A Peep Into Data Center Economics
Analyzing Challenges & Opportunities
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INTRODUCTION:

As the amount of data proliferates across all industries, organizations of all types are challenged with optimizing their data center operations. Since data is at the very heart of most businesses, it benefits organizations to develop a strategy to deal with their data centers.

It is especially true during uncertain economic times. The fixed costs can weigh heavily on organizations of all types, limiting options and hindering growth. The variabilization of technology, which enables businesses to move from a fixed technology cost model to a variable cost model, can enhance business agility while enabling these organizations to pay for technology they use, as they need it. Variabilized technology uses tenets like scale, standardization, simplification and Lean to drive efficiency, optimize delivery and lower unit costs, ultimately helping organizations do business better. It is therefore imperative that organizations must address their data center challenges in order to operate efficiently, be able to access and leverage their data, and remain competitive in a heated marketplace.

Today, many organizations have multiple data centers spread across geographies, due to organic growth and growth from mergers and acquisitions. These data centers typically have disparate technologies, including a wide range of servers, some of which are old, obsolete and some that are new. These arrays of assets are typically difficult to track and manage. Older assets consume more power, take up more space and require a higher degree of maintenance in order to function efficiently. The storage estate, which is probably the most inefficient of the assets and the most complicated to resolve, has added issues of backup and data management challenges.

While the hardware can be problematic, the software can present many critical challenges as well. A wide range of applications can further complicate the technology challenges of data centers, since each geographic location may have its own set of applications. These disparate data center environments can lead to interoperability issues, and they are difficult to manage and staff with individuals who have the right skillsets.

These challenges plague organizations of all types, because of the spread of business over time and complexity due to acquisitions. “These challenges were always present, but organizations are feeling them more acutely because of the changing business environment, where following the last recession, every dollar spent is being looked at very closely and is measured against value to business. Fast growing organizations are finding ways to reduce IT costs. Add to that the looming prospect for another recession, and we have the perfect environment for variabilization,” says Rajan Sampath, Head, Data Center Transformation Services, Wipro Technologies.

Outsourcing Center and Wipro conducted a survey that included 75 CIOs and Heads of IT from Fortune 1000 companies across US, Europe and APAC that aimed to determine the current state of organizations’ data centers as well as explore the attitudes and challenges towards data center optimization. The participants represent a range of industries including retail, financial services, transportation/logistics, manufacturing, healthcare and telecommunications.

While not a comprehensive picture of how organizations from various industry segments are currently addressing their data center challenges, the survey’ findings point to some general trends in this area.
really gauge how, or whether or not, the alternative models are benefitting them in terms of cost. The cost of such an initiative and lack of necessary budget was identified by 22.6 percent of participants.

People issues are also a concern. For instance, resistance to cultural change within the organization was cited as a reason to hold back from implementing an alternative data management model by nearly one in five (19.4%) survey participants. A lack of employees with necessary skillsets also prevent organizations from adopting new data management models. Nearly a third (32.3%) said that their organization currently lacks skill/talent required to implement and manage a new data center management model.

“Organizations typically don’t have enough skill within their firms to be able to successfully evaluate an exercise like this,” Rajan offers. “This means that if an organization decides to experiment with change, and a service provider comes in with an ROI proposal, there’s not enough competency within organizations to be able to evaluate the proposal and decide whether or not to pursue it.” Therefore they hire an external advisor to continue to make tactical decisions on investment.

Participants' other top-identified roadblocks to moving to alternative data management models include security and privacy issues. More than one-quarter (29%) identified data security as an issue, and 25.8 percent cited privacy concerns. Certain industries that are highly regulated – like financial services – are often more hesitant to move to an alternate data center management model for these reasons.

CONCLUSION:
In order to meet current data center challenges, organizations must take measures to consolidate data centers and look at outsourcing arrangements and alternate models of data center management. However, because carrying out a data center strategy typically requires a large investment in time and costs, organizations today are making tactical decisions instead, which have minimal impact. While some organizations are contemplating alternate models for data center management, others seem to be dragging their feet in making any meaningful changes to their strategy.

New approaches to the data center can provide organizations of all types with myriad benefits. By standardizing, consolidating, virtualizing and automating processes, organizations can transform their data centers to be lean and energy efficient. Transforming the data center can enable growth, minimize risk, increase speed and agility, and lead to dramatic cost reductions.

Wipro has an array of offerings that have been developed to help organizations from all sectors overcome today's data center challenges. Wipro’s data center services have been designed to help customers reduce IT infrastructure and operational costs, achieve higher service and performance levels and manage IT infrastructure efficiently and effectively. And Wipro is able to variablize client IT costs while delivering next-generation services.

Please indicate your organization’s annual revenue:

More than 40 percent (43.8%) of companies represented in the Wipro and Outsourcing Center survey are from organizations that report more than $1 billion in annual revenue. Another quarter (25%) of firms report less than $20 million in annual revenue. Roughly a quarter (25.8%) of organizations are large enterprises, with more than 20,000 employees, and the same percentage of firms are from organizations with fewer than 500 employees. Approximately another quarter (22.6%) said that their companies employ between 5,000 and 9,999 individuals.

Slightly more than 60 percent of survey participants work for organizations with very healthy IT budgets. Nearly one-half (45.2%) of participants reported that their annual IT budget for 2012 is more than $50 million, and another 16.1% said their organization’s IT budget is between $10 million and $49 million. Less than 20 percent (16.1%) of participant organizations have IT budgets of less than $1 million.

How is your organization meeting its data center management challenges?
FINDING #1: DATA CENTER STRATEGIES (IT INFRASTRUCTURE, APPLICATIONS, NETWORK AND FACILITY) CLEARLY IMPACT BUSINESSES.

Does your business view a Data Center strategy as a key impact to the business?

- Yes: 53.1%
- No: 15.6%
- Maybe: 31.3%

Wipro and Outsourcing Center survey participants seem to agree that a data center strategy impacts their organization’s business. While more than half of participants (53.1%) said that they believe a data center strategy impacts their business, only a scant 15.6 percent of participants said that such a strategy has no impact on their organization.

Survey members from the manufacturing industry did not feel that a data center strategy had the potential to impact their business, while representatives from other verticals either believed that such a strategy clearly impacted their business or possibly had an impact.

Wipro’s Rajan Sampath notes that some businesses might misunderstand a data center to be just a pure facility, not considering the IT infrastructure, although it’s difficult to believe that any organization today would consider its data center as not being critical to their business.

“Organizations should consider the data center to be IT infrastructure, applications, network and facility,” says Rajan. “This way, the data center clearly has business value.”

FINDING #5: LACK OF MEASURABLE RETURN-ON-INVESTMENT IS HOLDING ORGANIZATIONS BACK FROM MOVING TO ALTERNATE DATA CENTER MANAGEMENT MODELS.

What are the challenges for you to move to alternative models?

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The participants in the Wipro and Outsourcing Center survey were about evenly split on their adoption of alternative models for data center management, although slightly fewer (46.9%) said they have not yet adopted these models to manage their data centers.

Notes Rajan, the biggest challenge for organizations today doing any data center consolidation change models is to actually determine how the measures will improve their operations and still provide an acceptable return-on-investment. “But since organizations don’t really know what their data center costs are, they have to make a lot of assumptions,” says Rajan. “And since they don’t know their costs, they find it extremely difficult to justify ROI.”

A majority of participants in the Wipro and Outsourcing Center survey cited lack of measurable ROI as a challenge they face in moving to alternative data management models. However, since organizations don’t know their costs, they can’t...
The impacts of these measures ranges significantly. Survey participants report that their measures have realized cost savings of between 5 percent and 50 percent, although most report savings in the 10 percent to 20 percent range. Many are not sure at this time of the full extent of implementing the cost-saving measures.

“Businesses must know the detailed breakdown of costs to be able to determine cost improvement strategies and investments that impact business,” Rajan explains.

These organizations have taken different measures to contain costs. Measures included server and storage virtualization, application rationalization, back-up optimization, process standardization, facility and data center consolidation as well as taking steps to reduce energy and cooling costs. Survey participants also identified outsourcing and opting for a managed service provider as top cost-reducing measures.

**FINDING #4: FEWER THAN HALF OF ORGANIZATIONS HAVE ADOPTED ALTERNATIVE MODELS FOR DATA CENTER MANAGEMENT.**

FINDING #2: MOST ORGANIZATIONS OPERATE FROM MULTIPLE DATA CENTERS BUT OWN FEWER THAN HALF OF THEIR DATA CENTERS.

According to the Wipro and Outsourcing Center survey, a majority of organizations currently operate from more than just one or two data centers. In fact, less than 40 percent (38.7%) are running fewer than two data centers. More than two in five participants (41.9%) said they operate from three, four or five data centers. More than 10 percent of participants (12.9%) said they operate from more than 20 data centers.

Larger enterprises typically have multiple data centers, as do those that have a truly global reach. If an organization operates in multiple markets, for instance across APAC, including Australia, Japan, India or in Europe or Latin America, it would typically have multiple data centers.

Many organizations establish local data centers in regions where they expand their business into new markets, and other firms inherit data centers in local geographies as they acquire other companies. While there are benefits to multiple data centers spread across geographies, organizations find that having many different data centers is very expensive and outweighs some of the benefits of localization.
"Considering the availability of bandwidth and resolution of performance issues, it is clearly established that the consolidation of Data Centers has a significant business benefit to organizations," said Wipro’s Rajan.

More than half of survey participants (56.2%) said that they owned fewer than half of their data centers. But more than 40 percent (43.8%) own more than half of all their data centers.

Certain industries tend to keep their data centers in-house. For instance, financial services firms and telecommunications operators typically own their own data centers. However, many other organizations tend to have hosted data centers.

The trend over the past several years, according to Rajan Sampath, is for organizations to host data centers instead of owning them, but this varies from vertical to vertical and depends on the size and reach of the organization. "A large and established banking or telco enterprise, for instance, would be hesitant to give up their data center ownership, while a smaller retail enterprise might be more likely to go with a hosted data center option," Rajan says.

**FINDING #3: MOST ORGANIZATIONS DO NOT KNOW THE DETAILED COST BREAKDOWN OF EACH DATA CENTER.**

![Pie Chart](chart.png)

Fewer than a third of participants (31.3%) in the Wipro and Outsourcing Center survey said that their current data center costs are worrisome for their business. Nearly half (43.8%) of group participants said that data center costs were not a concern for them.

Interestingly, while data center costs are generally not top-of-mind for survey participants, these individuals also said that they really aren’t completely aware of how much money their data centers are costing their organizations.

A whopping 71.9 percent – nearly three-fourths – of all survey participants reported that they do not know the detailed cost breakdown of each data center. And, says Rajan, most organizations only know a portion of their data center costs—not the whole cost picture.

"It is not surprising that most organizations do not have a breakdown of costs. If these organizations don’t know where the costs are going, how can they know where to invest money to make improvements in efficiency?" Rajan notes. "It’s likely that these organizations have been spending money on things that are less critical or important."

Survey participants that did have a handle on their data center costs identified their top three costs in terms of both parameter and percent. Their biggest costs were related to the facility itself—building allocations, for instance. Other big identified costs were energy-related, due to power consumption to meet operational requirements, including cooling. Other chief costs are hardware- and software-related, as well as storage, staffing and maintenance.
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**FINDING #3: MOST ORGANIZATIONS DO NOT KNOW THE DETAILED COST BREAKDOWN OF EACH DATA CENTER.**

Are your current Data Center costs a big worry for your business?

- Yes: 25.0%
- No: 31.3%
- Maybe: 43.8%

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ABOUT WIPRO TECHNOLOGIES

Wipro Technologies, the global IT business of Wipro Limited (NYSE:WIT) is a leading Information Technology, Consulting and Outsourcing company, that delivers solutions to enable its clients do business better. Wipro Technologies delivers winning business outcomes through its deep industry experience and a 360 degree view of "Business through Technology" – helping clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, a practitioner’s approach to delivering innovation and an organization wide commitment to sustainability, Wipro Technologies has 131,000 employees and clients across 54 countries. For more information, please visit www.wipro.com

Wipro has helped several Fortune 1000 corporations improve the datacenter efficiency and effectiveness, in the process transforming their IT landscape and achieving business objectives. Our datacenter consolidation approach promises significant cost savings, business agility and variabilization of datacenter costs. We have an array of services to enable our customers - FluidState™, DAI™(Dynamically Adaptive Infrastructure), IT360™, Cloud, Mobility and Green Technologies.

For more information about Wipro’s data center services, visit http://www.wipro.com/services/infrastructure-management-services/Pages/data-center-services.aspx

ABOUT WIPRO COUNCIL FOR INDUSTRY RESEARCH

The Wipro Council for Industry Research comprising of domain and technology experts from the organization aims to address the needs of customers by specifically looking at innovative strategies that will help them gain competitive advantage in the market. The Council in collaboration with leading academic institutions and industry bodies studies market trends to equip organizations with insights that facilitate their IT and business strategies.

For more information please visit http://www.wipro.com/insights/Pages/industry-research.aspx

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Outsourcing Center is the world’s most prominent Internet portal for authoritative information on outsourcing. The Center’s mission is to build the industry by helping people understand how to create value through outsourcing. We pride ourselves on supplying a trusted and objective third-party perspective to our opt-in subscriber base of more than 115,000 through consistent editorials, research, whitepapers, and the annual Outsourcing Excellence Awards. For more information, please visit www.outsourcing-center.com

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