



**Cloud benefits  
realization – A  
measurable approach**



**V**arious forms of cloud computing are among the top three areas where most global CIOs will increase their investment next year, per Gartner estimates <sup>[1]</sup>.

At this point, cloud adoption is mainstream. Building, implementing and maturing cloud strategies will continue to be a top priority for years to come for enterprises, as mentioned in a Gartner press release <sup>[2]</sup>.

We have observed that most of the RFPs (request for proposals) received in the last year at Wipro, whether related to ADM (application development & maintenance), managed services or modernization, have a cloud component embedded in some way or the other.

Looking at widespread cloud adoption, the key challenge for enterprises would be to ensure right cloud strategy creation along with continuous measurement & optimization post implementation to fully realize the cloud benefits. An additional challenge lies in leveraging the latest CSP (cloud service providers) capabilities that get enhanced frequently.

### Cloud strategy varies

While Cloud is inevitable, the adoption strategy may vary for organizations depending on various aspects like usage patterns, compliance requirements, nonfunctional requirements, infrastructure investments, technical debt and cloud economics including others.

It is being observed that the expiry term of a data center (mostly third-party owned) contract also affects the cloud strategy making data center exit one of the major forces driving cloud adoption. Time-bound datacenter exit leads to “migrate first and transform later” strategy, enabling a relatively quicker cloud implementation for enterprises. This strategy however doesn’t exploit cloud benefits to the maximum due to associated time constraints and the way cloud services are consumed.

Another widely used strategy of “transform while you migrate” leads to a modernize-first approach, which enables enterprises to leverage

cloud wherever it adds value in the modernization journey, through various service models like SaaS, PaaS, BPaaS and others while minimizing the usage of IaaS.

The “Greenfield cloud native” smart application development strategy helps enhance user experience. It also supports the digital business model for a new organization or an existing organization venturing into a new business model or rewriting existing high business-value legacy applications to support/unfold growth avenues. Mobile, analytics, IoT and cognitive capabilities provided through a cloud platform support the shorter time-to-market objective with add-on DevOps tooling for frequent releases of features enriching user experience and new functionalities.

Amalgamation of the above-mentioned strategies is a path generally traversed by enterprises for steady and selective cloud adoption based on characteristics of individual application as well as by evaluating relevance of cloud in achieving business goals. Wipro’s Cloud Studio helps in evaluating the customer’s IT landscape to devise a cloud strategy based on multi-faceted discovery & assessment.

While enterprises create a cloud strategy to focus their efforts on select business goals, they need to continuously monitor and optimize cloud implementation as well as continue their journey toward modernization to realize the envisaged cloud benefits.

### Cloud benefits – ‘start with the end in mind’

While large cloud migrations are underway, it is critical to set goals and measure their success to maximize benefits. Benchmarking as-is state and identifying success criteria is essential for making informed investment decisions. Knowing when to expect what benefit and planning investment accordingly is very important for any cloud initiative.

Let us look at typical benefits organizations expect with cloud adoption:

- Reduction in IT facilities and utilities costs



**While there could be many parameters to measure, enterprises need to shortlist and prioritize the ones that align with and help track their identified business goals.**

- Reduction in IT compute/network/storage costs
- Reduction in current technical debt & technical debt growth
- Reduction in cost of new application development
- Improvement in agility, scalability & availability
- Improvement in ability to drive innovation & create new business models

It is not feasible to realize all of these benefits from day one of cloud migration. Moreover, it's a journey comprising various stages to really maximize tangible and intangible cloud benefits.

Gartner estimates that organizations that have done little or no cloud cost optimization are overspending by 70% or more hence it is critical to keep measuring various parameters.

To measure and realize benefits, one must define goals and measurement parameters for cloud implementation, which would potentially need the following aspects considered:

1. Identify key business drivers for cloud transformation
2. Define multiple goals across identified business drivers
3. Agree on multiple measurement parameters across all the defined goals at the application level
4. Define success criteria for each chosen parameter

### **Identify key business drivers and define goals**

Based on their vision, enterprises need to identify the key drivers for cloud adoption. Some key driver examples can look like: 'I need capability to deliver my core services, agility to react to market changes, and improve reach and recurrence of my customers'. 'I need my business services to be delivered consistently and be secure and compliant'. 'I need the capability to quickly implement innovative ideas with fail early, fail cheap enablement comprising automation apart from others'.

The business drivers that have been identified need to be broken into goals to be tracked basis parameters like: Improved customer experience, improved service availability, improved cost tracking & controls, TCO reduction including others. These goals shall be aligned with measurable parameters as detailed in the next section.

### **Measure important parameters**

While there could be many parameters to measure, enterprises need to shortlist and prioritize the ones that align with and help track their identified business goals. Benefits realization is a journey with milestones on timescale based on defined priorities and investment undertaken.

The table below depicts many such parameters that enterprises need to shortlist based on their priorities. This can enable them to plan investment based on complexity involved and the cloud maturity stage at which these benefits can

be realized. For e.g. provisioning time is reduced as soon as cloud use is started, without any investment, because cloud by default provides quick infrastructure provisioning. Similarly, for automated provisioning, some investment is required to create templates, blueprints or scripts. Another example could be the ability to

use adaptive architecture which is achieved with significant investment in modernizing the technology stack & architecture. The table below describes few benefits parameters and aligns them with the maturity stage based on when these benefits can be realized.

Complexity & Investment	Very High	<ul style="list-style-type: none"> <li>Improved mobility (for employees, suppliers, partners etc.)</li> <li>Visibility in IT assets &amp; charge backs (spends), Cost metering displays</li> <li>Energy bill (pre &amp; post migration) &amp; facilities cost reduction</li> <li>Operating cash flow improvement</li> </ul>	<ul style="list-style-type: none"> <li>Scalability (Degree to which the service or system can support a defined growth scenario)</li> <li>Single view of application, infrastructure, APIs and the cloud service performance</li> <li>All critical services are available as expected</li> <li>Reduced data-related security issues</li> <li>Reduced compliance audit issues</li> <li>Time taken to audit IT systems</li> <li>Disaster recovery capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Flexibility to use best-of-breed services from multiple clouds</li> <li>Reliability (Mean Time Between Failure and Mean Time To Repair)</li> <li>Service/system availability (Percentage of time the service/system is available)</li> <li>Number of support instances</li> <li>Issues that affect privacy of user information and data storage</li> </ul>	<ul style="list-style-type: none"> <li>Omni channel customer service experience</li> <li>Ability to use adaptive architectures</li> <li>Insight - more visibility into customer behavior , more granular cost breakdown</li> <li>Ability to create IT-driven digital business model</li> <li>Customer satisfaction index</li> <li>Customer growth /Sales growth</li> </ul>
	High	<ul style="list-style-type: none"> <li>Ability to quickly implement &amp; experiment with new ideas</li> <li>Zero downtime upgrades</li> <li>Ability to automate resilience (replace unhealthy instances with healthy ones)</li> </ul>	<ul style="list-style-type: none"> <li>Ability to use ML/AI/IoT/Big data services and integration technologies</li> <li>Reduced Incidents of network attacks</li> <li>Support for ITSM; ITIL processes</li> </ul>	<ul style="list-style-type: none"> <li>Ability to create redundant system and components</li> <li>Infrastructure utilization % (pre &amp; post migration)</li> <li>Reduced Carbon emission</li> <li>Speed of application deployments, updates and patching (support for Agile &amp; DevOps)</li> </ul>	<ul style="list-style-type: none"> <li>Ability to add new business capabilities</li> <li>Predictive analysis &amp; proactive alerting</li> <li>Self-service capabilities</li> <li>End of life management</li> <li>Running apps as API, Microservices &amp; containers</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Project turnaround times</li> <li>Amount of risk associated with failures</li> <li>Ability to automate load balance across Availability Zones, Regions</li> </ul>	<ul style="list-style-type: none"> <li>Response time (delay between request &amp; response)</li> <li>Throughput (transaction per second or data rate MBPS)</li> <li>Secure &amp; compliant provisioning, scaling</li> </ul>	<ul style="list-style-type: none"> <li>Reduced number/severity of outages</li> <li>Service error rates (number of errors pre &amp; post migration)</li> <li>Seamless digital experience for employees, customers, partners through cloud based identity management</li> </ul>	<ul style="list-style-type: none"> <li>Ability to respond to local market specific needs</li> <li>Faster time to market</li> <li>Ability to use open-source technologies</li> </ul>
	Low	<ul style="list-style-type: none"> <li>Time to provision &amp; de-provision infrastructure &amp; services</li> </ul>	<ul style="list-style-type: none"> <li>Availability of services for ease of setting up compliance &amp; security controls</li> <li>Ability to automate provisioning</li> </ul>	<ul style="list-style-type: none"> <li>DevOps, Process orchestration</li> <li>Evidence gathering capabilities</li> <li>SLA adherence pre &amp; post migration (Response time &amp; resolution time)</li> </ul>	<ul style="list-style-type: none"> <li>Access to new markets</li> <li>IT cost per business transaction / spend by service</li> </ul>
		Cloud-Enabled	Cloud-Inspired	Cloud-Pure	Cloud-Enhanced
		Cloud Maturity Stage			

Table-1: Measurable parameters in relative terms of time & investment required and maturity stage (Please refer to Gartner definition of cloud maturity stages)



While parameters in the above table are shown on a maturity stage/timeline basis, it is not necessarily a sequential path. Enterprises will need to run parallel streams wherein some applications will be transformed to cloud native (cloud enhanced) while other applications may just be re-hosted on cloud and stay there without any transformation. Another set of applications might start as cloud-enabled and over a period of time, attain a cloud-enhanced stage through phased transformation. All these paths need to be justified based on business value of the application and amount of investment they deserve.

## Define Success criteria for each benefit parameter & track them

For an application, the shortlisted benefit parameters will need to be chased against success criteria defined on the basis of maturity stage and investment planned. While not all benefits are tangible, they do contribute toward some tangible parameters that can be measured. The table below depicts examples of benefits and aligns them with the maturity stage.

Benefit Parameter	Success criteria examples	Benefit realization Maturity Stage
 CapEx	<ul style="list-style-type: none"> <li>60% savings in CapEx over next 2 years</li> </ul>	Cloud-Enabled, Cloud-Inspired
 OpEx	<ul style="list-style-type: none"> <li>\$200K/year savings</li> <li>Server-to-Staff ratio improved by 2x</li> <li>20% reduction in operational support calls</li> </ul>	Cloud-Inspired, Cloud-Pure
 Hardware Provisioning Efficiency	<ul style="list-style-type: none"> <li>50 machines in 5 minutes (3,000% faster resource provisioning)</li> </ul>	Cloud-Enabled
 Time to Market	<ul style="list-style-type: none"> <li>Time to market from 9 months to 2 months (80% faster in launching new products)</li> </ul>	Cloud-Enhanced
 Reliability	<ul style="list-style-type: none"> <li>40% reduction in hardware-related support calls</li> </ul>	Cloud-Pure, Cloud-Enhanced
 Flexibility	<ul style="list-style-type: none"> <li>Not locked into particular hardware vendor or platform or technology</li> </ul>	Cloud-Enhanced
 Availability	<ul style="list-style-type: none"> <li>99.99% uptime</li> <li>45% reduction in cost of downtime</li> </ul>	Cloud-Inspired, Cloud-Pure
 Productivity improvement (application development)	<ul style="list-style-type: none"> <li>40% increase in application development productivity by using PaaS services</li> </ul>	Cloud-Pure, Cloud-Enhanced
 Data center space	<ul style="list-style-type: none"> <li>80% reduction in data center space</li> </ul>	Cloud-Enabled, Cloud-Inspired
 Gain insights into business functions	<ul style="list-style-type: none"> <li>40% faster insight creation by assembling CSP provided data lake, ML adoption etc.</li> </ul>	Cloud-Inspired, Cloud-Pure
 Run-time platform standardization	<ul style="list-style-type: none"> <li>80% workloads are running on standard run time environment</li> </ul>	Cloud-Inspired, Cloud-Pure

While the above table touches on only a few parameters, there are many more which need to be measured and tracked to ensure success of cloud transformation. We work with customers through our Cloud Studio framework to identify, define and measure various parameters for cloud transformation aligned with the customer's business priorities.

## References

[1] - <https://gtnr.it/2MEYbaZ>

[2] - <https://gtnr.it/36kZeEA>



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