# Cloud and the connected economy

Customer-centered digital transformation through connected and always-on cloud services

Businesses have stepped up their pursuit of transformation in the age of industry 4.0, digital disruption and connected economy.

Cloud has been a great enabler in this race towards digital, building a connected ecosystem that is essential to not only satiate the need of customers but also partners, vendors, employees and things. Cloud has made connecting with consumers and businesses, at the speed of thought, possible by enabling real time insights via the complex landscape of 'big data' processing and computing.

Today's consumer mindset is not a reflection of any isolated event: our generation observes a network effects pattern and our behavior is influenced by the actions of others. Every second, there are billions of events triggered by individuals from multiple devices and locations, producing a chain of events. Understanding of behavioral events, correlating them and extracting insights involves managing and mining massive scale datasets.

Cloud, with its unparalleled compute and other data and analytics tools, has made behavioral economy a reality through network effects at scale, and introduced game-changing platform business models. No organization today can say no to this disruptive force that will potentially alter the course of business and economics.

## Cloud has had far-reaching impact across industries

- Healthcare organizations, service providers and wellbeing product disruptors are coming up with better health insurance and private care plans through electronic medical records (EMR). EMR systems sharing became an affordable reality only through better storage, collaboration and data sharing in the cloud.
- The aviation industry monitors air-traffic controls, flight paths, and other vast amounts of relevant information in real-time through cloud.
- Retail has been revolutionized with the advent of advanced, cutting-edge cloud computing technologies, big data, advanced analytics, social data, Internet of Things (IoT), artificial intelligence (AI), and conversational bots.
- Banking and financial sectors have been reimagined by the cloud. Smart and virtual banking, digital wallet, and mobile payments have raised digital transformation to a new level in the financial sector.
- Cloud technologies and edge computing together have transformed the advanced metering infrastructure of entire utility networks. Geo-location and real-time asset monitoring capabilities have added a significant new dimension to the energy and utility industries' service and cost affordability.
- Cloud has taken the connected car and the future of automotives into a new reality.

## Cloud-based ecosystem for a customer-centered, connected economy

Speed of business transformation is the new metric for cloud. Cloud is more of a business transformation accelerator than a technology transformation driver (See Figure 1) that enhances:

**Cost efficiency:** Smaller companies having limited IT budget and resources use cloud-based technologies, which provide them cost-effectiveness in operations. Large scale firms often offload non-mission critical and non-complaint workloads.

**Time to market:** DevOps, coupled with cloud on technologies such as IoT, Big Data, AI and ML, brings forward improved speed of innovation by faster access to development environments and thorough developer processes. Automated processes enhance security and eliminate possible errors and elimination of downtime that enable the building of stateless applications, ultimately leading to business reliability and customer satisfaction.

**Business model:** Cloud ecosystem allows firms to adopt platforms or become a platform business itself, in the age of platform economy. There is improvement in the economics of integration and delivery of services which ultimately enable new platform based models and sources of value creation.

**Planet-scale compute:** Data on cloud models, trained through feature engineering and clubbed with AI, simplifies collaboration and enhances customer experience. Some AI applications leverage boosted models and deep neural networks, which are extremely compute intensive, requiring long feedback loop and training time.

Machine learning (ML) IaaS platforms, purpose-built compute instances, and high performing AI capable chipsets, are affordable latest generation compute acceleration technologies. Cloud platform has made finding 'Neverland' a magical reality.

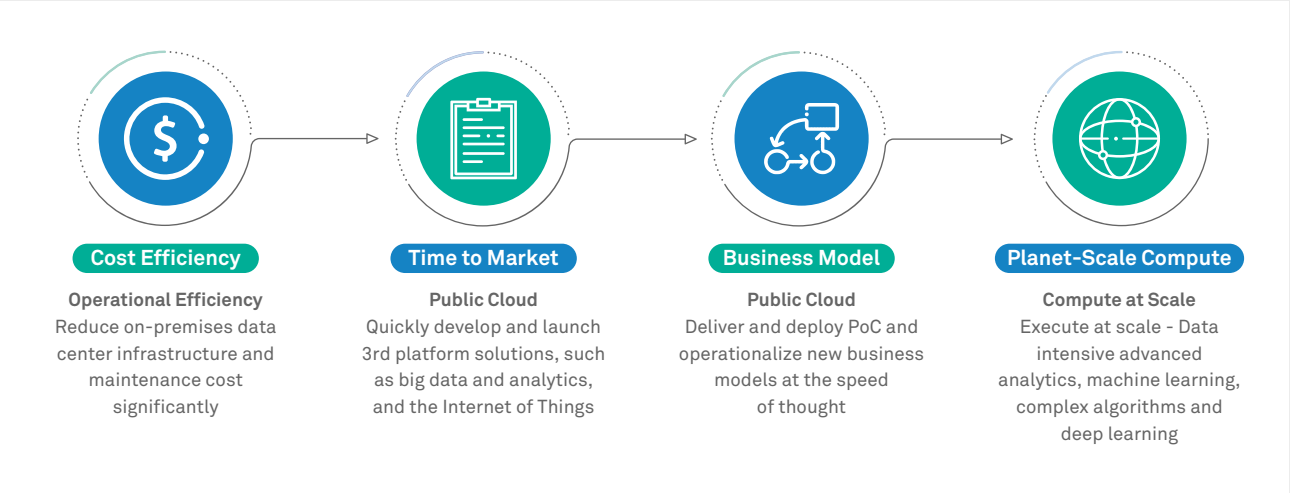


Figure 1: Cloud as the business-transforming agent

## The cloud strategy

To deliver the connected economy, the cloud ecosystem needs to be ingrained into the technology of the organization. The transition to the ecosystem can start with low-level workloads being transferred to cloud followed by the customer-facing applications. To deliver the cloud ecosystem effectively, an organization needs to look into:

### Fitting cloud into the vision and curating future strategy

Understand the future business needs and liaise with stakeholders to chalk out the cloud ecosystem strategy by exposing them to cloud platforms. It requires a systemic thinking where the cloud services are cogs in the larger enterprise machine, which optimizes the machine to provide competitive advantage. This will show the bigger picture and consequently remove qualms about transforming existing processes using new age technology.

### Opting for public, private or hybrid cloud

Cloud strategy needs to consider aspects such as compute power, fast scalability, changing app/tooling, robust security. Eg. Public cloud provides potential for innovation and collaboration where an app can be developed and the code can be shared with other partners seamlessly. But this requires a better understanding of target state commercial software and app usage. Using a multi-cloud approach entails using the right database tools that can move the workload to cloud without abandoning reliable and familiar on-premise solutions. The ultimate motive should be that businesses and stakeholders are able to access data with equal efficiency, reliability and speed.

### Data sovereignty and governance

With Privacy First being ingrained among organizations, it is imperative to use cloud services with clarity on data sovereignty and residency without compromising data security and customer trust. Choose the right cloud tools that enable data governance proactively. Implementation of policies is important so that they help every employee understand which type of data can be shared. This ultimately gives builds confidence among employees that their data is secure and encourages a culture of sharing.

**Investing in next generation skills that cater to platform engineering support**

Cloud savvy architects, developers, designers, analysts, data scientists and engineers are the skills that need to be invested upon either through reskilling or partners providing the relevant talent. This talent pool would cater to platform engineering and development teams to implement and run critical elements of the cloud ecosystem. At the same time, DevOps, DataOps and agile approaches to managing data reduces data friction, accelerates insights and results in innovation.

## Personifying business with Cloud

In the age of digital disruption, business models need to cater to customers' ever changing needs. Anything-as-a-service (XaaS) has emerged as the enabler for the next-gen business models. With the right cloud strategy and technology portfolio – that employs artificial intelligence and machine learning – to support gigantic volumes of data at the speed of thought, along with a pool of talented spectrum of skills, organization have the advantage to stay relevant and grow with new business models.

## About the authors

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