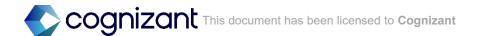




Future of Enterprise Quality

Reorienting Enterprise Quality to Deliver Business Assurance



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Executive summary

Enterprises are increasing technology investments with a view to transforming their traditional business models, which, in turn, is resulting in rising expectations from the enterprise quality function to realize the intended benefits, safeguard enterprises from potential risks, and contribute to organizational business objectives. Our recent survey with global IT leaders indicates that this evolving philosophy towards the role of the enterprise quality function is pushing enterprises to revisit and reorient the elements of their enterprise quality operating model.

Specifically, our findings show that:

- 84% of enterprises already have mature quality assurance practices across people, process, and technology elements
- However, only 7% have evolved to a future-ready business assurance model for their enterprise quality functions
- Enterprises that have successfully moved from quality assurance to business assurance have achieved 1.5X better strategic, business, and operational outcomes than other enterprises

As we examined the characteristics of these high-performing business assurance-oriented enterprises, we found that an effective quality model requires multiple components of the operating model to work cohesively. Enterprises that realized mature strategic, operational, and tactical benefits had complete clarity around objectives at the leadership level. The business and IT leaders in these enterprises displayed remarkably well-aligned thought processes and were focused on investing in quality as a strategic capability.

This mindset further trickles down to multiple elements, from organization structure, culture, and vision to technology, talent, and the partner ecosystem:

- 83% of the business assurance-oriented enterprises have adopted a hybrid quality operating model with a combination of centralized and decentralized elements
- These enterprises are 3X more mature in adopting new development practices such as SRE, a product-centric operating model, DevOps, and agile methodologies
- 67% of these enterprises plan to increase their enterprise quality budget by 10% or more in the coming 12 months
- 75% of the business assurance-oriented enterprises have increased their engagement with external stakeholders to meaningfully enhance their enterprise quality propositions and outcomes

In this report, we examine and identify:

- Perspectives and findings on how expectations from enterprise quality functions are evolving as digital transformation takes center stage
- The critical elements of the enterprise quality operating model
- Interventions and best practices that are required across multiple dimensions to move from quality assurance to business assurance



Our research uncovered the following key recommendations for enterprises to maximize benefits from quality investments.

- 1. Establish enterprise quality as a boardroom conversation
 - Enterprises that have successfully moved to a business assurance model are remarkably aligned on the issue of quality across business and IT leaders and are backed by strong executive sponsorship. They demonstrate consistent awareness of the business benefits of a strong quality function, as well as the potential downside of sub-optimal quality in their physical and digital estates.
- 2. Stimulate the role of centralized quality function to drive successful next-gen tech adoption A centralized quality function is well-positioned to drive the initiatives needed to build long-term reusable quality assets and identify best practices and approaches to benefit the broader organization. However, the centralized quality function needs to be paired with a decentralized approach for execution to ensure agility at scale. By establishing standards, seeding innovation, and acting as a quality custodian, the centralized quality function enables velocity at scale. Purely decentralized model often fails to scale beyond the initial momentum as they run into problems of technology proliferation, non-standard methodologies, talent constraints, and misaligned innovation efforts.
- 3. Measure enterprise quality function success based on its impact on business and product Enterprises that have successfully moved to a business assurance model emphasize business improvement metrics (such as user experience, business growth, and user satisfaction) and product success metrics (such as TCO, speed to market, and product quality) over functional metrics specific to development, operations, or tech assurance.
- 4. Revitalize your partnership ecosystem to include external organizations as your strategic extension

Top-performing enterprises have a more sophisticated approach to their partnership ecosystem and view partners as strategic enablers of innovation and thought leadership, taking them beyond efficiency imperatives. They proactively nurture and expand their ecosystem, funneling ideas from partners into implementation.

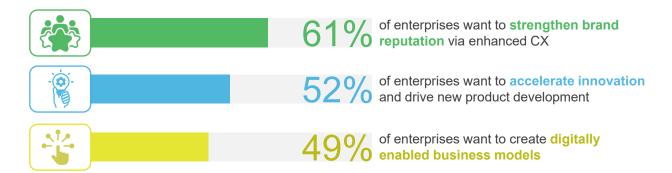
Evolving business priorities guiding enterprises' journeys

Enterprises prioritize their business transformation initiatives across three fundamental objectives: enhancing brand reputation and customer experience, driving scaled innovation, and digitally enabling new business model creation, as Exhibit 1 describes.

EXHIBIT 1

Top business priorities for enterprises

Source: Everest Group (2022)



Our research¹ shows that a focused enterprise quality function is considered a critical enabler of these objectives.

The exhibit below highlights business and IT leaders' top philosophies regarding their enterprise quality functions.

EXHIBIT 2

Enterprise leaders' philosophy regarding enterprise quality



1 Everest Group survey with 163 global enterprises

Newer technology adoption is driving intense quality challenges

As part of the process of digital scaling, we expect extensive investments in digitalization of products, servitization of offerings, and automation of processes. This will result in blurring of the boundaries between the physical and the digital.

Our research shows that 47% of enterprises intend to invest in emerging technologies to create more immersive systems, infuse software and intelligence as part of their core product offerings, and leverage innovative technologies to ensure business sustenance. Digital twins, Augmented Reality/Virtual Reality (AR/VR), Internet of Things (IoT), blockchain/distributed networks, and XaaS models are some of the key bets enterprises are placing for the future.

This phenomenon poses a unique challenge for the enterprise quality function as it needs to develop new capabilities for the phygital world. Exhibit 3 illustrates the key technologies that will be adopted in the next 12 to 18 months and their key challenges.



With digital becoming the core of our business, we had to invest in building a software quality team from scratch to complement the mechanical side of our business and ensure product success.

 Global Director – Quality and New Programs, UK-based electric automotive manufacturer

EXHIBIT 3

Key technologies to be adopted in near future and their corresponding enterprise challenges Source: Everest Group (2022)

Tech to be adopted (next 12-18 months)	Corresponding enterprise quality challenges (% of enterprises)
Digital twins	56% Challenges associated with physical-digital convergence
Industry of things / Industry 4.0	52% Threat of external cyber attacks
XaaS solutions	52% Delivering consistent CX via new digital channels
Augmented reality / virtual reality	44% High quality workforce availability
Distributed ledger / blockchain	42% Organization-wide standardization of tech adoption process



Quality for us is insurance, even beyond assurance; we are investing in quality now to avoid future issues.

 Global Director – Quality and New Programs, UK-based electric automotive manufacturer

The exhibit below lists the potential impact of software failure and provides examples of software failures across various enterprises.

EXHIBIT 4



Examples

T Mobile

T-Mobile data breach impacting 50 million customers' data

CHASE 🗘

Technical issues resulted in many account holders seeing incorrect balances

TESLA

Tesla recalling 12,000 vehicles after a glitch in self-driving software

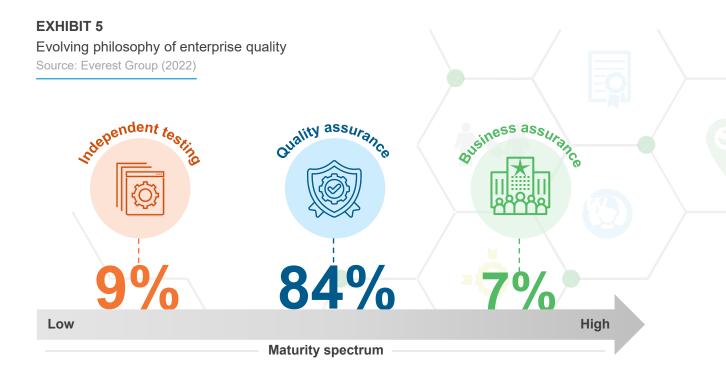


Nest

A software update for Google Nest thermostat went wrong impacting many customers' comfort

Business assurance: the next frontier for enterprise quality

The expectations and responsibilities of the enterprise quality function have continued to evolve with the changing business ecosystem and risk profiles. What started with independent testing as a responsibility for enterprise quality function progressed to quality assurance in recent years, and it continues to change – the evolving business environment requires the enterprise quality function to assume a broader business assurance role going forward. Exhibit 5 shows the evolution of the enterprise philosophy toward quality and the percentage of enterprises that align with that philosophy.



Business assurance is a discipline that drives positive business outcomes by orchestrating quality as a key objective across the enterprise value chain. Moving to a business assurance model entails radical changes in enterprise quality's operating model such as organization structure, governance, execution methodologies, and talent profile.

EXHIBIT 6

Evolving role and operating principles of the enterprise quality function Source: Everest Group (2022)

The following exhibit explains the operating principles of enterprise quality function as it evolves from independent testing to quality assurance to business assurance.

	Independent testing	Quality assurance	Business assurance
Objective	Standalone monolithic testing approach	Integrated application assurance approach that adopts the shift-left principle	Assuring business brand value
Scope of work	Test applications for functional and non-functional accuracy	Broad focus on functional and non-functional aspects of applications	End-to-end orchestration of quality across the integrated phygital landscape
Organization structure ুট্ট	Centralized quality function	Quality resources aligned to projects and product teams	Hybrid structure with central quality team driving best practices and product-aligned quality resources driving quality mindset
Methodologies and technology adopted	Dominated by manual testing with minimal automation	Testing executed in an agile/DevOps environment Leverages Al/cognitive capabilities for intelligent testing	 Continuous assurance in an agile/DevOps environment Al/cognitive at the core of decision-making and intelligent testing Extreme automation to drive execution speed in the Continuous Delivery / Continuous Integration (CI/CD) model Efficient and scaled validation and verification processes for phygital products Emphasis on testing and certification to meet customer and regulatory expectations
Governance metrics	Efficiency-centric metrics at the quality function level	Effectiveness metrics at the application level	Impact metrics at the business level
Talent profile	Dedicated manual testers with limited development skills	Integrated Dev + Test teams	Full stack quality engineers and SDETs working within product teams

We clearly understand that if we continue to use the old paradigm of quality, there will be a massive mismatch between expectations and outcomes.

- Executive Director, US-based multinational investment bank

EXHIBIT 7

Reorientation of enterprise quality function drives breakthrough business benefits

While the mindset around quality is evolving, most enterprises are still at an interim stage of quality function maturity (quality assurance). Only 7% of the enterprises that we surveyed have evolved to a business assurance model; however, for those organizations, this progression has resulted in meaningful benefits and impact across three key dimensions: strategic, operational, and business outcomes.

Enterprises focused on business assurance have achieved 1.5X better strategic, business, and operational outcomes than other enterprises.

In Exhibit 7, we explore the differences in the outcomes realized by business assurance-oriented enterprises and other enterprises.

Comparison of overall outcomes: business assurance-oriented enterprises versus other enterprises Source: Everest Group (2022) Business assurance-oriented enterprises Other enterprises No impact Significant impact · Increasing business sustainability **Strategic** • Enhancing customer experience outcomes Strengthening brand reputation · Accelerating the enterprise-wide innovation agenda · Strengthening regulatory stance Operational Increasing business resiliency outcomes Ensuring uninterrupted business operations and functionality Accelerating time to market **Tactical** Enhancing employee productivity outcomes Reducing defects

Business assurance-oriented enterprises have realized 1.6X the productivity output of other enterprises.

The capability octagon: enterprise quality success elements

A thorough analysis of enterprise investments in the quality function reveals an interesting pattern of capability interventions that are critical to achieving these desired outcomes. These interventions span across the strategy and solution tenets impacting the operating model, objectives, and mindset of the enterprise quality function.

Strategy interventions are the changes to the enterprise quality function's overarching objectives in line with business objectives. Making this change requires the organization to revisit the vision for enterprise quality function, economics, and funding approach, design a conducive organizational structure, and identify relevant metrics to measure and govern the outcomes.

Solution interventions are the internal changes in operating principles such as technology levers, associated investments in talent, sourcing and partner ecosystem, and a robust approach to drive innovation.

Our analysis of enterprises across these strategy and solution tenets indicates a meaningful maturity gap in enterprises focused on business assurance versus others. Some interesting observations from the capability octagon include:

- Business assurance-oriented enterprises demonstrate genuine strategic clarity
 Most enterprises seem to be holding on to their traditional operating principles while also trying
 to maneuver to the new way, which is diffusing their benefits. However, enterprises that pivoted
 to a business assurance approach have demonstrated absolute clarity on their desired future
 state and the roadmap to achieve it.
- The need for interventions in the enterprise quality function is widely acknowledged, but only business assurance-oriented enterprises are acting on it
 All enterprises seem to realize the importance of undertaking these capability interventions, and many have made meaningful investments across all dimensions of the capability octagon.
 However, the volume of focus and resulting investments to these capability metrics is higher across all dimensions for business assurance-oriented enterprises.
- Business assurance-oriented enterprises have a strong alignment between their IT and business functions

Our research shows a very strong alignment between the business and IT teams in business assurance-oriented organizations, with a shared vision, success metrics, and team constructs, which—in turn—enables business assurance-oriented enterprises to realize significantly better outcomes than other enterprises.

Exhibit 8 shows the comparison between business assurance-oriented enterprises and others along eight key capabilities.

Our analysis of enterprises across strategy and solution intervention tenets indicates a meaningful maturity gap in enterprises focused on business assurance versus others.

12

EXHIBIT 8

Capabilities comparison of business assurance-oriented enterprises versus other enterprises Source: Everest Group (2022)

The following sections elaborate on key differentiating tenets that result in higher-than-average outcomes for leading enterprises.



Business assurance-oriented enterprises critically differentiate themselves from other enterprises with their approach to leveraging organization structure, innovation & continuous improvement, economics, and sourcing & ecosystem tenets.

1. Organization structure - reorganizing with quality as a mindset

Business assurance-oriented enterprises understand the value of a synergistic organization-wide technology strategy to support their digital transformation journeys. These enterprises are clear on their visions and are not hesitant to rally their resources to meet their goals.

When it comes to enterprise-level quality planning, these enterprises are largely focused on forward-looking parameters such as evolving market expectations, looking beyond internal business strategies and digital investments.

EXHIBIT 9

Enterprise quality planning parameters considered by business assurance-oriented organizations Source: Everest Group (2022)



Nearly 85% of the business assurance-oriented enterprises have a hybrid quality model: the quality function is centralized and plays a prominent role, while responsibility for specific aspects of quality remains at the functional level. The centralized quality function's role is to undertake initiatives to build long-term reusable assets and capabilities and identify best practices and approaches. The distributed quality function aligned to product teams is the custodian of quality at the product level and drives the quality mindset within the team.

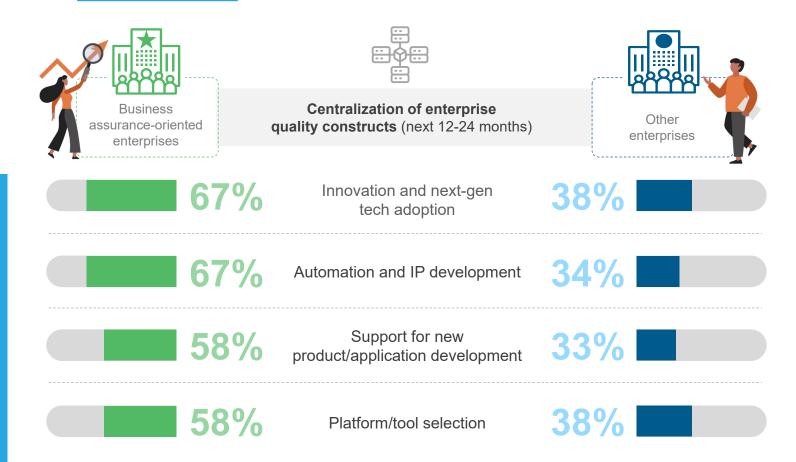


As an organization, we want to be faster and stronger, and in that, the role of the centralized QA chapter is very important; it is the connecting link between the various squad teams to enable coordination and collaboration.

- Head of Testing, leading European telecom service provider

EXHIBIT 10

Centralization of enterprise quality in business assurance-oriented enterprises versus others Source: Everest Group (2022)



We have established a hybrid structure for our quality function. There is a centralized enterprise quality center of excellence, and at the same time, we have quality engineers embedded with every product team. It has helped us in enabling economies of scale, faster time to value realization, and stronger alignment with business objectives, and at the same time ensured more agility and autonomy at the product level.

 Service Owner EMEA, US-based multinational healthcare and life sciences company

2. Innovation and continuous improvement – from fail fast to succeed faster

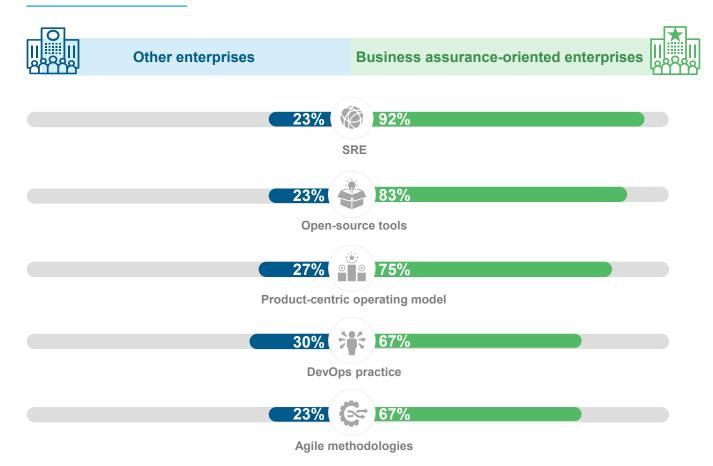
The culture of continuous improvement is deeply ingrained in the working philosophy of business assurance-oriented enterprises. The innovation charter is driven both at a central IT level as well as at the individual product teams. Over 70% of these enterprises work in a product-centric agile/DevOps setup. They extensively leverage open-source tools and practice Site Reliability Engineering (SRE) to ship reliable products.

This positioning is strikingly different from other enterprises. Although many enterprises use an agile/DevOps setup for their projects and leverage open-source tools, they do not follow these practices as rigorously as the business assurance-oriented enterprises do.

The following exhibit shows the proportion of enterprises that rigorously practice quality-related working models.

EXHIBIT 11

Quality-related practices in business assurance-oriented enterprises versus other enterprises Source: Everest Group (2022)



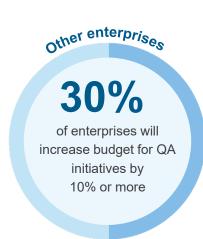
3. Economics – investing for enterprise quality transformation

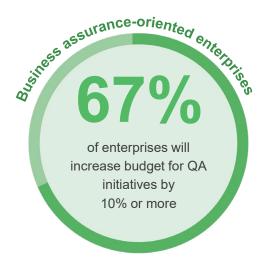
Business assurance-oriented enterprises invest disproportionately more than their peers to ramp up their enterprise quality capabilities. On average, they intend to invest 2.2X more in this area than other enterprises, as indicated in Exhibit 12. The scale of investments is driven by the need to support new digital initiatives, strengthen their enterprise quality talent pool, and improve their security and compliance postures.

EXHIBIT 12

Planned budget increase for enterprise quality initiatives among business assurance-oriented enterprises versus others

Source: Everest Group (2022)

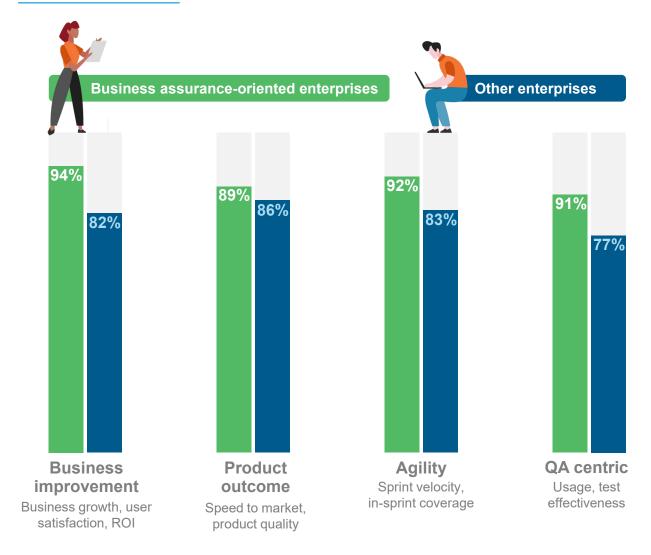




While business assurance-oriented enterprises invest disproportionately in quality, they are equally keen to measure the impact of those investments. These enterprises have crafted robust success measurement models that track metrics across multiple dimensions such as business improvement, product outcomes, agility, and enterprise quality. Business assurance-oriented enterprises leverage these metrics to fine-tune their operations and investments in accordance with their overarching business goals. Exhibit 13 shows enterprise quality investment success measurement metrics for business assurance-oriented enterprises versus other enterprises.

While business assurance-oriented enterprises invest disproportionately in quality, they are equally keen on measuring impact of those investments using metrics across multiple dimensions such as business improvement, product outcome, agility, and enterprise quality.

EXHIBIT 13Enterprise quality investment success measurement metrics
Source: Everest Group (2022)



4. Ecosystem partners: the secret to creating differentiating strength

Across the board, surveyed enterprises acknowledged the need for a strong partner ecosystem. Three quarters of the business assurance-oriented enterprises and 62% of the other enterprises have increased their engagement with external stakeholders.

However, the nature of engagement with the ecosystem varies significantly between the two segments. Business assurance-oriented enterprises seek more transformational value from their partner ecosystems and see them as sources of innovation, thought leadership, and access channels to the latest tools and technologies beyond cost efficiency imperatives.

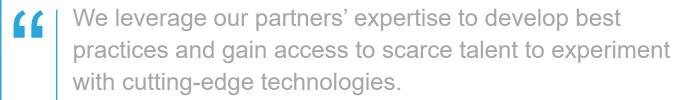
The following exhibit illustrates the drivers of external engagement for the business assuranceoriented enterprises.

EXHIBIT 14

Drivers of external engagement for business assurance-oriented enterprises

Source: Everest Group (2022)





Head of Technology – QA, Australian retail company

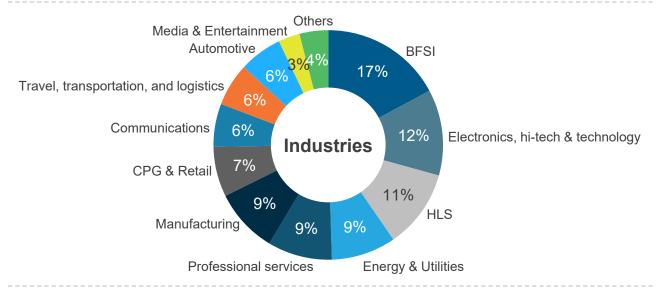
Conclusion

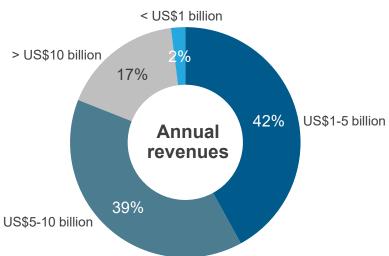
In an environment in which every business is a digital business, organizations need to evolve from quality assurance to business assurance. This transformation involves significant change across both the strategy and solution elements of the quality operating model cutting across organization design, tools and techniques, governance, and funding models.

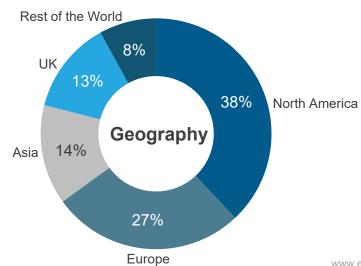
However, the rewards are disproportionate – our research suggests that enterprises that have successfully embraced the business assurance model generate 1.5X more benefits than organizations that do not. Notably, business assurance is not a defined end point, but a fundamentally different way of "doing" quality. In that sense, it is an ongoing journey that all enterprises will need to undertake – and it will necessarily start with a shared vision of digital transformation between IT and business. Beyond product and brand outcomes, business assurance needs to be viewed as the discipline that safeguards and stewards this vision of digital transformation.

Appendix

The information in this report is based in part on a survey conducted with 163 enterprises in March 2022 See the graphics below for demographic details.









Everest Group is a research firm focused on strategic IT, business services, engineering services, and sourcing. Our research also covers the technologies that power those processes and functions and the related talent trends and strategies. Our clients include leading global companies, service and technology providers, and investors. Clients use our services to guide their journeys to maximize operational and financial performance, transform experiences, and realize high-impact business outcomes. Details and in-depth content are available at **www.everestgrp.com**.

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