Cloud Choices: How to Defend Which Workload Goes Where

Why are you here?

You might be reading this document because you want to:

    A. Find answers about the cloud, such as when to use public, private, or hybrid cloud.

    B. Build a defensible IT optimization strategy to support your cloud decisions.

    C. Know the best way to manage costs and increase agility for your IT organization.

    D. Learn how to modernize complex virtual, physical, and legacy environments.

    E. Avoid migrating workloads to the wrong platforms.

Maybe you fit into all five categories. Whatever motives have drawn you here, this whitepaper will offer a glimpse of the practices midmarket and enterprise IT organizations have used to succeed at their own cloud-related transformation.

What can you expect from this whitepaper?

This paper introduces you to a time-tested approach that can take you from where you are to where you need to be. In the process, it shares a few high-level methodologies and best practices that can help transform your data center into a more optimized and agile, future-focused state that leverages both off- and on-premises platforms.

What follows are highlights of a detailed, multiphase approach developed by Insight. This approach, part of Insight's **Workload Tranformation Assessment (WxA)**, is summarized here in three high-level steps:

    1. Discover where you are now.

    2. Identify where you should go.

    3. Create a defensible action plan and roadmap to get there.

The remainder of this paper offers a brief look into the work involved in each of these three main steps.

1: Discovering where you are now

The end goal of this first set of exercises is to develop a go-forward plan for IT optimization and the cloud. But, before you can get there, it's important to start with a series of prescribed, detailed tasks surrounding **discovery, assessment,** and **reporting**. The goal is to gain a clear picture surrounding your organization's current state.

By the time your current-state research and assessment is complete, such work will offer insights into four areas:

1. Technology: This includes in-depth discovery and analysis of your current application workloads. It includes assessing interdependencies between workloads as well as dependencies on underlying infrastructure.

2. People: Comparing the current state of organizational roles and responsibilities to the desired future state, and evolving the organization from do-it-yourself to greater automation of its workloads in public, hybrid, or private IT service delivery models.

3. Process: Assessing the current state and maturity of key operational processes and business services offered, along with identifying any roadblocks or inhibitors to moving forward.

4. Economics: Obtaining baseline financials, defining investment costs, reviewing potential future-state-optimized IT models, and developing a financial benefits analysis.

1a. Defining workloads and workload transformation

A key component to project success in these initial exercises hinges on our core methodologies associated with **IT optimization** and **workload transformation**. Before we go forward into some of the steps required to clarify your organization's current state, let's first define the concept of workloads and workload transformation.

> Workload: A workload is an application and the underlying resources it needs to operate. This might include dependence on other upstream/downstream applications or systems and dependence on other required infrastructure (compute, network, storage, cooling/heating/power, specific location, etc.).

> Workload transformation: This is the process of identifying the most technically appropriate and cost-effective platform to support a workload's requirements. (Note that platforms can take many forms, from physical to virtual and various forms of cloud service delivery.)

1b. Gathering data about your organization's current state

Fact-finding and information collection at these initial phases can be performed in many ways. Some methods we use include:

- Using manual and automated tools to gather information regarding current workloads and data center infrastructure. Many commercial tools exist to aid in automating this type of fact-finding activity. Insight has developed its own proprietary workload and IT environment discovery engine, **SnapStart**. The use of tools like SnapStart allow for more comprehensive, automated discovery of IT environments — from on-premises to cloud.

- Conducting interviews with technical IT, executives, and business leads in the organization. This helps bridge the gap between the operation of IT workloads and their underlying business functions.

How we help clients drive digital transformation

One global beverage company used Insight's SnapStart discovery tool and proven processes to gain 50% better data completeness on the path to digital transformation. **Read about it here**.

Among other deliverables, such fact-finding missions should start to unveil details about:

- Business service requirements (e.g.., compliance, RTO/RPO, security, lifecycle management, SLAs)
- Technical reference architecture requirements (e.g., performance, I/O throughput, latency, availability)
- Baseline infrastructure costs
- Current costs of operation
- Current business drivers
- Current maturity of IT operational processes in light of existing standards and frameworks

1c. Obtaining more detail leads to better future decisions

During initial discovery and assessment phases, it's important to learn exactly how a workload operates in an organization, along with how its operation connects to various business functions. Organizations with large and complex environments may have begun this type of assessment already, possibly in an effort to inventory virtual machines in operation.

Few, however, have completed the level of assessment required. Many companies have not yet completed a comprehensive application dependency map, nor have they updated a Configuration Management Database (CMDB). Many also still struggle to define workload requirements per application.

Completing this type of workload transformation assessment will help you succeed at optimizing your IT environment and achieving business outcomes. It will also help you avoid costly mistakes by ensuring you choose best-fit platforms that work in concert together.

**Figure 1. Sample automated application dependency maps: Where business and IT converge**
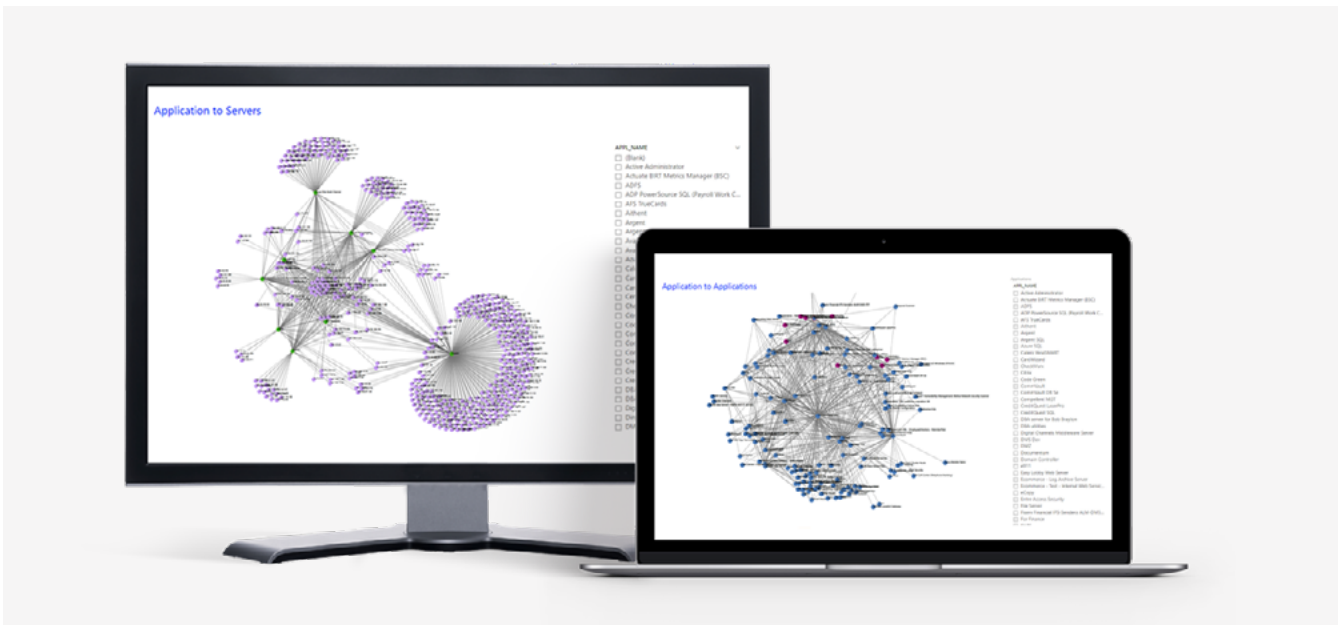
Surprisingly, mapping not only 60-70% of workloads, but also the remaining 30%, often uncovers many opportunities to align workloads and achieve significant savings in IT optimization.

The application dependency map is among the many reports produced during the five-phased Workload Transformation Assessment.

IT Operational Assessments and Organizational Assessments may also be produced during these phases (samples shown in Figure 2).

Figure 2. Sample Operational and Organizational Assessments
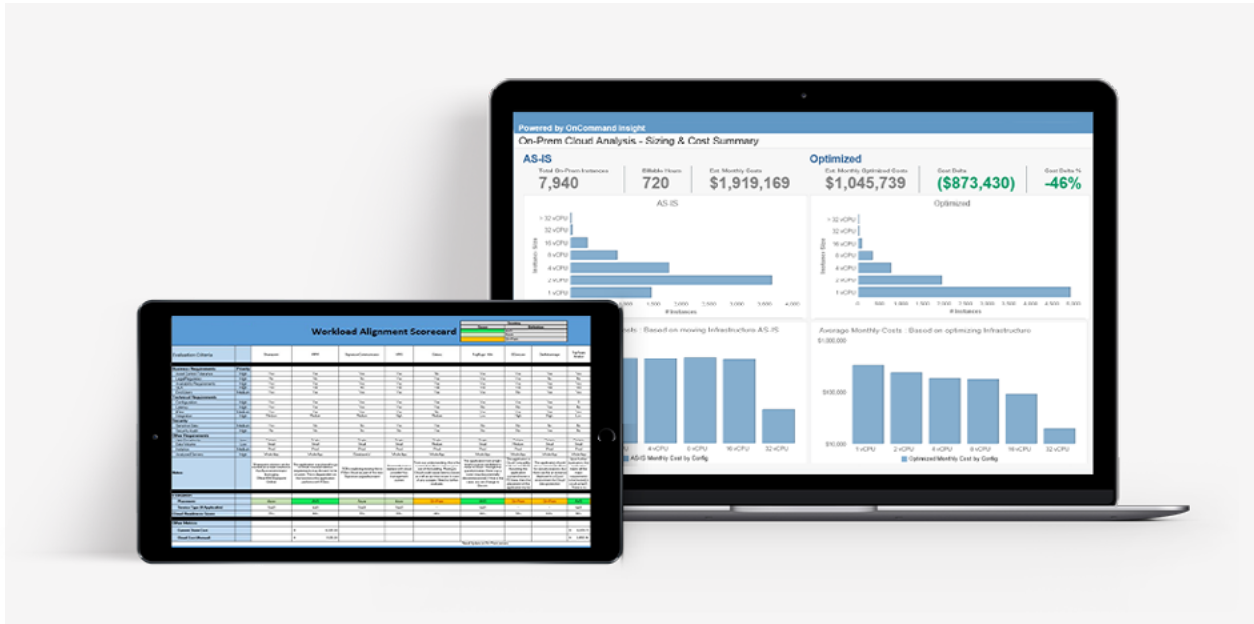
2: Identifying where you need to go

Once initial fact-finding occurs, attention turns more to recommendations and decisions regarding ways to transform and optimize workloads and the overall IT environment. This includes developing initial criteria for the types of workload transformations and timelines most-suited to the organization.

Enterprise and midmarket organizations that undertake this type of current-to-future-state analysis should use detailed, logical decision tools to support any recommendations. This includes the need to retire, resize, consolidate, lift-and-shift, rework, and/or migrate certain workloads to another platform.

Regarding cloud platforms, it's also no longer enough just to recommend certain workloads be moved to the cloud. Today's cloud choices are plentiful. Detailed recommendations should include exactly which mixture of cloud platforms are recommended and why, such as:

- The choice of edge, private cloud, public cloud, or hybrid cloud.
- The choice to host application workloads via a Software as a Service (SaaS) cloud model, Platform as a Service (PaaS) model, or an Infrastructure as a Service (IaaS) model.
- Reasons to choose one or more cloud vendors to host specific workloads or, even, to use a cloud broker.
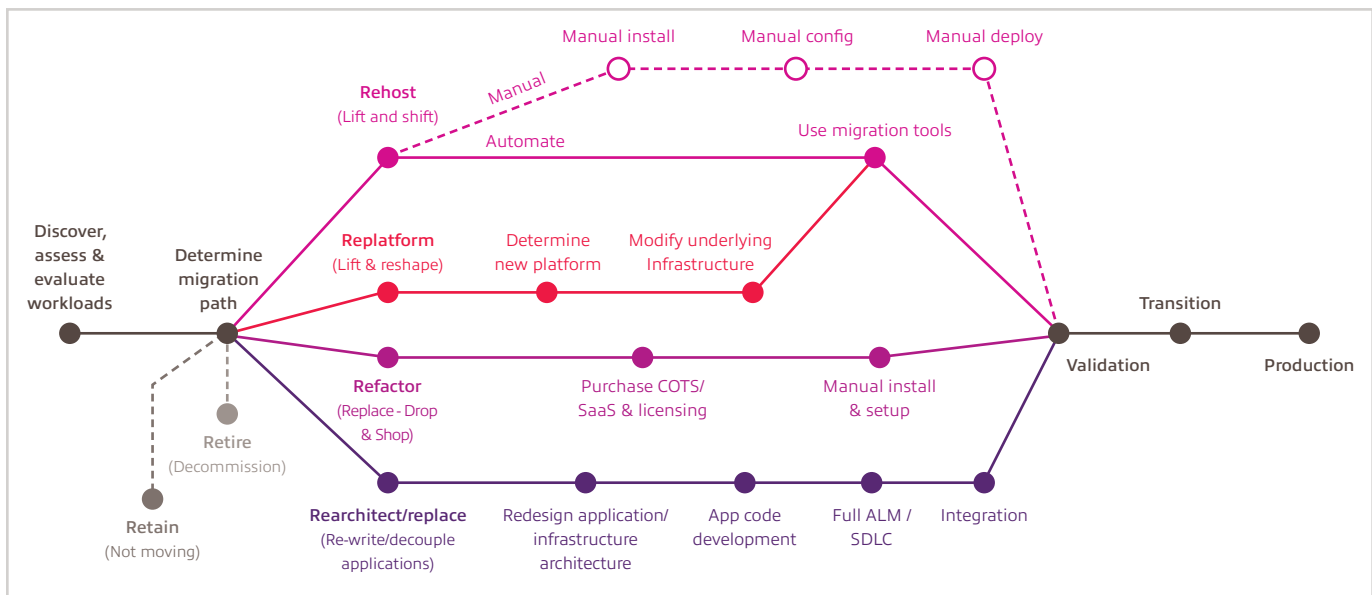
For a large enterprise IT environment, recommendations derived from this set of steps might be as shown in Figure 3. In one customer's case, this process led to the reduction of 418 current IT configurations down to only 23 configurations.

Figure 3. Sample recommendations and roadmaps for workload optimization and placement

Sample assessment details

	Retire	Retain	Rehost	Refactor	Replatform	Rearchitect
	Application has been or plans to be decommissioned in the near future.	Application will stay in its current position.	Application will be redeployed and reconfigured to work in a cloud environment.	Application will be moved to a newer version or different solution hosted by a cloud provider.	Application will be optimized without changing its core architecture.	Application's architecture and development will be changed using cloud-native features.
Workloads	15	15	90	60	60	60
	5%	5%	30%	20%	20%	20%

Workload assessment methodology

3: Creating a defensible action plan to get there

This critical step benefits from the multilayered research and recommendations that have come before it. By this point in our methodology, a clear picture begins to emerge. This picture demonstrates not only your organization's current state, but also current issues and requirements. It conveys details about what an optimal future state will look like. It then defines specific recommendations and a specific transformation roadmap to help get your organization from where it is to where it should be.

Remember how you were looking for a strategy to help defend your decisions about which workload goes where? This is where such a transformational strategy becomes crystal clear.

Being able to confidently defend future IT transformation plans to company executives is an important step in an organization's transformation journey. This will help the IT organization move into its emerging role as a broker of the right cloud services at the right time to enable the business.

At this point in Insight's five-phase Workload Transformation Assessment, organizations can expect to see clarity regarding their own path to cloud and IT as a Service (ITaaS). Here, organizations receive comprehensive reports, recommendations, and strategies surrounding:

+ Infrastructure strategy
+ Service delivery strategy
+ Transformation strategy
+ Roadmap and recommendations
+ Executive-level presentation with associated business case

Figures 4 and 5 show sample strategy reports and roadmaps your organization might see at this final phase in the process.

Figure 4. Sample Total Cost of Ownership (TCO) options for Workload Transformation
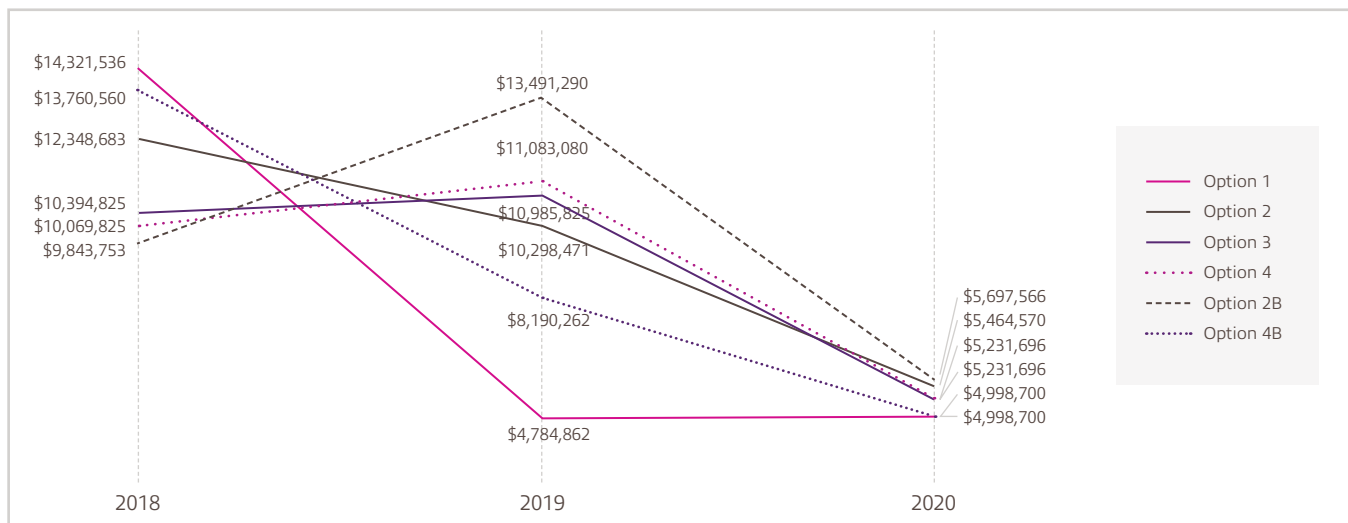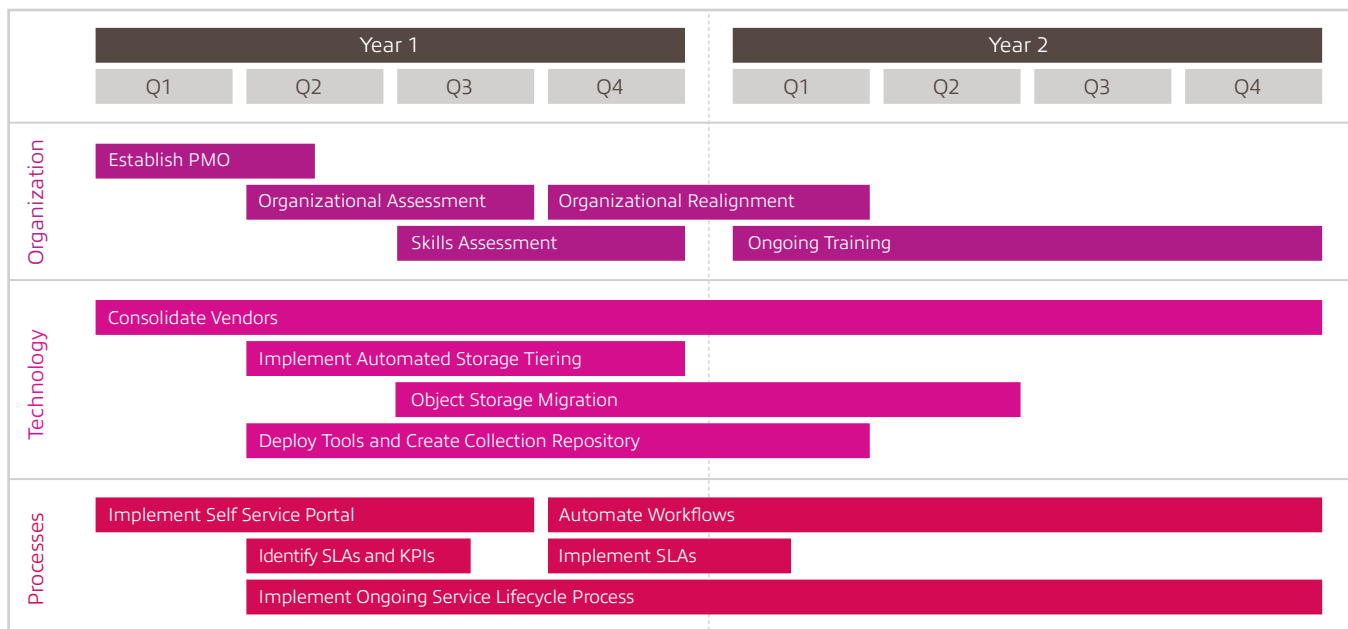

Figure 5. Sample multi-year roadmap and strategy

Focus: Strategy and financial modeling

Strategic programs need to be realistic, pragmatic, and executable.

Can you do this process yourself?

Let's face it. Many enterprise and midrange organizations have a lot of smart people working within them. However, day-to-day IT operational requirements oftentimes get in the way.

There's just not enough time to do this type of strategic IT planning properly, along with keeping the lights on. Then, there's the time it takes to gain expertise on various cloud technologies, tools, and ITaaS delivery options, in addition to the common issues that can trip up even the most well-planned IT migrations or implementations.

For these reasons, many organizations choose to use the best practices and expertise of organizations like ours as an extension of their own IT team. In the case of defensible IT transformation and optimization, we can help you get a clearer picture and build a successful go-forward plan.

Every organization has different levels of need for help. You might just need advice on how to best proceed with your organization's current efforts in these areas. Others might need a high-level "reality check" or a more comprehensive cloud strategy and workload assessment. Whatever your needs, our experts are here to help.

To learn more about how Insight can help with your cloud strategies and align workloads with best-fit platforms, visit:

solutions.insight.com/services

Driving innovation with digital transformation

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