

The Financial World After COVID-19

A View from CIO's Lens

May 2020

Covid-19: Financial setback wrapped in a cloak of uncertainty

COVID-19 is likely to cost the world economy

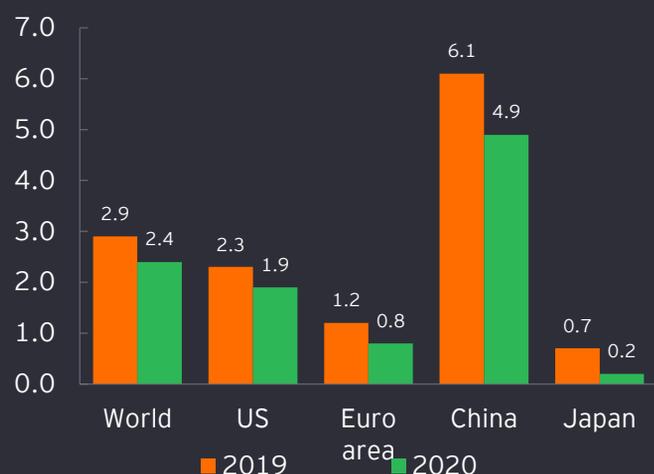
US\$1 trillion in 2020

Source: UNCTAD Report, 9 March 2020

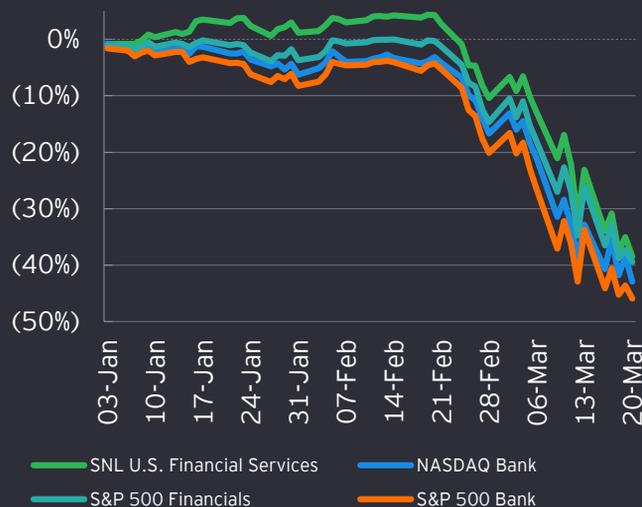
72% organizations believe the impact will be seen far beyond the next six months

Source: EY Human Capital Resilience Survey, 2020

Revising global growth forecasts



Stock Markets have been severely impacted



OECD downgraded its 2020 real GDP growth projections for almost all economies on back of anticipated economic slowdown

Source: OECD

- ▶ US Financial services indices have suffered material losses following the COVID-19 outbreak
- ▶ Market concerns about increased credit losses and funding squeeze are likely drivers

Source: Capital IQ; EY analysis

Challenges for Banking Sector

The banking sector is going to come under a lot of pressure on account of the following

- ▶ Address **liquidity challenges** and develop a response plan to return business to original levels
- ▶ Reassure stakeholders **to restore market confidence**
- ▶ Fundamentally **change the operating model** and prepare for sustainable growth
- ▶ Optimize **cash and costs** to withstand prolonged disruption due to lockdowns
- ▶ **Augment cash flows**
- ▶ **Streamline** structures, portfolio, footprint to enable least disruptions in future

Emerging Opportunities for Banks

Immediate - mid term focus

- ▶ Achieve lower and more **agile cost base**
- ▶ Increase **workforce flexibility**
- ▶ **Optimize and mitigate** geo-risk, enhance agility
- ▶ **Maximize** digital customer access
- ▶ **Enhance digitalization**, automation, back up with cyber security
- ▶ **Revisit capital** sources and allocation

Eventually with long term vision to

- ▶ **Re-imagine** relationships
- ▶ **Re-think** new business solutions
- ▶ **Apply** new balance to decision making
- ▶ **Fully** digital enterprise

Focus is to reduce overall operating expenses and increase margins

Average **50-100%** uptick

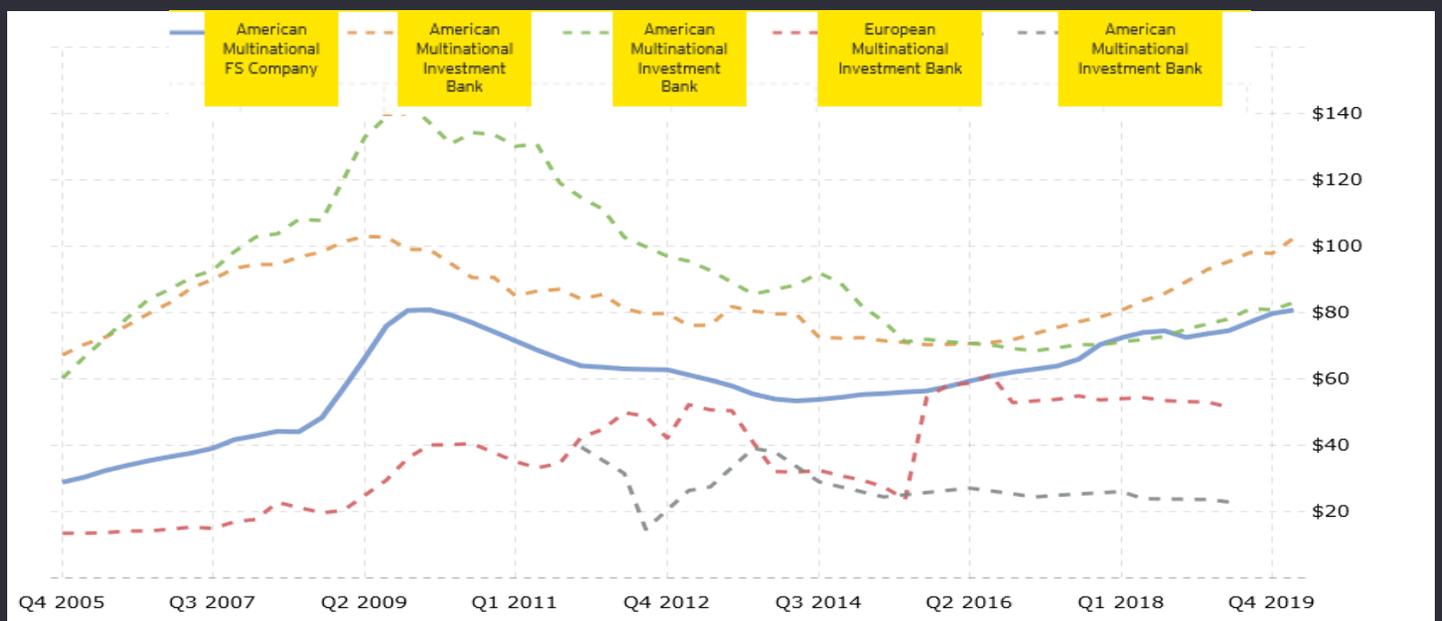
In operating expenses from their lowest levels over last decade

Operating margins stagnating at **c15-20%** range

Source : CIO Survey, Forbes

Banks were already under pressure for operating margins, which will aggravate post COVID. CIOs will have to implement strategies to reduce operating expenses and adopt variable cost strategies in a new world in the aftermath of COVID - 19.

Operating expenses



Operating margins



Financial Service CIO

Key Focus Now and Beyond



Run The Bank Cost Optimization

Strategically reduce RTB spend to free up valuable \$ for transformational CTB Initiatives



Change The Bank Cost Optimization

How to successfully and consistently implement CTB programmes to improve organizational effectiveness



Virtual and Digital Workforce

Enabling operations to work effectively remotely by leveraging digital technology



Run the bank cost optimization

Identify efficiency improvement areas to create budget for change in business needs

Key focus of any CIO will be cost optimization and technology adaption to support new virtual digital world. For reducing the operating expense, "Run the Bank" cost will have to be optimized while tech organizations align on the "Change" side to cater to the new evolved business / customer requirements.

01

Infrastructure Cost Optimization

Adapting modern tools to enable Financial Service CIO to optimize their spends and obtain cost synergy while scaling up for new digital demand

02

Application Portfolio Rationalization

Focus should be on Application Rationalization based on relevance and cost

03

IT Service Management Optimization

With workforce moving to remote work, digitization and zero-touch is required for ITSM

04

Cyber Security Enforcement and Optimization

While Operations and Infrastructure takes a leap towards digitization, CIO should not lose focus on safeguarding their Cyber space

Infrastructure cost optimization

Rationalize infrastructure and optimize utilization

15% Cloud Storage and Cloud Computing can reduce IT infrastructure and maintenance cost by ~15%

Source : EY Survey

Focus on rationalizing infrastructure while taking into consideration the growth, scalability and change in business demand



Infrastructure Rationalization

- ▶ Discover portfolio
- ▶ Optimize utilization
- ▶ Optimize based on usage and provisioning flexibility for scaling up
- ▶ Define Elasticity and transform scalable model of growing the platform whenever needed
- ▶ Adoption of Open Source platform



Productivity Improvement in Utilization and Management

- ▶ Visualize Benchmark
- ▶ Automation for maintenance
- ▶ Improved delivery Models: Continuous delivery including inspection, integration, management, provisioning, deployment, monitoring to be leveraged.



Leverage Site Reliability Engineering to ensure continuous uptime

- ▶ Load Balancing and Even distribution of Capacity
- ▶ API Gateway and DR model
- ▶ Blue / Green Deployments - Leveraging cloud platforms and DevSecOps pipelines to enable the tear down and replacement of production environments



Cloud On-boarding / Migration

- ▶ Assessment and Discovery
- ▶ Implement Roadmap based on evaluation, phase wise roll-out approach
- ▶ Evaluate 6-R principle of adoption and align roll-out based on the cloud model of choice
- ▶ Integrate SRE and CD Framework for controlled roll-outs



Self-Healing / Self Recovery

- ▶ AI / ML approach to identify incidents associated with applications of similar type and proactively address them without manual intervention
- ▶ Develop Smart Operations Modules for templated provisioning and KPI based recovery/ remediation of tools and platform assets

Key Considerations

Focus should be on Improving scalability, uptime, security while optimizing cost. Strong expertise in end to end program management with key governance and proven accelerators / expertise to be engaged. Self-sustained ROI to be leveraged for the optimization

Application portfolio rationalization

Relook at the application spread and business value

20%

In large complex global organization, 20% of the apps are sparingly used and therefore can be sunset

Source : EY Survey

10%

Rationalise projects for a large organization can reduce 10% of the overall project cost

Source : Oracle

30%

License optimization can save ~30% of the overall licencing cost for any large enterprise

Source : Gartner

Key focus of any CIO will be cost optimization and technology adaption to support new virtual digital world. For reducing the operating expense, "Run the Bank" cost will have to be optimized while tech organizations align on the "Change" side to cater to the new evolved business / customer requirements.

Each application needs to be assessed against the Business Value and Technical health.

Enables transformative insights

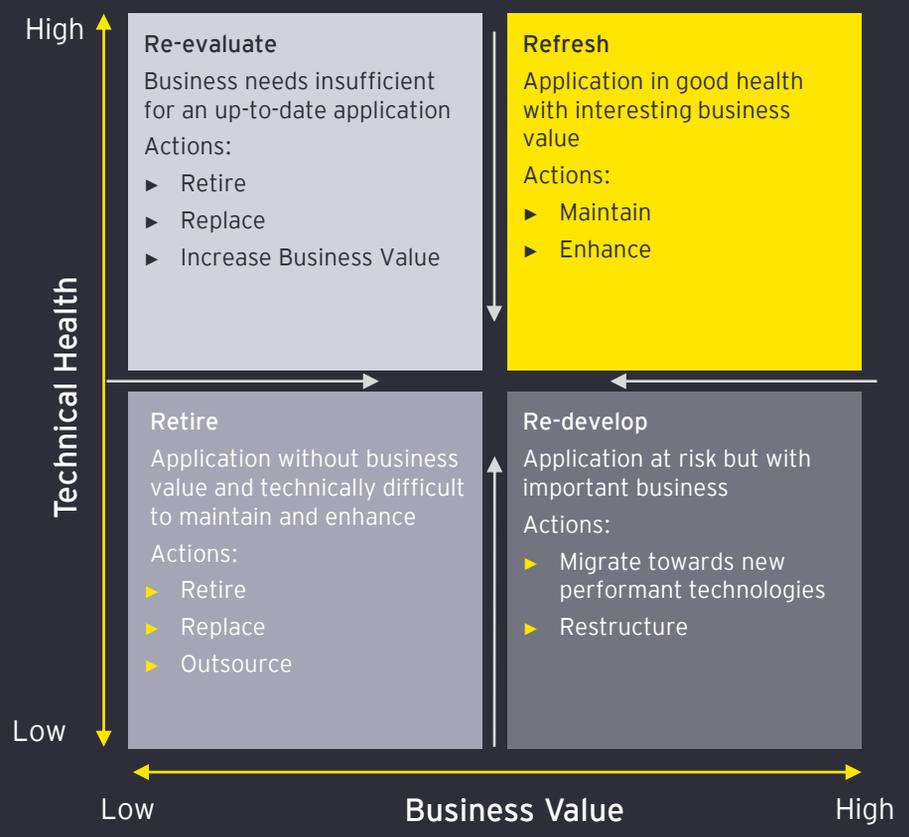
Business value can be derived using drivers

- ▶ Growth
- ▶ Change in Business Needs
- ▶ Operational Efficiency
- ▶ Regulatory Needs
- ▶ Technology Innovation
- ▶ services

Technical Health

Technical health is primarily assessed by

- ▶ Technical Debt,
- ▶ Support cost
- ▶ Lifecycle of the underlying stack
- ▶ Security.



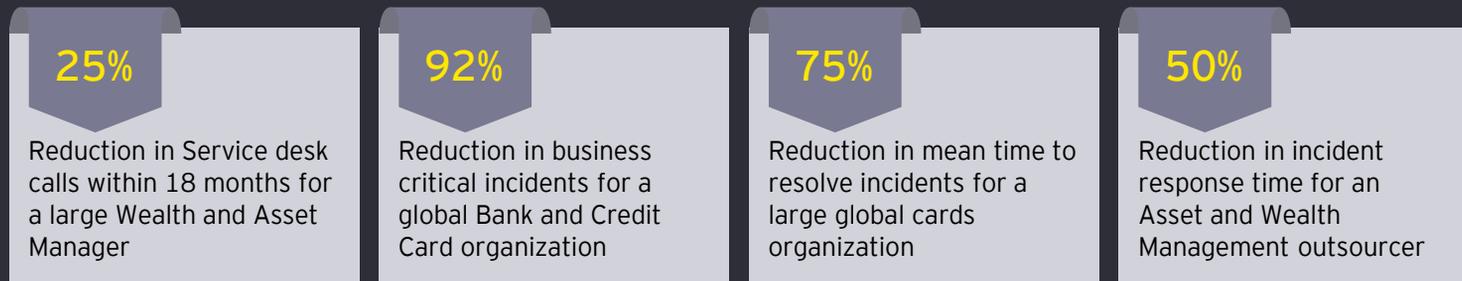
Key Considerations

Financial analysis is required to understand cost vs benefit post analysis on Business Value and Technical Health. Similar applications across organization need to be merged based on cost and ROI analysis

IT service management optimization

Digitize ITSM

Matured ITSM processes lead to demonstrable ROI



Source : Computerworld and Smart Enterprise Magazine

Key focus of any CIO will be cost optimization and technology adaption to support new virtual digital world. For reducing the operating expense, "Run the Bank" cost will have to be optimized while tech organizations align on the "Change" side to cater to the new evolved business / customer requirements.

Service desks and IT functions are dealing with unprecedented levels of demand to deliver and support services across the board. Post focusing on business continuity focus is now shifting on digitizing, human intensive service desks.

As organizations become more reliant on the cloud and loosely coupled integrations, SaaS and PaaS based tools provide scope for faster innovation with rapid implementation, low/no code configuration, seamless integration, elastic capacity, automatic upgrades, and increased business agility.

Key focus for ITSM

<p> Reduce Incident Management Cost</p> <ul style="list-style-type: none"> ▶ Reduce the number of incidents by leveraging predictive analysis and machine learning to identify incidents before they materialise. ▶ A number of auto heal technologies are being deployed to resolve the incidents if they materialise. 	<p> Optimize change management TAT</p> <ul style="list-style-type: none"> ▶ Reduce end to end change management duration by leveraging Agile and DevOps best practices and automation tools. ▶ Single click and zero downtime deployments are taking serious pace in the industry. 	<p> Optimize problem management</p> <ul style="list-style-type: none"> ▶ Increased automation to prioritise problems based on Root Cause Analysis outcomes. ▶ Triage problems based on their criticality to the digital business in current circumstances. ▶ Push for Self-Service thereby eliminating the need of raising tickets. 	<p> End to end automation</p> <ul style="list-style-type: none"> ▶ Achieve by integrating the ITSM and ITOM toolsets with Agile, DevOps and Ticketing tools and integrate it further with SRE (Site Reliability Engineering) and AI concepts.
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Cyber security enforcement and optimization

Secure digital footprint, secure attack surface

\$ 6 Trillion

Cybercrime damages costing the world by 2021

Source : Verizon

\$28 Billion

Worldwide Forecasted spend on Cybersecurity by Financial Services by 2022

Source : EY Survey

68%

Business Leaders acknowledge increasing risk

Source : EY Survey

Financial Services - Top Patterns of Threat

Web Applications, Privilege Misuse, and Miscellaneous Errors represent 72% of breaches

- ▶ Denial of Service and use of stolen credentials on banking applications remain common
- ▶ Compromised email accounts become evident once those attacked are filtered

Factors to Consider for Enhancing Cyber Security

 Cyber Risk Management	 Access Governance	 Cyber Resilience	 Advanced Cyber Testing
<ul style="list-style-type: none"> ▶ Identification ▶ Visualization of Impact ▶ Refine the underlying data scope ▶ Building up data-pools and optimized clean-up of raw data ▶ Leverage AI/ML space for predictive pattern generation and detection 	<ul style="list-style-type: none"> ▶ Building up right access drivers, Role Based access controls (RBACs) ▶ Defining lifecycle policies of all manual access, Validating authentications using token mechanisms ▶ Using Trail Audit processes to evaluate and derive insights on exposure areas 	<ul style="list-style-type: none"> ▶ Identify high profile outages ▶ Evaluate regulatory expectations ▶ Define business impact ▶ Trace threat vectors for DDoS etc. and define network policies ▶ Implement Fallback on-demand system models 	<ul style="list-style-type: none"> ▶ Evaluate simulated models of DDoS, WAF Threats ▶ Implement Self Recovery models to recover from any un-anticipated impact ▶ Design tiered response formats to combating unexpected traffic from unrealisable sources ▶ Trace back all request origins

Key Considerations

Financial analysis is required to understand cost vs benefit post analysis on Business Value and Technical Health. Similar applications across organization need to be merged based on cost and ROI analysis

Change the bank cost optimization

Aligning technology to support business demand in-line to customer needs in post COVID world



Technology spend on change the bank has to Re-align with “New Business Models” and “Change in Customer Needs and Dynamics” which are evolving in virtual world created post COVID

01

Agile Operations

Moving away from functional silos to product oriented structure and transform to be an integral business driver

02

DevOps Transformation

Integration between Development and Operations to accelerate software delivery to enable agile organization

03

Workforce Optimization

Devise an optimization model for the workforce by identifying areas of improvement across location and portfolio

04

Optimizing Technology Organization

Best technology output for every \$ spent along with high quality and enhanced customer experience

Agile transformation

Necessity to become truly agile as the entire business model and customer behaviour is changing

With change in customer requirements and evolving business needs, organization has to go through Agile transformation to fundamentally change the ways of working and drive a new operating model with Business, Operations and Technology working together (Virtually) as a single team resulting in key benefits such as decrease time-to-market, reduce spend and enhance Employee/Customer delight.

33%

Better Employee Engagement

75%

Decreased Time-to-Market

45%

Save in Budget spend

Source : EY Survey

Agile Transformation Guiding Principles



Capability

- ▶ Organizational structure
- ▶ Roles and responsibilities
- ▶ Leadership champion for agile



Technology and Automation

- ▶ Integrated tools to support end to end agile process
- ▶ Management of orchestrated deployments
- ▶ Build, deploy and test automation



Process and Policies

- ▶ Leading practices and standards
- ▶ Standardized, integrated processes and continuous improvement
- ▶ Adoption of agile principles



Performance Management

- ▶ Process metric for tracking progress
- ▶ Track sprint velocity
- ▶ Monitor and measure code quality



Governance

- ▶ Accountability and responsibility
- ▶ Common procedures, controls and business rules
- ▶ Release, change and defect management process



Training and Communication

- ▶ Skills required for agile processes
- ▶ Define and train agile principles
- ▶ Transparency in communication

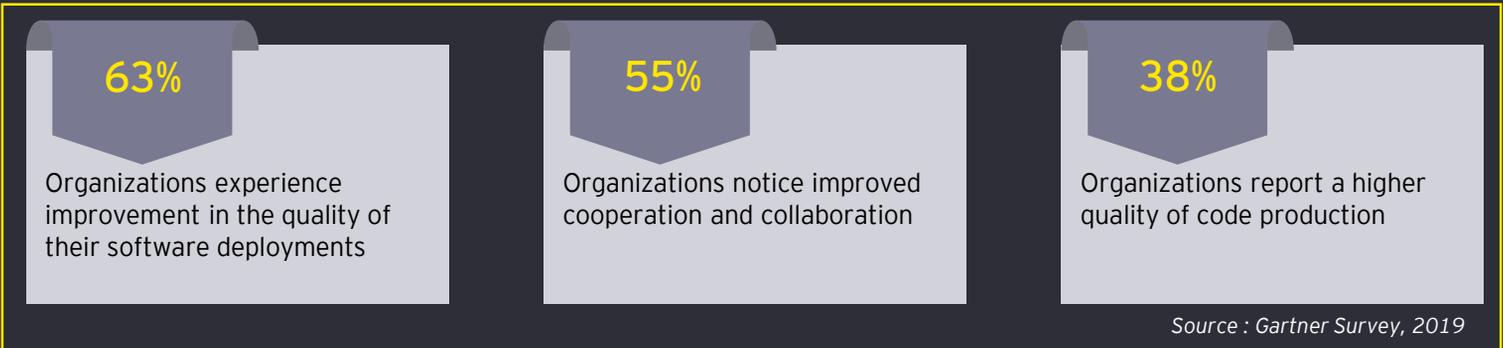
Key Considerations

Focus for large Financial Services is to respond to innovative disruptors with faster time-to-market by adopting agile with customer driven approach. Mid managers need to develop flexible global product ownership while changing the culture of the organization. Focus is now on virtual agile

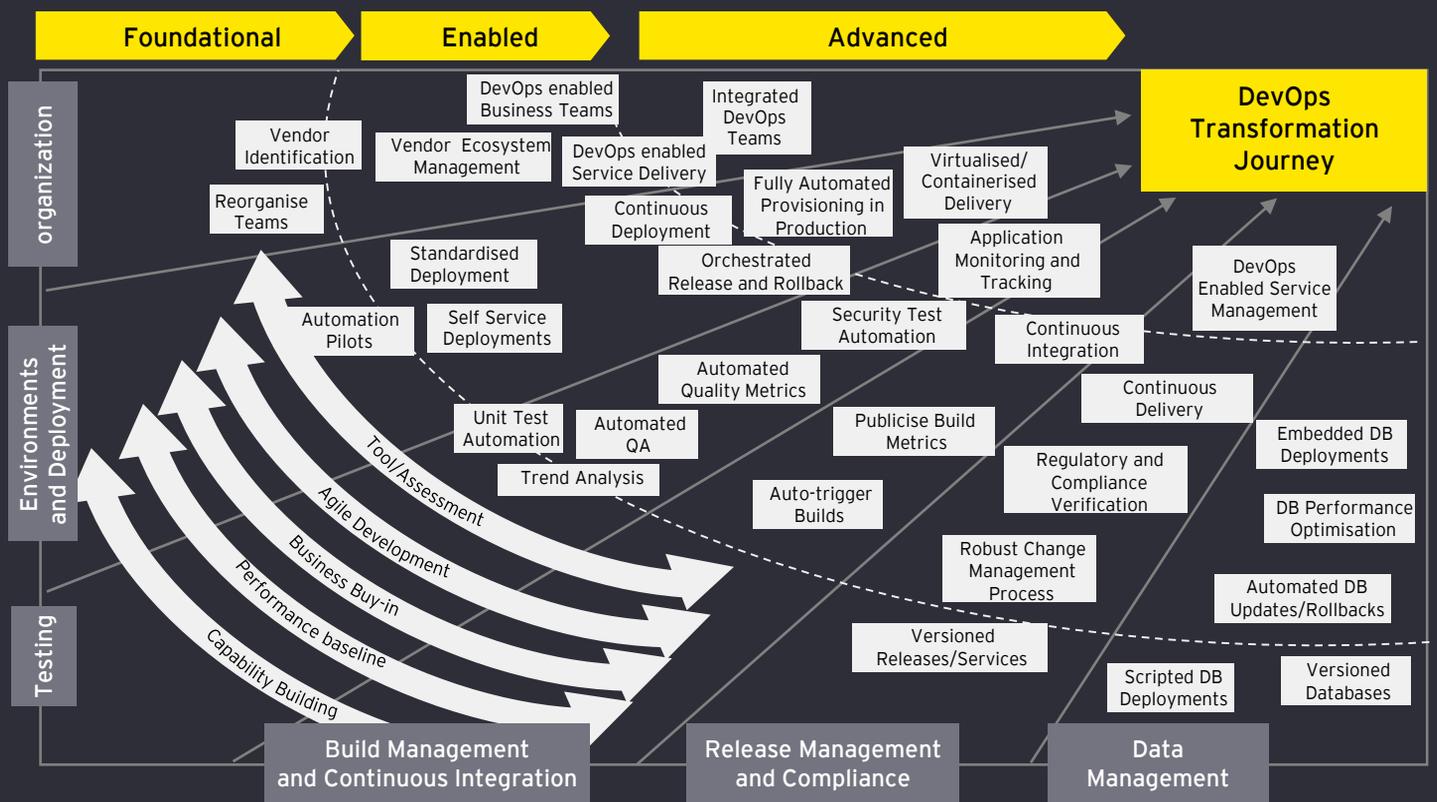
DevOps transformation

Technology delivery transformation to support Agile transformation

The DevOps journey impacts multiple parts of the organization that need to evolve and mature to deliver value. Continuous integration and continuous deployment pipeline has to be made - near real time to facilitate higher productivity and ensure that tech organizations are truly agile.



DevOps Transformation Guiding Principles



Key Considerations

As organizations put more emphasis on automation, it is imperative to adopt the right DevOps framework with Continuous Integration (CI) and the Continuous Deployment (CD), that provides the capability to rapidly develop, test, and deploy applications.

Workforce optimization

Time-Zone is the most significant factor in the new Digital world

The next waves of disruptive technology and post COVID world will create an enormous degree of labour displacement. Firms today will require far fewer people with very different capabilities, and will need to manage this transition of skills effectively. Movement to Gig Economy (freelancing/specialized short-term contracting) will also be an effective approach.

17%

Organizations experience improvement in the quality of their software deployments

40 - 50%

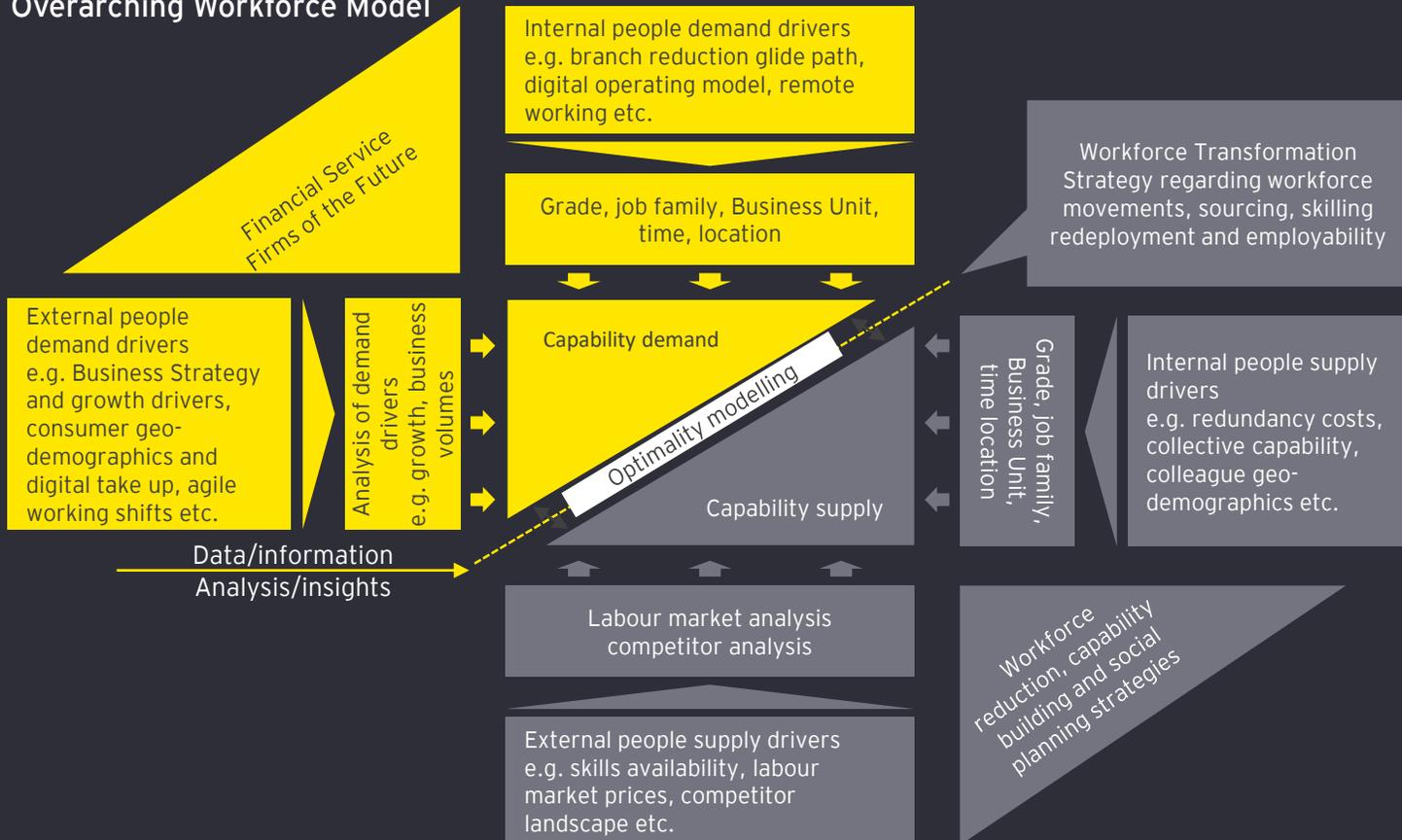
Organizations notice improved cooperation and collaboration

65%

Organizations report a higher quality of code production

Source : EY Survey

Overarching Workforce Model



Right Sourcing Strategy

Design the right sourcing strategy (outsource, co-source, insource) including the lens of productivity levers to derive quantifiable and measurable benefits

Workforce Strategy

Devise an optimization model for the workforce by identifying areas of improvement and thereafter, suitably positioning/ leveraging over-utilised, under-utilized resources

Resource and Location Strategy

Adapt an efficient "cost vs benefit" analysis for productivity measurement of the resources, assessment of suitability from On-Site/Off-Site model standpoint

Optimizing technology organization

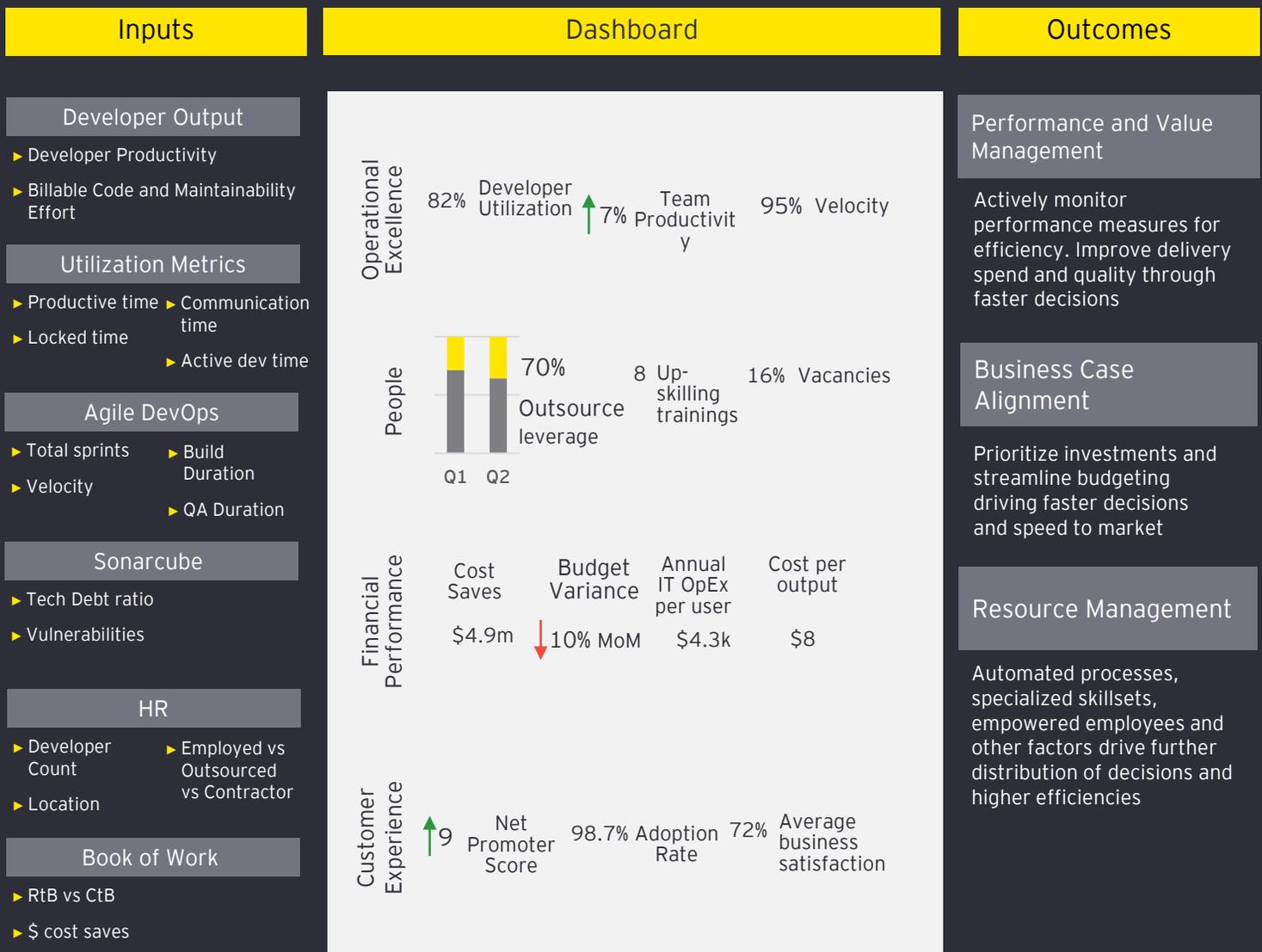
Metrics on cost, ROI and Output is a must for monitoring transformation

Optimizing Technology Organization: Integrated mechanism for measuring utilization and efficiency of technology development and corresponding impact on Finance, ROI and Operational Excellence is a key for cost optimization.

60% Of bank's application budget is spent in maintaining applications, and given the legacy banks also tend to higher Technical Debt Ratio.

Source : SEI Study - Carnegie Mellon

Collect inputs from multiple sources to build a holistic view at the function as well as a team level and customized across various stakeholder layers



Key Considerations

Focus should be to get a consolidated view on potential areas of improvement by identifying key metrics such as ROI, customer experience, 'Teams with Low Productivity', 'Projects with Quality Issues', 'Drop in Productivity'. It will further provide insights on actions which require least effort and help attain maximum gains.

Virtual and digital workforce

On the back-bone of technology with minimal human intervention

Remote work will be a persistent norm, and the organizational capabilities will need to shift to enable productivity within the new work model, while reducing operational cost and improving controls.

30%

of current banking work can be performed by Machines

75%

of millennials want the ability to work flexibly

60-70%

Workforce Need Upskilling

Source : EY Article - "The Future of Talent in Banking: Workforce Evolution in the Digital Era Bank Governance Leadership Network"



Hybrid Operating Models

Focus on front to back and horizontal integration. For example, while business lines can be integrated front to back, specific operational areas: such as Trade validations, Settlements , Reconciliations can be standardized horizontally.



Digitization

Documentation needs to be fully digitised by leveraging ICR/OCR advancements along with AI-ML to validate documents. This not only eliminates manual intervention but also enables faster processing.



Straight through Process

Internal impediments can be reduced by application modernization and integration through micro-services and APIs



Leverage technologies like NLP, AI and ML

Leveraging automation technologies can help in reducing manual interventions and can grow and help straight through processes over a period of time, with specific manual intervention when required.



Workflow Enablement

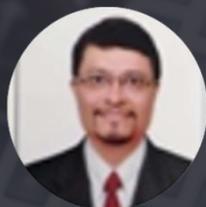
In current situation, where everyone is working from home, a system with predictive and insightful dashboards will allow everyone to track progress. Risk management frameworks and models can further be superimposed to help make risk based decisions by the leaders.

Should you have any additional questions,
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