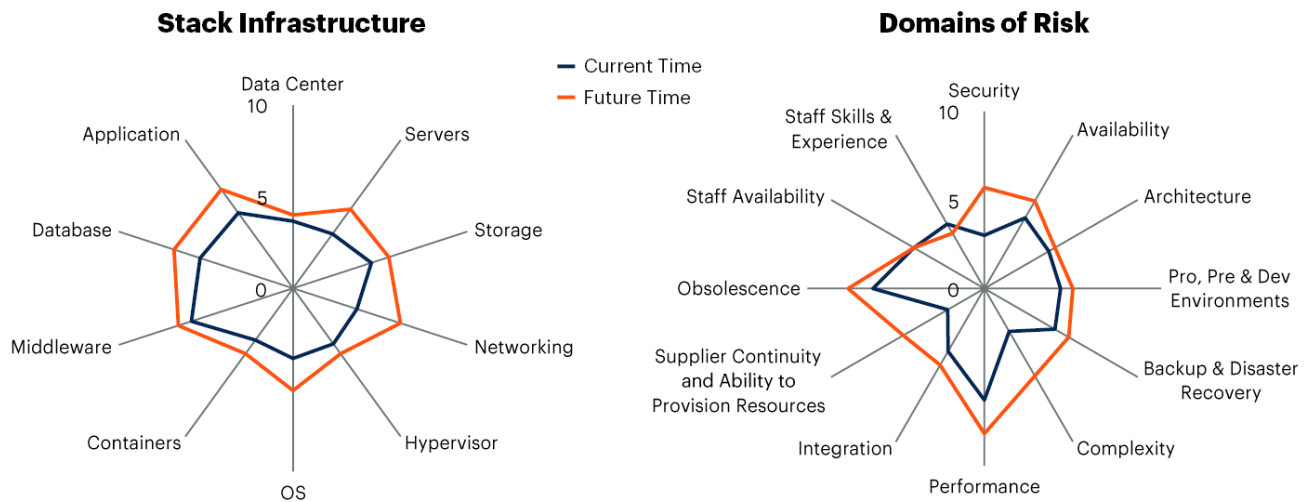
Source: Gartner
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A full stack based on-premises requires a health check for the entire stack, from the data center layer to the application layer. But as organizations move to the SaaS approach, the number of layers to check decreases because the SaaS provider manages that risk. I&O leaders who deal with colocation, hosting or cloud providers mitigate most of the risk from the stack they manage, monitoring and checking SLAs and terms and conditions in their contracts.

Use input from the self-assessment discussed in the previous section to score the health status from two dimensions for each application. One is related to the infrastructure stack supporting the application and another is based on the domains of risk shared across all of the infrastructure layers (see Figure 4). I&O leaders also can evaluate risk from the current situation and a future state, corresponding to the estimated delay time, to identify the risk gap and propose temporary mitigation plans to cover the additional risk.

Figure 4: Application Health Status Gap Analysis

Application Health Status Gap Analysis



Source: Gartner
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Quantify Health Status Gaps for Each Application and Its Infrastructure Platform

A qualitative risk approach is not always enough to have an accurate vision of what stopping or delaying a modernization initiative means. Organizations that lack an accurate and quantifiable risk analysis could incur additional risks and expenses that exceed any short-term savings from delaying the initiative or the benefits of the modernization initiative itself.

The health status analysis should reveal patterns that suggest a future incident is likely or identify layers where an incident is probable.

These incidents may affect one or several layers of the infrastructure supporting the application and could happen once or several times during the period of time the modernization initiative is delayed. I&O leaders should describe how to solve those repeated incidents in the mitigation plan.

Based on the health status gap analysis for each application and its infrastructure platform, I&O leaders must cover this gap with the different initiatives (see [“Developing a Practical Hybrid Workload Placement Strategy”](#)), evaluating at least the following points:

- Technology resources required that need to be provisioned
- Time estimated to provision those resources, and time to implement the initiative
- Time the application could be out of service
- Human effort required from internal teams and external resources (partners and vendors)
- The frequency at which this initiative should be executed while the modernization initiative is delayed

With the outputs of this analysis, I&O leaders may quantify an estimated TCO for every risk mitigation plan for each application.

Communicate the TCO of Risk Mitigation Plans

With the creation of mitigation plans and their estimated TCO, I&O leaders can identify what actions should be executed and what resources are required. With these outputs, I&O leaders should:

- Communicate to business leaders the impact of delaying modernization initiatives, temporary mitigation plans to cover the risk and the TCO of each.
- Build a business case using the resulting TCOs by prioritizing the customized mitigation plans from an I&O perspective.
- Recommend releasing locked modernization budgeting if the TCO of temporary mitigation plans exceeds the initial modernization TCO.

In some cases, a detailed TCO could be hard to define. However, with this analysis, I&O leaders can talk in terms of risk to business leaders. These risks must be recognizable to the organization because the risk is not only about technical issues, but also compliance, revenue or reputational risks.

This analysis should identify and prioritize applications and infrastructure stack layers that must be fixed. However, it's ultimately a business decision that determines next fixing actions.

I&O leaders must socialize the results of these health status analyses within the organization in a business dimension and then let the business leaders decide whether they want to tolerate them or not. This will also create awareness and ownership of the problem because if business leaders don't want to mitigate the risk, they are accepting them.

Evidence

Gartner published 323% more research on the topic of cost reduction initiatives in 2Q20 than in 1Q20. This increase was concurrent with a 260% rise in Gartner client inquiries on the topic from 1Q20 to 2Q20.

Recommended by the Authors

[Application Modernization Should Be Business-Centric, Continuous and Multiplatform](#)

[Overcome Barriers to Agility by Reducing Technical Debt in I&O](#)

[A Decision Model to Optimize Risk, Value and Cost](#)

[Use Gartner's IT Finance Frameworks to Drive Successful IT Finance, Value and Cost Programs](#)

[How to Respond to Mandatory IT Budget Cuts](#)

[Infrastructure Resilience Debt: Pay Now or Pay Later, but Manage Your Debt](#)

[Developing a Practical Hybrid Workload Placement Strategy](#)

[Toolkit: How to Score the Health Status of Your Application Infrastructure Platform](#)

Recommended For You

[Toolkit: How to Score the Health Status of Your Application Infrastructure Platform](#)

[Critical Capabilities for WAN Edge Infrastructure](#)

[Magic Quadrant for WAN Edge Infrastructure](#)

[Market Guide for Backup as a Service](#)

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