OVERCOMING THE CHALLENGES OF IMPLEMENTING A HYBRID IT MODEL
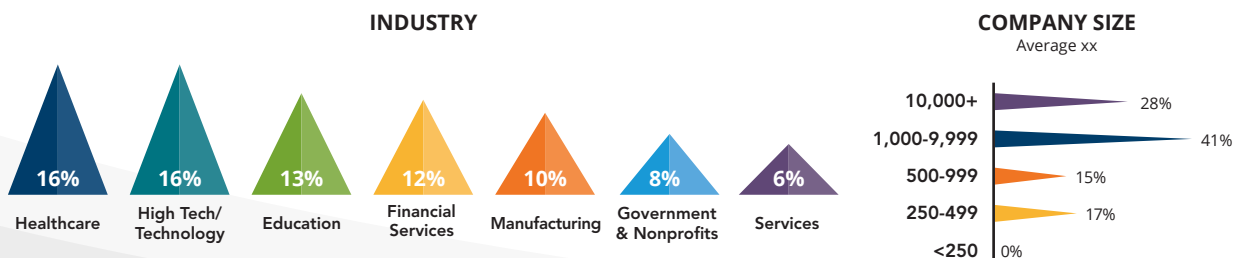
76% of IT decision makers say they are experiencing challenges implementing a hybrid IT model.

Source: IDG Research commissioned by WEI, June 2017.

According to the findings of a recent study, it is estimated that 90% of companies will eventually move to a Hybrid IT model.[1] This is no surprise considering the many advantages such as agility, scalability, resiliency, automation, simplicity and reduced costs that only Hybrid IT can offer in a single enterprise model. The quickening migration to Hybrid IT is evident in an IDG study published in Forbes Magazine, which estimates that a typical IT department has only 40% of their apps and platforms residing in on-premises systems.
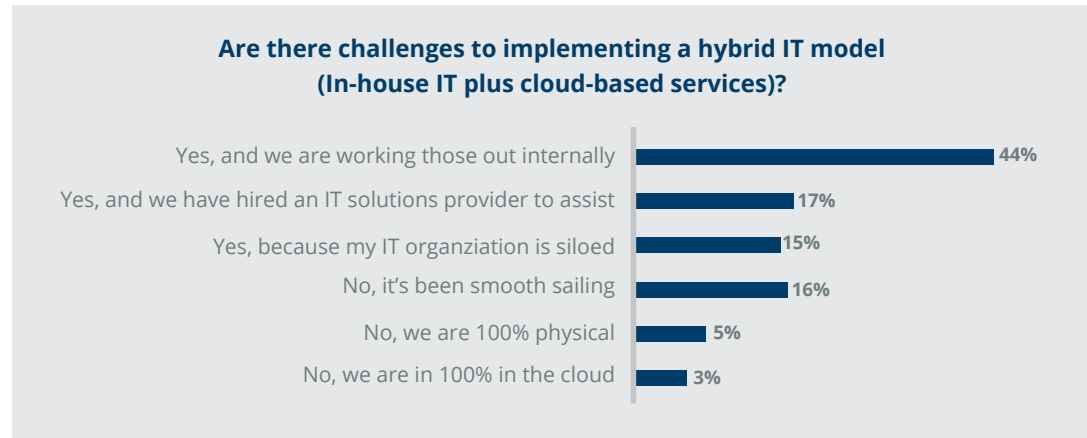
Hybrid IT is new paradigm that is redefining the function of IT within an organization. However, the implementation of new archetypes always comes with challenges along the way. Change is never easy, but often worth it. The traditional on premise enterprise took a long time to build. Rebuilding and the modernization of it will not happen overnight.

WEI and IDG conducted industry research in June of 2017 amongst IT decision makers to get a snapshot of the real or perceived challenges in implementing a Hybrid IT model. The respondents were comprised of Directors, Vice Presidents and C-level IT professionals. The makeup of the companies they come from is shown below.

INDUSTRY

Industry	Percentage
Healthcare	16%
High Tech/Technology	16%
Education	13%
Financial Services	12%
Manufacturing	10%
Government & Nonprofits	8%
Services	6%

COMPANY SIZE
Average xx

Size	Percentage
10,000+	28%
1,000-9,999	41%
500-999	15%
250-499	17%
<250	0%

Those polled were asked to select which statement below pertained to their experience with Hybrid IT. The results show that only 8 percent of enterprises are not embracing Hybrid IT— an IT model comprised of both traditional IT and cloud services. Only 16 percent of those migrating to a Hybrid IT environment report to have not faced challenges along the way.

Are there challenges to implementing a hybrid IT model (In-house IT plus cloud-based services)?

Yes, and we are working those out internally	**44%**
Yes, and we have hired an IT solutions provider to assist	**17%**
Yes, because my IT organziation is siloed	**15%**
No, it's been smooth sailing	**16%**
No, we are 100% physical	**5%**
No, we are in 100% in the cloud	**3%**

In this whitepaper, we will discuss eight of the most common challenges that IT departments encounter when transitioning to a Hybrid IT model. Note that many of these challenges are not technology related.

CHALLENGE #1 – ADJUSTING TO THE CHANGING ROLE OF IT

The traditional approach to IT is straightforward. Safeguarding the data center, ensuring the stability of the network infrastructure and offering a predictable experience for users are the staples of traditional enterprise management. The on-premises enterprise is based upon large CAPEX, so longevity is essential in order to substantiate large investments. When other business units within the company require a new application be deployed, internal IT either purchases a new server or spins up a new VM. New projects and implementations require weeks and months of planning. Innovation ensues sequentially and over time.

It has not even been a decade since cloud computing exploded on the scene and began competing directly with traditional IT. Suddenly, internal IT was not the only game in town and the concept of shadow IT began to come about. Just as customers will seek out a better mousetrap, business units and department managers will seek problem solving, cost reducing solutions to fit their needs. If necessary, they will do so with or without the blessings of the CIO. In fact, according to a Brocade study of global CIOs, 80 percent had seen some form of unauthorized cloud/SaaS usage within their companies.[3]

IT now has a new role. It is no longer the guardian of the data center; it is the IT broker of the enterprise. This new role is somewhat similar to that of a real estate broker. Homebuyers can

choose to purchase a house on their own, risking their capital should they not fully understand current market conditions, disclosures or contract law. Utilizing a real estate broker lessens their risk exposure and protects their interests. Similarly, the role of IT is to guide business units to find the optimum infrastructure to house their workload and protect them before, during, and after the deployment process.

Like the very cloud based applications that spawned the transition of this new role, IT must think of itself as a service. Its mission is no longer to manage data centers. The focus of IT today is to find innovative solutions that solve business problems, pursue opportunities and grow the business. Whether these solutions can be implemented within their direct control on-premises, or outsourced to a third party service provider is irrelevant. In order to do this, internal IT must put the needs of the business first before technology. It must regard the business units of the company as its customer base. Hybrid IT is both a technology archetype as well as a mindset. Hybrid IT creates an agile, responsive platform for the enterprise to flourish in a global economy where disruptors can change the rules overnight and windows of opportunities are narrow and short lived.

CHALLENGE #2 – THE RAPID PACE OF CHANGE AND INNOVATION

Keeping up with IT innovation today is like attempting to drink from a fire hydrant. It is easy to drown in the overwhelming flow of opportunity. New types of cloud services, hybrid management systems, hosting platforms, security tools and digital services are introduced constantly. This is much different from traditional IT that sought to maximize application longevity and stability. Internal IT was able to control the pace of change, as upgrades were manually induced processes.

For cloud computing, the velocity of change is set by CSPs. However, this is no different from the Windows 10 operating system that many IT professionals are familiar using. By building and deploying Windows 10 as a type of OS-as-a Service, Windows 10 is perpetually evolving and maturing on its own. You can delay the update of the latest branch version but you cannot stop it.

Cloud-based applications will not have the lifespan of applications hosted within the legacy enterprise. Application cycles may in fact be as short as the windows of opportunity that they sometimes serve. IT must prepare itself and the organization for continual innovations and technology evolvement. In the future, it will not be technology itself that will provide longevity and stability to the organization, but the pursuit of innovation. For those in the IT field, lifelong learning will become an industry imperative.

CHALLENGE #3 – BALANCING BIMODAL IT IN YOUR ENVIRONMENT

If the IDG research presented at the beginning of this paper is indicative of the global enterprise, only 3% of companies are 100% in the cloud, which means that they host

"something" on-premises. Although at times it may seem like everyone is flocking to the cloud, the fact is that the majority of enterprise applications are not cloud ready. Sometimes the reasons for this are security and compliance driven, but in other cases, they may be legacy, budgetary or political issues. Whatever the reason, the reality for most companies is what Gartner refers to as Bimodal IT.

Bimodal is the practice of managing two modes of IT, each designed to develop and deliver information, and technology-intensive services in its own way.

1. Mode 1 is traditional, emphasizing predictability, accuracy, stability
2. Mode 2 is exploratory, emphasizing agility and speed

Gartner goes on to state, "Bimodal capability that marries the renovation of the IT core with the exploratory approach to developing new digital products and services is essential for an enterprise to survive and flourish in the digital era. Both modes will play a crucial role in innovation and digital transformation."[4]

The challenge is how to pursue both technology platforms simultaneously as a single departmental entity. Call it old school versus new school on one campus. It is important to ensure that each mode has skilled staff and the technology to support both initiatives. Both require a different management style and skill set. The teams assigned to each mode must think collaboratively, not competitively. Open communication between the two is key in order to create a highly concerted cross business that addresses all the needs of the organization. Bimodal is not an endpoint however. The eventual goal is to modernize everything.

CHALLENGE #4 – TARGETING WORKLOADS TO THE OPTIMUM INFRASTRUCTURE

Creating platforms for workloads in a traditional IT environment is clear-cut—deploy a new server group and either install the needed application or hand it over to the developers. Using Hybrid IT, workloads are not automatically assigned in default fashion. Each workload must be carefully evaluated for its inherent level of:

- Agility
- Scalability
- Traffic fluctuations
- Resiliency and availability
- Speed and latency requirements
- Mobility and reach
- Resource requirements
- Security

Once these measures are evaluated and quantified, the goal is to assign each workload to the infrastructure that achieves a balance of:

- Empowering the business units and users that will utilize it
- Ensuring that the solution will meet any and all business objectives
- Implementing a solution at the lowest cost possible
- Retaining governance and control
- Self-provisioning deployment

A thorough evaluation and assignment process will ensure that the implementation is successful and fulfills the needs of the organization and its users. This type of collaborative effort will also foster a sense of ownership amongst end users as well. These workloads overtime are added to a catalog that provides users the ability to simply select the service offering they need.

CHALLENGE #5 – TRANSITIONING FROM CAPEX TO OPEX

One of the primary allures of the public cloud is the adaption of an OPEX model rather than a CAPEX driven one. IT management that is accustomed to a fixed cost model consisting of large capital outlays need to be ready for the management requirements that a variable cost model requires. One can quickly lose control of cost flows when juggling multiple cloud instances spread across multiple cloud platforms, serving multiple business lines within the company.

IT must control costs just like any other business unit within the company. A careful evaluation of SLAs before signing any contracts with CSPs is critical in order to avoid unforeseen cost surprises. Monthly bills from cloud vendors need to be carefully scrutinized and analyzed for cost cutting measures such as the decommissioning of resources during off peak demand periods.

The CSP pricing model is an even greater challenge for government institutions and non-profit organizations that are saddled with an inflexible budgeting process. IT leaders within these types of organizations need to convince the senior leadership of the advantages of an OPEX cost structure.

CHALLENGE #6 – MEETING SECURITY AND COMPLIANCY REQUIREMENTS

According to a recent report, 95 percent of IT professionals reported migrating some part of their infrastructure to the cloud in the past 12 months. However, 35 percent said they had also ultimately moved workloads out of the cloud and back on-premises.[5] This reversal was due to either security, compliance or performance concerns. Some of these enterprises may have been over exuberant in their rush to the cloud, neglecting to consider the complexity of compliance and security requirements. Managing and securing multiple infrastructures that provide greater access and mobility for users is far more challenging than securing isolated IT silos. The issue of who has access

to what and where comes to the forefront as valuable data cannot be transferred to the public cloud.6 The rapid pace of cloud innovation also complicates security measures as new tools and innovations equate to an increase in zero day attacks. Organizations that must meet HIPAA, PCI or other types of compliance measures must ensure that their cloud providers can satisfy stringent standards. Encrypting both data in transit and data at rest should be a priority for these types of organizations.

CHALLENGE #7 – ACQUIRING AND RETAINING TALENT FOR A HYBRID WORLD

In a survey conducted in 2017, 63 percent of IT leaders said an IT staff skills gap was one of the five biggest challenges of the cloud and hybrid IT. 62 percent of IT professionals surveyed indicated that was requiring them to acquire new skills while 11 percent say the cloud and hybrid IT have altered their career path.[7]

In a recent whitepaper, Microsoft lays out some of the critical roles required by organizations implementing Hybrid IT. These include a Business Liaison, Data Center Manager, Security Specialist and Software Architect.[8] The high demand for those professionals with the desired skill sets is evident in the certification industry. The AWS Certified Solutions Architect was the #1 most demanded certification in 2015 and #3 today, boasting an average compensation of $125,000.[9]

Finding talent with the knowledge base to support emerging technologies can be a real inhibitor. Compounding this challenge is undergoing the delicate balancing act of retaining one's current staff that has the expertise and experience to support the existing on-premises infrastructure. Just as difficult is the task of motivating your existing talent to constantly learn while still performing their regular job duties.

CHALLENGE #8 – THE POLITICS OF CHANGE

Reggae music legend, Bob Marley, once said, "Everything is political." That goes for IT as well, says David Fafel of WEI, "The biggest hurdle of implementing Hybrid IT isn't technological, it's political." This is understandable as change always encounters some level of resistance. By increasing the agility and flexibility of IT, you are also negating the centralized power and gatekeeping role that some have adopted over time. Hybrid IT is about decentralizing resources and authority.

It is only natural to feel a sense of pride for the traditional on-premises data center that took years of labor to create, making it difficult to witness its relevance diminished and negated. After so much invested, many will not want to simply rebuild it all in the cloud. The 'we've always done it this way' mantra and attitude may surface in defiance from those who sense the

threatening of their turf. Morale may suffer as those who feel they lack the skills to succeed in the new environment question their role and future in the organization.

It is important not to underestimate the importance of being prepared for political backlash. IT leaders need to identify change agents within the department who are willing to help promote the transition. Selling the team and senior management on the advantages is important, and giving others a forum to express their concerns will help lessen any automatic resistance.

CHALLENGING – YES. REWARDING – DEFINITELY!

The challenges are indeed real, but the payoffs are enormous. One can only glance at today's headlines at the number of traditional retail establishments closing the doors of thousands of locations across the country due to their inability to compete with the modern cloud based companies such as Amazon and others. Elasticity and agility are compulsory attributes required by organizations today in order to succeed. Those that approach these challenges with the same sense of flexibility will be able to quickly reap the rewards of Hybrid IT.

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info@wei.com

800.296.7837

www.wei.com

43 Northwestern Drive
Salem, NH 03079

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