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DIGITIZATION AND
MODERNIZATION
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The pandemic is changing everything around us. It is forcing us to reimagine our interactions amongst each other, with machines, and amongst machines. The physical world and virtual world continuum has been established over just a few weeks of the pandemic, to take advantage of the opportunities emerging due to COVID and in some cases for mere survival. Businesses which engaged with customers physically, now see the value of being digital and the potential of reaching and engaging further. Clearly, the post-COVID world will be very different from the pre-COVID times.

The race between humans and machines has started and the word 'resiliency' has started making more sense in the current scenario. We are now more dependent on machines than ever.



The need for modernization in financial services

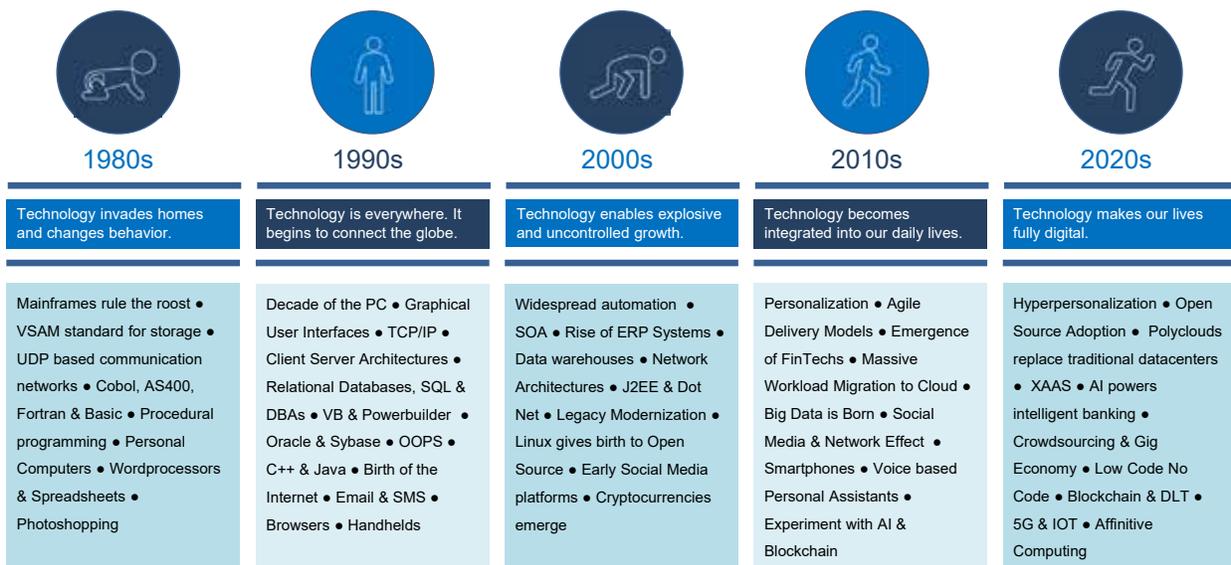
The financial services industry has traditionally had a technology backbone powering it, whether older monolithic platforms or the more recent Omni channel access technologies, vis-à-vis other industry segments. Banks also have the advantage of having various customer journeys, both B2B and B2C, running touch less over the internet. So can we assume that banks are

more resilient in the current pandemic scenario? Perhaps not.

Banks had very good reasons for continuing with their legacy platforms and code, written decades ago. While there has been a need of reimagining customer experience, many banks have struggled to move away from these legacy platforms. Clearly, the complex code, business rules, and the risk of system failures are keeping them away from adopting the latest technology stacks,

including the relatively resilient open source ecosystem and Cloud stacks. This adversely affects them as competition from FinTechs and startups who are challenging the monopoly they had on customers.

Modernization has hence become the top priority for CIOs and CEOs. While some are already ahead in the journey, others are taking a hard look at the need for modernization.



Modernization: Evolution of Technology

Modernization will ensure that technology is leveraged to meet expanding business goals, including resiliency and providing competitive advantage in today's digital economy. Modernization is possible in almost every area e.g., on the Mainframe, Cloud, open source technologies, data, platforms, user interface etc. Modernization can be a lever to make a business digital ready by transforming to next-gen architectures. It can be used to accelerate growth and optimize costs, as well as propel innovation.

Making a modernization shift

Let's take an example of Cloud adoption as a part of modernization focus. Banks had some good reasons for not moving to Cloud. At first, they were concerned about risks associated with data security. Then, as data became the new oil, they started worrying about loss of data ownership. As the benefits of moving to Cloud started becoming more evident, and the industry started exploring various models to address these concerns, banks did start taking to cloud adoption, only to find themselves getting overwhelmed with the size and complexity of migrating huge legacy systems. Couple that with the fact that most of the early migrations were "lift-and-shift", which effectively meant that applications did not necessarily benefit from

the elastic compute capabilities of the Cloud, thereby resulting in no tangible returns on the investment.

But now banks are fast turning to Cloud. As per a recent report, the financial Cloud market will rise at 29.7% CAGR from 2020 to 2026. In fact, financial services has now become amongst the fastest cloud adopters. Gartner predicts that public cloud services will grow at 17% during 2020, and states, "IaaS is forecast to grow 24% year over year, which is the highest growth rate across all market segments."* As per Bloomberg, a major portion of the \$500 billion that financial institutions will spend on technology in 2021 will go to the cloud.

In other words, banks were compelled to work around their concerns with data security or ownership and move their workloads to the cloud. But what began as a "push" has now become a "pull". As cloud adoption increased in the financial sector, banks realized that their concerns had been greatly exaggerated and that they had been overlooking the benefits of the cloud. As stated by Sid Nag of Gartner, "In the recovery and rebound phase, CIOs are recognizing that they don't need to bring workloads back on premises, which will further increase cloud spending and drive new applications around cloud-hosted collaboration that incorporate emerging technologies such as virtual reality and immersive video experiences."**

Leaders and laggards in modernization

We find that organizations can be mapped to one of 4 distinct bands with respect to their modernization journey – market leaders, fast followers, cautious adopters, and laggards. Digital maturity and adoption of cloud-native practices are two factors that determine the overall modernization stage. The first factor, digital maturity, is the measure of how many bank business processes have moved from being physical to phygital to finally arrive at becoming completely online omnichannel experiences. The second factor, that of cloud-native practices, is the measure of a

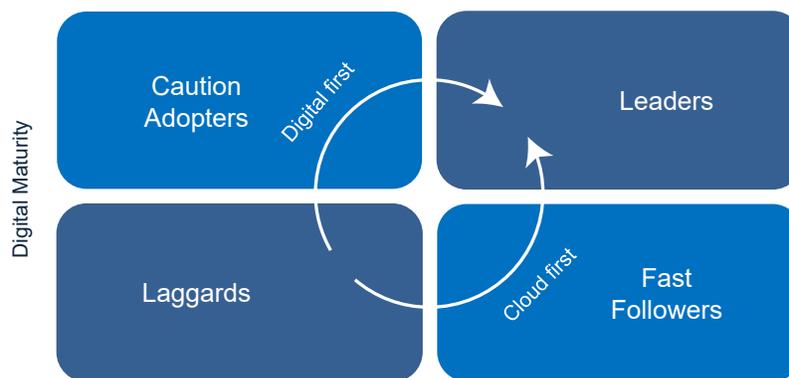
bank's platforms to leverage the best of cloud provider's capabilities. Effectively, a bank that has virtualized its business processes and has a higher cloud-native architecture maturity, is likely to be in the leader band.

Cloud platforms are familiar to banks, yet FIs are unfamiliar with connecting the many disparate cloud solutions they use. It is here that the use of cloud-native systems and accompanying tools, such as Kubernetes, come into deeper play.

Cloud-based storage means your sensitive

data across hybrid multi-cloud systems could be subject to privacy regulations. It is imperative that in-context data access controls are applied. Controls should include flexible access policies, data encryption, tokenization, as well as data masking, blocking and redaction.

According to a study conducted by Trend Micro, four out of ten cloud-related incidents can be traced back to a misconfiguration in the cloud environment. Nevertheless, we are now at a point where challenges are mitigated and modernization is accelerated.



Adherence to Cloud Native Principle

Modernization bands for mapping organization journey

The efforts being undertaken by banks in this race towards modernization to go from Laggards to Leaders are some of the largest and most complex migrations ever undertaken. This has become a no-holds-barred zone where every possibility must be considered.

Legacy mainframe workloads are getting migrated onto cloud ecosystems, massive monoliths are getting broken down into domain-driven microservices. Physical data centers are getting consolidated onto virtualized multi-cloud / poly cloud platforms.

Conclusion

In summary, modernization of a Live Enterprise is multi-faceted, and covers all aspects:

- Modernization increasingly accelerates transformation of the enterprise through application simplification and rationalization, superseding legacy technologies with next gen technologies which leverage cloud and open source while ensuring security
- Modernization reimagines customer experiences and interactions thus enabling acquisition of newer customers, including new customer types, as well as retaining older customers by providing

the required stickiness

- Modernization enables reimagining the business itself with new revenue streams that didn't exist before
- Modernization enables cost takeout by reimagining processes, relooking operating models, implementing new ways of working and by using platforms and automation

By undertaking the modernization journey towards a Live Enterprise banks can exercise a blueprint to leverage the right levers and timely interventions towards being resilient. I hope to delve into this further in my subsequent papers.



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