

Choosing Between Private and Public Clouds: How to Defend Which Workload Goes Where

Why are you here?

We'll venture five guesses as to why you are reading this document. You want to:

- A. Find answers about “the cloud,” such as when to use public, private, or hybrid cloud.
- B. Build a defensible data center optimization strategy to support your cloud decisions.
- C. Know the best steps for cutting costs and increasing agility for your IT organization.
- D. Learn how to transform complex virtual, physical, and legacy environments.
- E. Avoid migrating the wrong workloads to the cloud. Nearly 40%¹ of enterprise clients surveyed who have moved to public cloud stated they needed to pull workloads back on premises.

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

What can you expect from this paper

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 Cloud + Data Center Transformation (CDCT) 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.

For the sake of brevity, CDCT's detailed seven-phase methodology surrounding **Workload and Platform Alignment** 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 and their interdependencies with 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 managing 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. **Finance:** Obtaining baseline financials, defining investment costs, reviewing potential "future state" optimized IT models, and developing a financial benefits analysis.

1a. Learning about workloads and workload alignment

A key component to project success in these initial exercises hinges on our core methodologies associated with **IT Optimization** and **Workload Alignment**. 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 alignment.

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

1b. Gathering the 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:

- 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.
- Using manual and automated tools to aid in information-gathering regarding current workloads and infrastructure in operation within your data center.

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

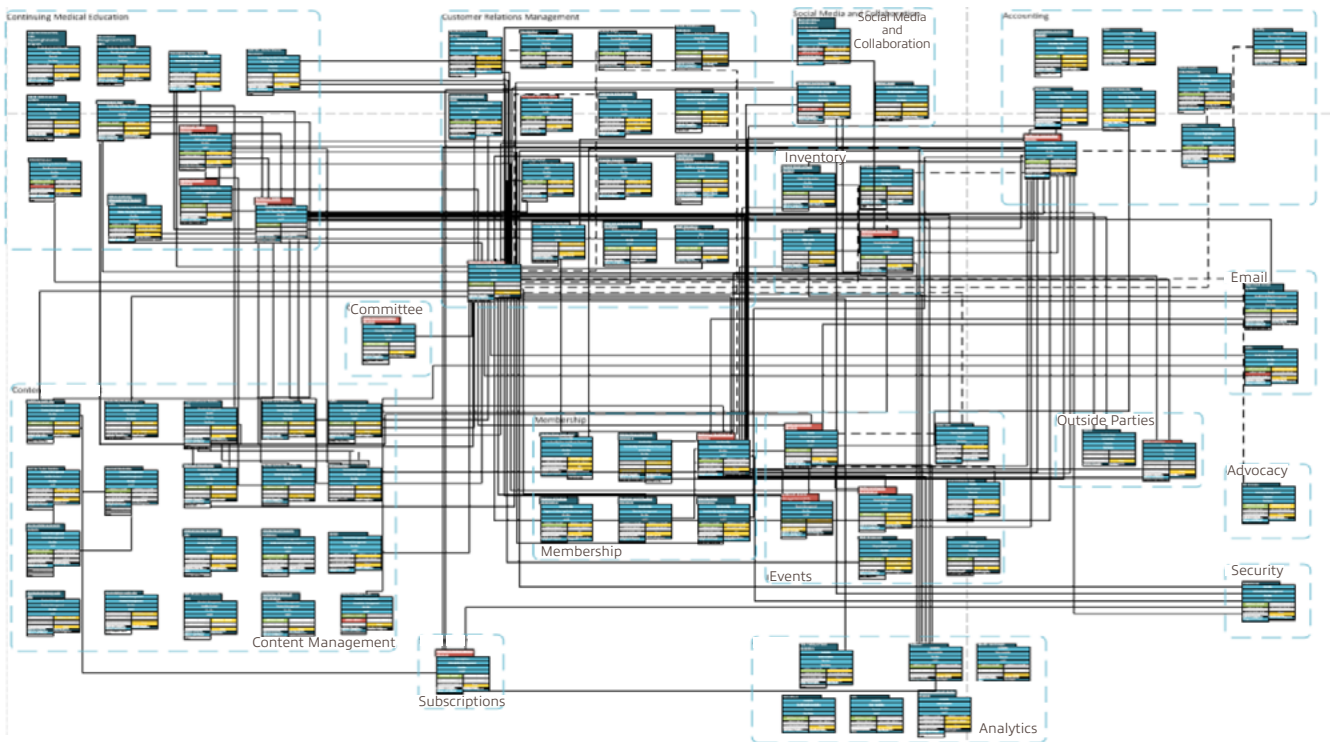
- Business service requirements (i.e., compliance, RTO/RPO, security, lifecycle management, SLAs)
- Technical reference architecture requirements (i.e., performance, I/O throughput, latency, availability)
- Baseline infrastructure costs
- Current costs of operation
- Current business drivers
- Current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

1c. Obtaining more detail leads to better future decisions

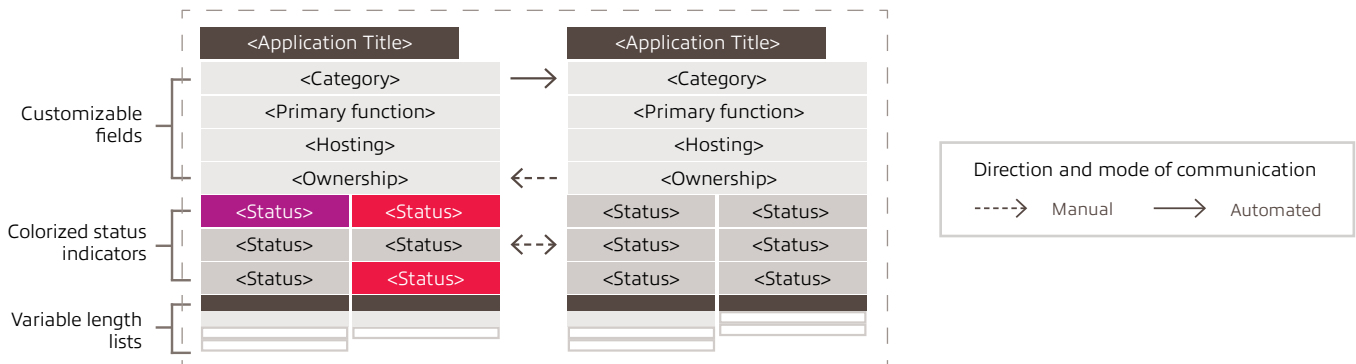
During initial discovery and assessment phases, it's important to learn exactly how a workload operates in an organization, along with how its operation connects to the various business function(s). Organizations with large and complex environments may have begun this type of assessment already, possibly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

Few, however, have completed the level of assessment required. According to an [IDG Research survey](#) commissioned by CDCT, 80% of those surveyed had not completed a comprehensive Application Portfolio Map like that shown in Figure 1 or had developed a configuration management database (CMDB). Additionally, nearly 30% of companies don't define workload requirements for each application they use. A workload and application alignment can help you optimize your data center and choose best-fit platforms to have both work in concert — and successfully achieve business outcomes.

Figure 1. Sample application portfolio map: Where business and IT converge



Application portfolio map legend

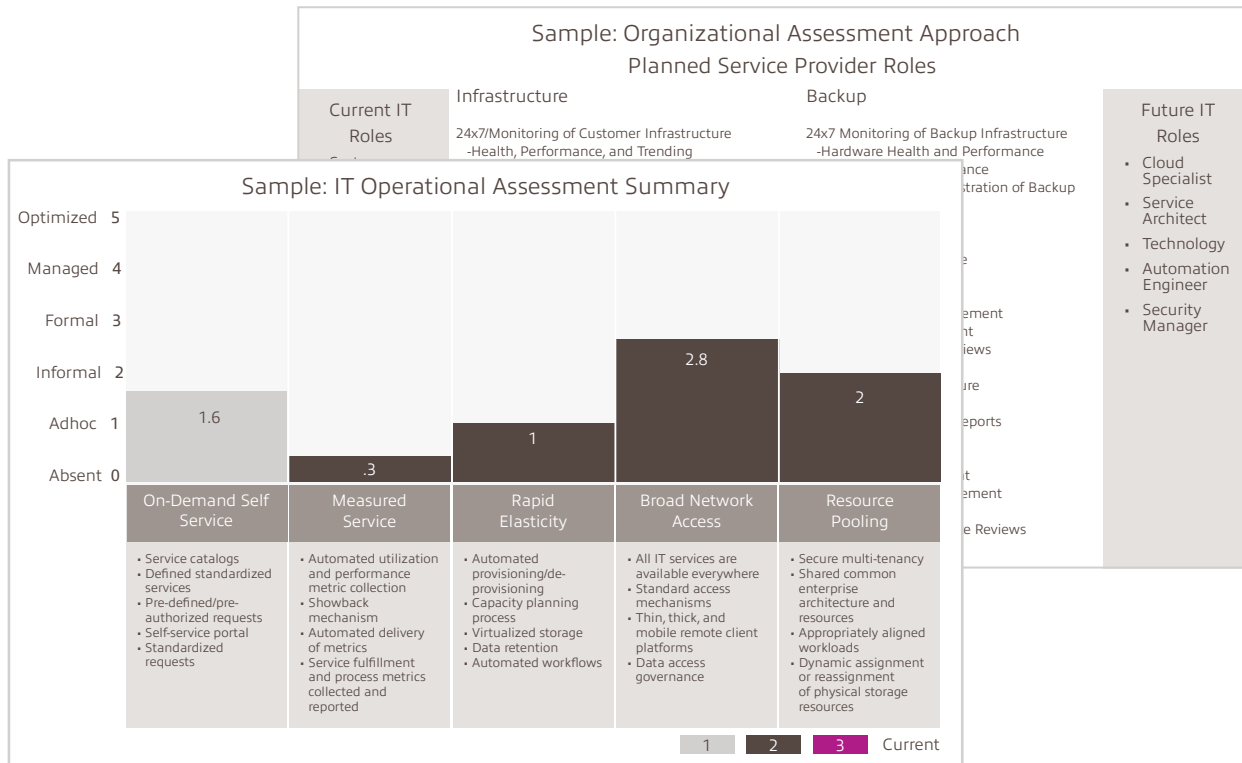


Surprisingly, mapping not only 60-70% of workloads, but also the remaining 30%, often uncovers many opportunities to align workloads and achieve significant savings in IT optimization.

The application portfolio map is among the many reports produced during the Workload Alignment’s seven-phase methodology.

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

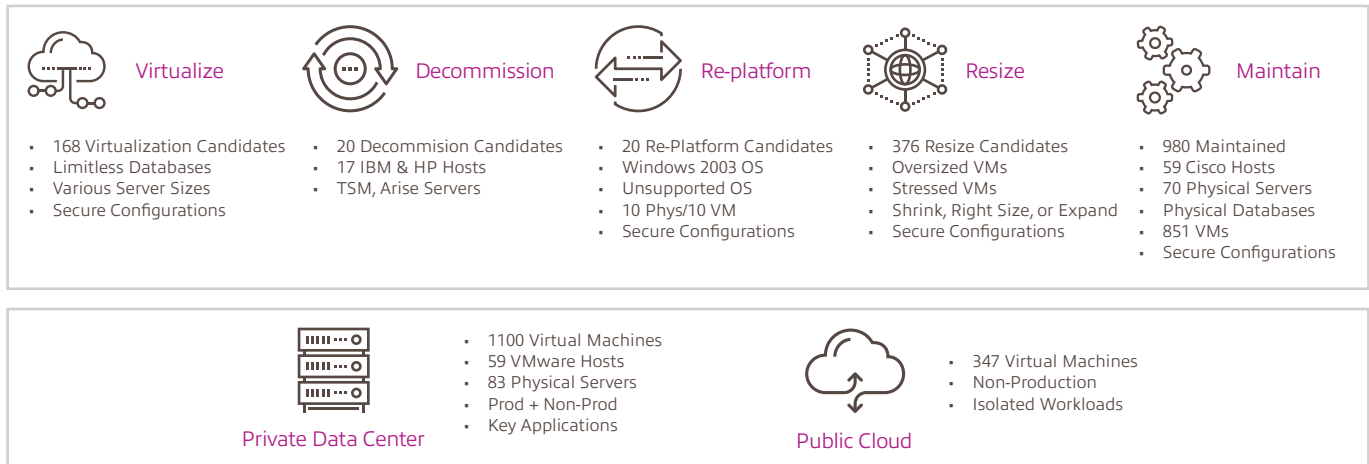
Once initial fact-finding occurs, attention turns more to uncovered areas of potential future opportunity within the organization. This next set of steps leads to recommendations and decisions regarding an optimized future-state IT strategy. This includes developing initial criteria for the type of workload alignment that will better suit your organization.

Enterprise organizations that go through this type of current-to-future-state analysis should use detailed, logical decision tools to support any recommendations for optimizing and aligning workloads within the IT environment. This might include the recommendation to change the current state of one or more workloads via methods like: virtualization, decommissioning, resizing, or re-platforming (including which platform is best suited and why).

For a large enterprise IT environment, recommendations derived from this set of steps might be as shown in Figure 3. In one customer case, this process led to the reduction of 418 current IT configurations down to just 23 configurations.

Figure 3. Sample recommendations for workload optimization, placement, and standardization

Workload optimization & placement



IT optimization & standardization



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 also 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 that strategy to help defend your decisions about which workload goes where? This is where such a transformational strategy becomes crystal clear.

The ability to confidently defend IT go-forward plans to company executives and key stakeholders has become an important step in an organization’s own transformation journey. The transformation is not simply to defend IT’s role but to evolve IT into a broker of the right cloud services to enable business outcomes. The future strategy can accomplish both a cost optimization goal and an evolution of the IT organization to partner with the business to identify and broker the right technology services.

At this point in CDCT's seven-phase methodology surrounding workload alignment and IT optimization, organizations can expect to see clarity regarding their own path to cloud and IT as a Service (ITaaS). Organizations following this methodology should be able to produce more comprehensive reports at this phase that describe recommended strategies, such as:

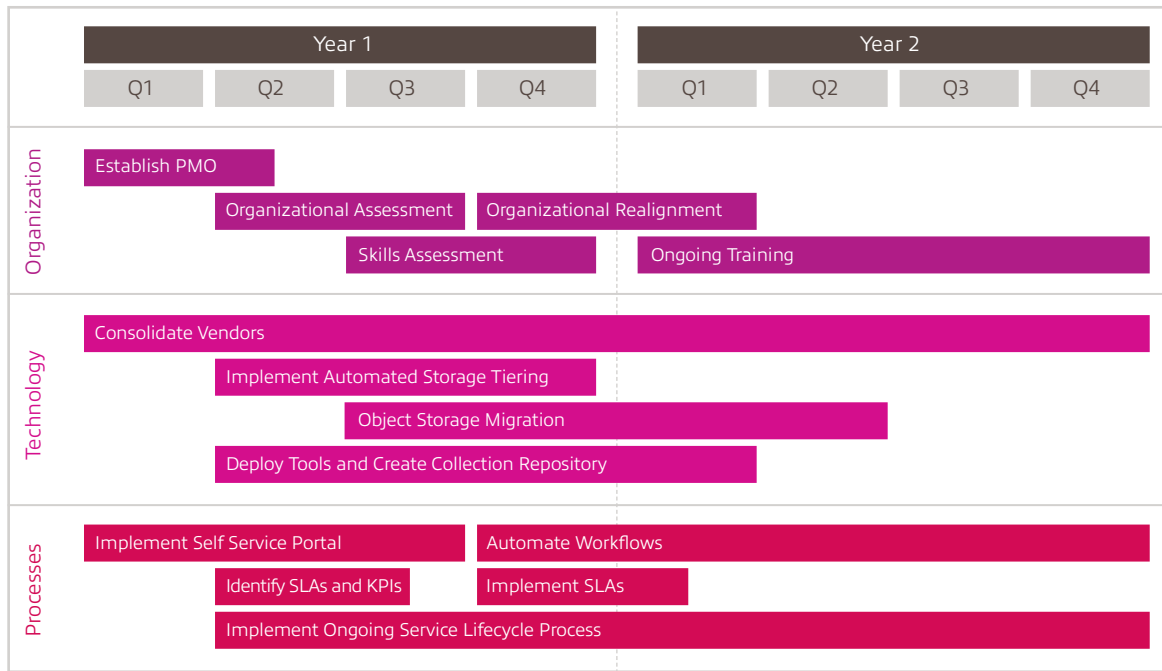
- + Infrastructure strategy
- + Service delivery strategy
- + Transformation strategy
- + Roadmap and recommendations
- + Executive-level presentation with associated business case

Figure 4 shows one of the sample strategy reports or roadmaps your organization might see at this final phase in the process.

Figure 4. Sample multi-year roadmap and strategy

Focus: Strategy and financial modeling

Strategic programs need to be realistic, pragmatic, executable



Can you do this process yourself?

Let's face it. Many enterprise IT 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 stalwart IT migrations or implementations.

For these reasons, many organizations choose to use the best practices and expertise of organizations like ours as an extension to 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 you get the right answers.

To learn more about how CDCT can help with your cloud strategies and align workloads with best-fit platforms, visit the [CDCT Services](#) web page or find [more resources about IT optimization challenges](#). You can also contact us directly at 800.448.6314.

Meaningful solutions driving business outcomes

We help our clients modernize and secure critical platforms to transform IT. We believe data is a key driver, hybrid models are accelerators, and secure networks are well integrated. Our end-to-end services empower companies to effectively leverage technology solutions to overcome challenges, support growth and innovation, reduce risk, and transform the business.

Learn more at:
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References

1. [Data Centers in Flux: The IT Optimization Challenge](#). IDG Research and CDCT, 2016.