INNOVATION, INTELLIGENCE, STANDARDIZATION: THE FUTURE OF ENTERPRISE CLOUD APPS

Disruption is the new normal

Several disruptive changes have riddled the 21st century that have changed the way we live and work significantly. Starting with an exponential increase in storage and compute capacities to the rising influence of social media, digital consumerism, the evolution of artificial intelligence (AI) and machine learning (ML) technologies to the latest changes brought about by the pandemic. These five factors combined have had a transformative influence across business and personal worlds.

The rise of these factors would not have happened without the ongoing support of the business ecosystem.

1. Storage and compute capacity have exponentially increased over the years, and with cloud computing, the possibilities have expanded beyond imagination. Hyperscalers such as Amazon AWS, Google Cloud and Microsoft Azure have played a considerable role in making computing at scale a reality.

2. Today, every product or service is available for purchase through online channels. Plus, a new generation of technology-savvy consumers is propelling the digital consumerism wave. The impact is reflected in the healthy 18% year-on-year growth in eCommerce sales, which reached USD 3.5 trillion in 2019 and forecasted to double in the next four years[1]. Moreover, in the first half of 2020, eCommerce sales grew by 30% year-on-year[2], galvanized by the pandemic.

3. Social media plays an integral role in connecting people. Nearly 50% of the world's population uses some form of social media, making it a hard-to-ignore channel for your business[3]. Enterprises now spend millions of dollars trying to harness social media channels to reach their target audience and influence buying decisions.

4. Business leaders globally recognize the transformative power of AI and ML across their organizations with their ability to redefine stakeholder experience, streamline operations, boost growth and foster innovation. Even B2B enterprises are exploring AI and ML technologies to derive better business results.

5. The pandemic has upended businesses, professional and personal lives. With limited mobility, enterprises have quickly switched to remote working enabled by cloud and other digital platforms. A significant percentage of the global workforce operates from their homes today and expected to continue for the rest of the year.

Each of these factors by itself had had a lasting impact, and a combination of these factors has triggered enormous changes in the way business is conducted today.

Shifts in business models

Examples from the retail, healthcare and manufacturing industries illustrate the shifts effectively.

From footfall to website visits – Earlier, consumers preferred visiting physical stores to "look and feel" the item they planned to purchase. Now, they view the product on a website, which provides the consumer with the ability to view it from multiple dimensions. The shopper also solicits feedback on the item from social media channels or review portals to understand the experience of other consumers. Once convinced, they purchase the product, with the entire buying lifecycle completed online. eCommerce sales made up 16% of total retail sales in the US in 2019[4] and projected only to increase.

Doctor online – Healthcare, a sector that depended entirely on physical visits to clinics and hospitals, is experiencing a gradual yet significant change with some aspects of the care moving online. Online healthcare services now offer initial visits, online consultations, remote patient monitoring and remote imaging services. Market research projects the global telehealth market to hit USD 559 billion by 2027[5].

Smart factory – Traditionally, the manufacturing industry has had labor-intensive operations in its factories, warehouses and distribution centers (DCs). Automation brought about a massive change in the pick, pack and ship processes. It is common to see robots on the shop floor as they replace humans and lifts in DCs and large warehouses. One hundred percent automated factories already exist with periodic remote monitoring from a central hub.

New business models that emerged from disruptive changes include eCommerce, direct to consumer and segment-of-one. There is a whole new level of choice and flexibility offered for the customer today. It has massive ramifications across the organization, from product design to manufacturing and distribution. Some changes are already in motion today, such as intermediary elimination and direct shipments from the factory to the consumer, removing the need for a DC.

Technology is the centerpiece

As enterprises change their business models to cope with these disruptions, they must continuously evaluate the technology roadmap to support their transformation efforts. Enterprise cloud apps play an essential role here. Enterprise applications are the mainstay of an organization and control the daily operations through enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), and human resources management (HRM) systems. With cloud computing, enterprises have an opportunity to move from monolithic systems on-premise to more agile versions on the cloud. A recent Infosys study showed that enterprises are indeed moving their applications to the cloud as part of their digital transformation journey.

Organizations are redefining their cloud roadmap to embed intelligent technologies and cater to new business models. For this to happen successfully, enterprise cloud apps need to rejig their solutions to generate intelligence, perform real-time data analytics, hyperautomate business operations and so on. These nuggets of intelligence and innovation must be developed as an add-on.

A tech ecosystem holds the key

Startups are an active player in this segment as they try to develop apps for specific purposes. An app that identifies buying patterns of consumers through sentiment analysis of interactions on social media channels is an example.

Enabling real-time decisions implies processing a significant variety of data that come together in the background. For an enterprise, it is a colossal task to mesh data from different sources and apply intelligence to generate insights. The success of this task depends on how well the internal and external data (diverse data such as weather, commodity exchange data) work together. A typical enterprise is simply not geared to juggle around with data at this scale or complexity. Hyperscalers have taken the lead in defining data and AI frameworks. With ready access to external data as it is hosted on their cloud servers, hyperscalers are better placed to process massive volumes of data and deliver intelligent insights.

On the other hand, enterprise apps vendors such as SAP and Oracle are making good progress despite a late start but are behind hyperscalers. We anticipate their efforts to take more time to produce compelling enterprise cloud apps. An integrated architecture (of the add-on AI apps and the primary ERP systems) is critical to support evolving business requirements, however.

System integrators (SI) like Infosys are contributing to this situation by defining an integrated architecture or by embedding cloud data and AI apps into enterprise apps such as S4-HANA. In this way, Infosys is helping define the architecture for tomorrow's business.

What the future holds

A sound architecture relies on standardized processes and solutions used in an organization, a far cry from today's situation. With cloud solutions, we see standardization emerge as companies in an industry lean towards using the cloud in the same way.

We expect the architecture to become more stable and standardized over the next three to five years. Ideally, we will see an intelligent enterprise comprising these players -

- hyperscalers who provide the cloud infrastructure and business services to facilitate intelligent service operations on cloud

- enterprise app vendors who address the fundamental processes within an organization

- startups that provide intelligent point solutions which enable new business models

- enterprise app vendors such as SAP and a SI like Infosys work together to define analytics frameworks by accessing transactional data as well as external data

The Infosys Cobalt Cloud Community can assist enterprises in their endeavor to prepare for a new business environment. This community houses a significant and valuable repository of assets that will help an enterprise equip themselves for tomorrow's business demands. With these assets, they can evaluate intelligent apps, transform their existing processes to next-gen business processes and convert existing enterprise infrastructure to new-gen enterprise architecture such as S4/HANA.

In conclusion, several technology related gaps hamper quick adoption and progress to new business models. Enterprise app vendors and hyperscalers are making progress in addressing these gaps but at different paces. We see the ecosystem evolving to develop a standardized platform in the next three to five years. Infosys has a critical role to play in bringing together enterprise app vendors, startups and hyperscalers to define new business models for clients.

References

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