TATA CONSULTANCY SERVICES

Rebound to a New Beginning: Re-Evaluate, Repurpose, Reopen, Reaffirm

Abstract:

COVID-19 has taken the entire world by storm and in terms of a rebound, experts are speculating a V/L/U shaped recovery. No one seems to have an answer for it yet, but history has shown us that social crises like these (SARS et al) have brought in attitudinal shifts in society and business models alike e.g. Rise of e-commerce in China post SARS[1]. So, what kind of changes do we expect post-COVID? What do organizations need to be ready with? What are the short-term and long-term business strategies that CXOs need to ponder upon?

In view of this, this paper recommends a framework -- "Rebound in a New Beginning"

[1] https://www.bcg.com/publications/2020/8-ways-companies-can-shape-reality-post-covid-19

"Reevaluate-Repurpose-Reopen-Reaffirm"

Based on the global scenario, we believe it's going to be a Swoosh-shaped recovery (see Fig 1),[2] where once demand picks up, growth too will see a rise. However, it will take a little more time to return to a pre-COVID growth rate. The framework talks about the importance of each phase of recovery and due considerations that need to be given in each period. Organizations need to be ready with their Re-evaluate and Repurpose strategies in the first six months of the pandemic and need to act on these strategies to take the organization back on to the path of building business resilience and growth.

TCS Business 4.0™ (intelligent-Agile-Automated-Cloud) would act as a key enabler to execute each of these phases.

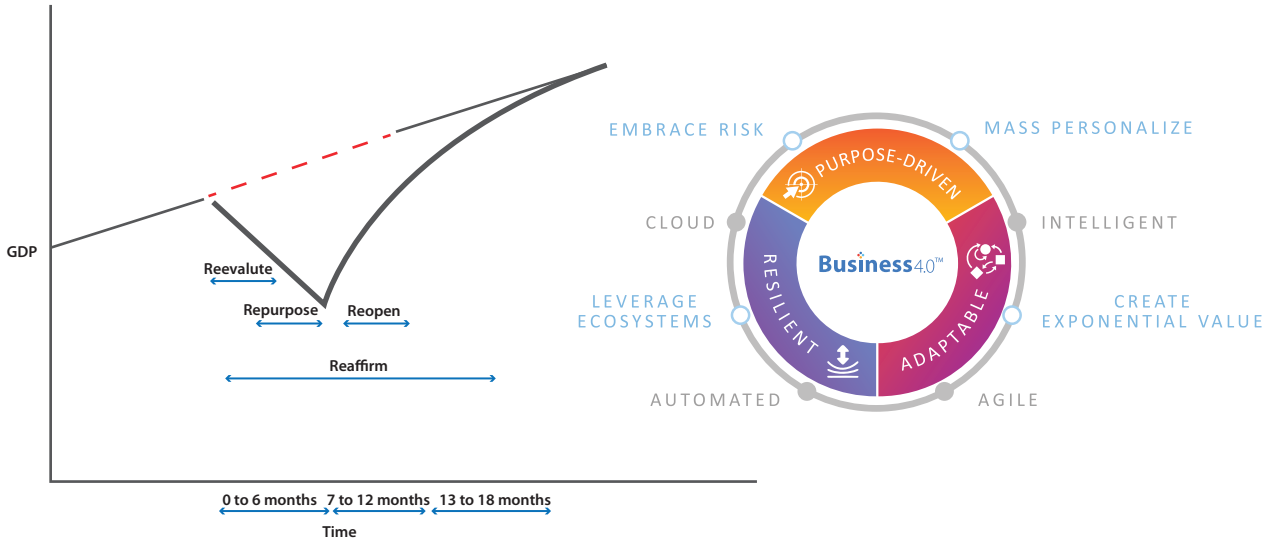

Figure 1:(left): 'Swoosh'-shaped recovery; (right) – The Business 4.0 behavioral framework

EXPLORING EACH PHASE

- **REEVALUATE BUSINESS STRATEGY**
  Rather than thinking about WHY, organizations need to think about the HOW and WHAT of business strategies and what levers should be in place for short- and long-term plans.

  - **Remote Workplace Enablement:**
    There is an increase in spend on technologies that support remote work, such as laptops, desktop virtualizations, VPNs, and multi-factor authentications to ensure secure access and greater emphasis on using collaboration technologies. Enterprises need to adopt to a transformative operating model that enables remote

[2] https://www.forbes.com/sites/sarahhansen/2020/06/03/u-shape-v-shape-recovery-shapes-explained-and-what-they-mean-for-americas-economy/#50dc643125a5

access for employees. This is the future of work and it highlights the importance of collaborative technologies as the new normal. It should not be seen as a constraint, but as a differentiating "human cloud".

- **Digital Transformation:**
  Many CIOs are re-evaluating whether to continue to invest in digital transformation or look at cost optimization. We recommend that digital transformation projects be given a priority and be implemented with 10X urgency with the following areas of focus:

  - **Customer 360** - In case of B-2-C businesses, organizations need to think of ways to reach customers through digital channels like email, text, social media, chatbots etc. Urgency in customer engagement will be a key factor in gaining and retaining customer loyalty. All SLA metrics like MTTR (Mean time to Response/Resolution) need to be redefined to give them the same online experience as in-store. Organizations should resort to Machine learning in business like RPAs (Robotic process Automation) and deploy self-service applications like chatbots to automate manual business processes and engage with customers, giving human like conversational experiences. Retailers should invest in new-age technologies like **AR/VR** for an immersive virtual shopping experience.

  - **Data and AI** – The post-COVID world is going to see the rise of a "data-driven AI- powered economy" where data and AI will be at the core of business decision-making, and to drive transformation. The success of this largely depends upon the organization's data maturity. Data is categorized by four V's: Volume, Variety, Velocity and Veracity (the deciding factor in the success of AI-led business initiatives). Data doesn't reside any longer in relational systems. Today, more than 80% of it is unstructured by way of emails, chats, content management systems, service logs, and social media. These pieces of information need to be stitched together to make smarter data-driven business decisions. For business resilience, organizations need to come out of data silos and adopt an enterprise strategy called "data socializing" where systems can communicate with each other using an enterprise service bus and share the information to have a single version of truth. AI projects often don't see the light of day due to unavailability or poor quality of data. Data strategy should hence be top priority for CIOs this fiscal year. Global trends suggest there is an increasing adoption of AI and ML technologies as an enabler in digital transformation. Enterprises need to lay out a structured approach

Manufacturing	HealthCare	Retail	Banking	Supply Chain	Telecom	Agriculture	Transportation
Predictive Maintenance	Medical Imaging	Product Recommen-dation	Risk Assessment	Blockchain	Network Optimization	Image recognition for plant health	Autonomous Vehicle
Predicting equipment failure	Automated Diagnosis	Consumer Sentiment analysis	Fraud Detection	Transport Optimization	Predictive Maintenance	Soil nutrient deficiency	Traffic Management
Quality inspection	Drug discovery	Vision Analytics	Algo trading	Robots for warehouse management	Predicting equipment failure	Controlling pest infestation	Transport Optimization
Digital Twin	Patient data analytics	AR/VR Immersive shopping	Regulatory Compliance	Forecasting planning	Customer Segmentation	Weather forecasting	Connected Cars

Figure 2: Industry view of AI Use cases

for digital transformation, incorporate AI in business by combining the value of automation with future-proof architecture that allows enterprises to incrementally leverage AI capabilities from multiple sources.

- **Legacy Modernization -** With cost optimization as the common boardroom agenda during the pandemic, CIOs must consider legacy modernizations on priority to reduce operational cost, simplify the IT landscape, and help organizations become resilient and adaptable. With the rise of social, mobile, analytics, and cloud (SMAC) technologies, enterprises will be more agile in enhancing customer experience and improving top line revenue. Legacy modernization has turned out to be a business necessity. IDC estimates global spending on digital transformation technologies and services to grow by 10.4% in 2020 to $1.3 trillion[3]. We reckon complete assessment of migration in terms of prioritizing business processes, feasibility study on business process consolidation, decommissioning strategy for unused processes, code conversion/optimization strategy, data migration strategy and phase-wise migration strategy. A key area for consideration is mainframe migration --migration of high MIPS batch jobs to a newer platform, offering a cost advantage.

[3] https://www.idc.com/getdoc.jsp?containerId=prUS46377220#:~:text=Global%20spending%20on%20DX%20technologies,reductions%20in%20overall%20technology%20spending.

- **IT tech landscape simplification -** Enterprises over the years grow with a multiple tech stack adding it to organizational technical debt. Some of the areas to be considered for consolidation are data integration, data ingestion, reporting technologies, and UI modernization.

- **Legacy system migration to cloud native applications -** Convert monolith applications using microservice-based architecture and deployed using container orchestrations.

- **Enterprises can use a Complexity vs Value framework—**The framework suggested below can help determine legacy modernization priorities. Two suggested methodologies for legacy modernization:

1.) Lift and Shift- As Is migration of code and business processes
2.) Rearchitect - Reengineer business process, code optimization

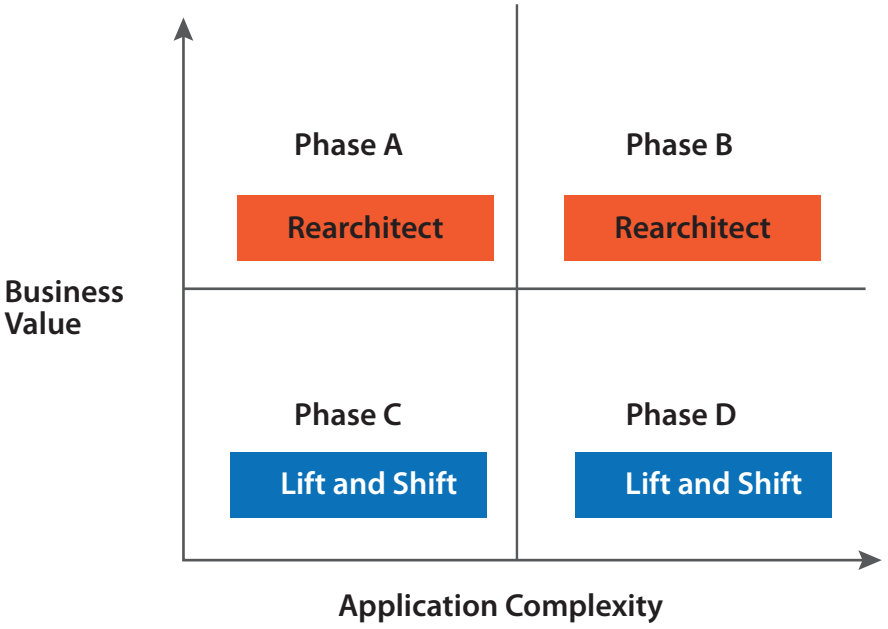

Figure 3: Application Complexity Vs Business Value Framework

- **Cybersecurity:** Organizations worldwide have had to adopt to remote working following the pandemic. Cyber criminals, however, see this as an opportunity. Few measures to combat cyberthreat are:

  - Use of VPN, and ensuring enterprise VPN servers and related network infrastructure is updated

- Firewall, DMZ and proxy set up to avoid DDOS (Distributed Denial of Service), advanced malware, application layer attacks, blocking traffic from unwanted sources
- Remote sessions to auto time out, reauthentication and reauthorization to gain access, Multifactor authentication
- API security with industry standard OAuth2.0 framework
- Increased regular audits of network device maintenance
- Security awareness sessions for employees e.g. training them to be wary of phishing / skimming emails[4]

- **Rapid Innovation:** Although the current focus is going to be on business continuity, organizations should use this as an opportunity to foster innovation culture to experiment with emerging technologies. The core principle is "Fail Fast, Learn Fast". This type of culture needs an innovation operating model to evaluate an idea to a rapid prototype, in quick succession. Some futuristic concepts that can be considered for rapid innovation are:
  - With the advent of IOTs, using a Digital Twin to simulate various physical scenarios
  - 5G /Empowered Edge and Autonomous operations - Where Edge devices like drones, autonomous vehicles and robots collaborate with each other and work seamlessly
  - Evaluating Blockchain - Blockchain still remains immature for enterprise deployments due to a range of technical issues, including poor scalability and interoperability[5]

  Rapid prototyping can help validate the idea and give business sponsors the confidence to invest in large scale execution, when business normalizes. This would give them first-mover advantage to capture new market segments. CXOs must set aside budget to set up Centers of Excellence for innovation (COEs) for long-term benefits.

- **Employee Engagement:** Employee wellbeing must be the first of CHRO priorities in a post-pandemic organizational environment. Below are a few engagement measures:

[4] https://ciso.economictimes.indiatimes.com/news/covid-19-cert-in-says-spurt-in-cyberattacks-on-personal-comps-since-work-from-home-protocol-began/74857200

[5] https://www.gartner.com/en/newsroom/press-releases/2019-10-21-gartner-identifies-the-top-10-strategic-technology-trends-for-2020

- Employee connect programs
- Virtual recreational team games, talent hunt
- Wellbeing sessions -Yoga/exercise/counselling
- Deploying self-service applications that can act like an emotional companion for employees
- Investing in employee reskilling / upskilling

- **REPURPOSE**

Repurposing has given a new lease of life to many organizations during this pandemic, countries have resorted to use of emerging tech repurposing (AI /ML, big data analytics) to combat the disease. Robots have been deployed to deliver meals and medicines to patients, facial recognition is adopted to identify use of masks, drone deliveries for essential supplies, surveillance cameras for contact tracing etc. A private German technology company, which originally developed ultra-wideband sensors to collect data for athletes, is now selling a product that it says can ensure social distancing and trace infections by using the same sensors[6]. Another sector that is seeing a sea change is education; Covid-19 has made us all think how to engage students in meaningful ways to give them the best learning experience outside the physical classroom. Cloud storage is being seen as storage mechanism for educational content to be made available on-demand. Many manufacturing firms have repurposed their production facilities to produce COVID-19 essentials e.g. converting automotive plant to produce ventilators, textiles factories for gloves, masks, pharma sector is repurposing drugs which they have developed during SARS to test COVID-19 vaccines. Repurposing however has a few downsides:

- Concerns over data privacy violation: This arises as contact tracing uses user location information tracked through GPS.
- Challenges shifting production facilities to introduce new segments: While some manufacturing companies are failing to meet required standards, there are legitimate concerns from incumbent firms that the call for repurposing will increase competition in an artificially overcrowded market space for a very small selection of products.[7]

[6] https://covid-19danger.com/coronavirus-tracing-for-workplaces-could-become-new-tech-opportunity/

[7] https://www.unido.org/news/covid-19-critical-supplies-manufacturing-repurposing-challenge

- Concerns about overproduction or waste in the future if too many new entrants appear: As this is going to be a short-term strategy, firms may need support from policymakers for the eventual transition to "normal" times.

- **REOPEN**

Reopen is a state of opening of the mind to a new beginning. Some of this can be with regards to physical reopening of offices, while others would be adopting newer ways of working that the organizations must take a look at. This would mean regular CAPEX investment to ensure employee workplace safety - use of contact tracing, frequent sanitization, social distancing and rearchitecting workplaces, a new term EBITDAC (Earnings before Interest tax depreciation amortization and COVID-19) is also gaining ground to account for COVID-19-related CAPEX spending.

Also, some of the innovative ways that organizations are exploring reopening include an example of an airline that is the first to test an innovative technology where contactless devices are installed before check-in. The device can monitor heart rate, body temperature and respiratory rate. As we discussed above customer engagement is going to be seen through a different lens now with a rise in the use of virtual assistants, chatbots and RPA.

Another important aspect that will help organizations in the reopening phase is adopting a location independent agile working model. This is not just as a project execution methodology, but also as a mindset shift that will give organizations a structured way of delivering value at work.

- **REAFFIRM**

This is the self-belief phase and essential to sail through troubled waters. The world has seen numerous crises but emerged stronger. The 1930 Great Depression, World Wars I and II, Y2K, and the 2008 sub-prime lending crisis are just examples of human resilience and perseverance, and a lesson for businesses to work on building resilience, adaptability and staying purpose-driven as they take on a new beginning.

About The Author

Tushar Thorat

Tushar Thorat is a Product Lead at TCS, Research and Innovation, Incubation. He has over 15 years of experience in designing and implementing solutions in the areas of Business Intelligence, Data Analytics, Enterprise Application Integration, Artificial Intelligence, Big Data, Innovation Management and Delivery Management. Tushar has architected and led large business transformation programs with proven success. Contextual knowledge about customer operational systems coupled with retail industry knowledge have given Tushar a competitive edge to deliver state-of-the-art solutions. He is a proponent of the 'Innovation First' approach, and has his own philosophy, 'CII (Challenge status quo-Ideate-Innovate)', towards innovation. He holds a Bachelor's degree in Electronics Engineering from the University of Mumbai, India, and has completed a senior management program from IIM Ahmedabad, India
https://www.linkedin.com/in/tushar-thorat-05106023/

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at **www.tcs.com**

Corporate Marketing | Design Services | M | 10 | 20