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Implement AI Quality Assurance To Validate Outputs And Improve User Trust

Why Implementing AI Quality Assurance Is Essential For Improving Model Security, Performance, Reliability, Accuracy, And Ethical Compliance

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FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY COGNIZANT AND MICROSOFT
JANUARY 2026

Quality Assurance Is Essential For Any Company Leveraging AI

According to Forrester's recent State Of AI Survey, trust in AI systems is among the top barriers to AI adoption across organizations, yet many currently lack robust AI quality assurance strategies to help validate outputs and improve user trust.[1] In this paper, we define AI quality assurance as the initial assessment and continuous monitoring and evaluation of AI systems to ensure their security, performance, reliability, accuracy, and ethical compliance.

Cognizant and Microsoft commissioned Forrester Consulting to conduct a survey of 173 AI strategy development and implementation decision-makers to evaluate how organizations are assuring the quality of their AI systems.

Key Findings

Most organizations lack essential AI quality assurance capabilities and depend on manual processes throughout AI development lifecycles. The inability to assure AI quality drives end-user skepticism and output distrust.

Despite the connection between AI quality assurance and user trust improvement, limited governance, model explainability, skill gaps, and deployment pressures make improving AI quality difficult.

Organizations must dedicate more resources to improving AI testability and traceability. More effective quality assurance helps build trust in AI outputs and maximizes business value.

Quality Assurance Is Increasingly Important For Current — And Future — AI Priorities

As AI adoption continues to expand, organizations remain focused on several foundational AI priorities, such as improving AI use for decision-making, strengthening data management, and refining the ROI case for AI.

Quality assurance is not only critical as AI adoption progresses and organizations scale more complex use cases across the enterprise but it can also help support foundational AI priorities. Robust quality assurance enhances trust in AI systems for decision-making and strengthens ROI cases by ensuring security, performance, reliability, accuracy, and ethical compliance.

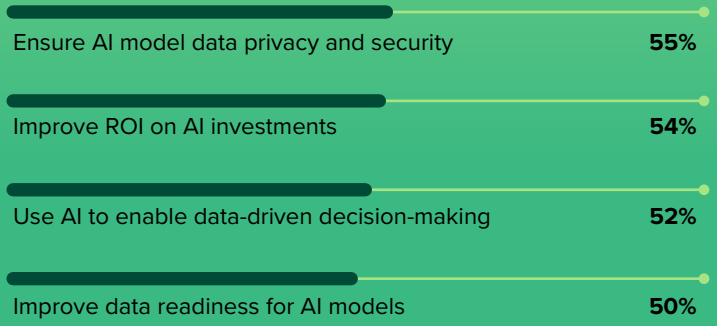
Importance Of Quality Assurance As AI Adoption Proliferates

(Showing “Agree” and “Strongly agree”)

79%

Quality assurance is becoming more important for my organization as AI adoption progresses

Top AI Quality Assurance Priorities*



*Note: Showing top four priorities
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester’s Q4 2025 AI Assurance Survey [E-65954]

The Majority Of Organizations Lack Critical AI Quality Assurance Capabilities

Despite growing recognition of the importance of AI quality assurance, most organizations do not have the necessary capabilities to fully assure the security, performance, reliability, accuracy, and ethical compliance of their AI systems.

While current efforts focus on foundational quality assurance practices, such as validating AI data security, data inputs, and system performance, most organizations lack more advanced safeguards for their AI systems. Fewer than half of surveyed decision-makers reported their organizations have capabilities to address critical AI-related risks like model bias, system misuse, model drift, model realism, and emergent AI system malfunctions.

This gap underscores the need for more holistic approaches to AI quality assurance that extend beyond foundational data, security, and performance checks.

How Organizations Assure AI System Quality Today

Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

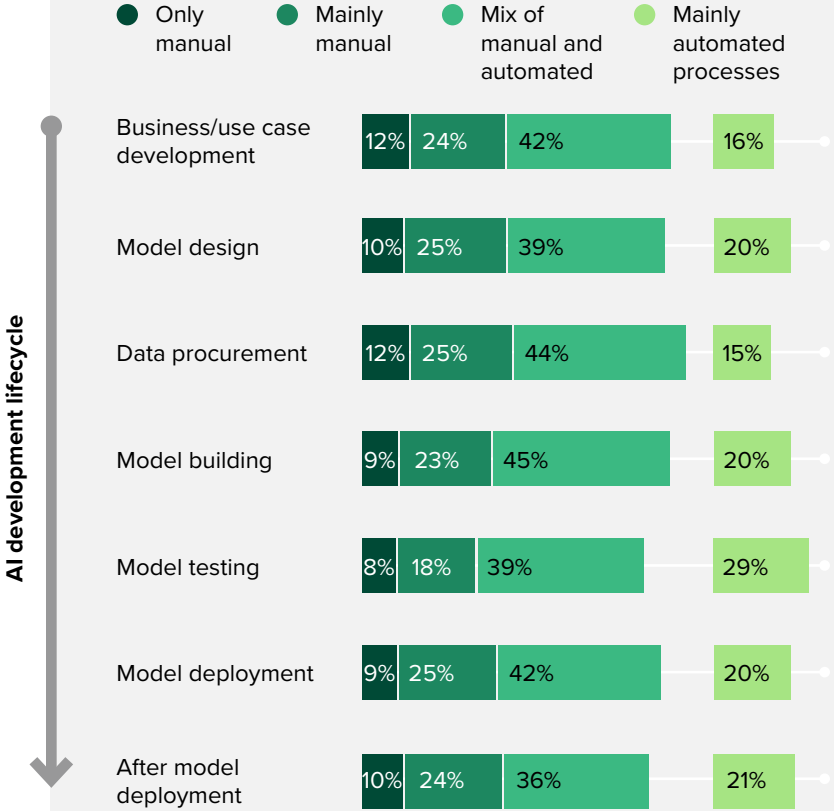
Most Organizations Rely Heavily On Manual AI Quality Assurance Processes

Many organizations not only lack the necessary capabilities for holistic AI quality assurance strategies but also have not implemented automated, standardized, and repeatable processes for the capabilities they do have.

Across AI development lifecycles, quality assurance remains a highly manual process. Fewer than one-third of decision-makers reported their organization relies primarily on automated quality assurance processes at any AI development stage.

As AI adoption accelerates with increasingly advanced use cases, manual quality assurance approaches are becoming unsustainable. Scaling these methods is costly and resource-intensive and exposes organizations to significant risks from inconsistent and unverifiable processes.

Level Of AI Quality Assurance Automation



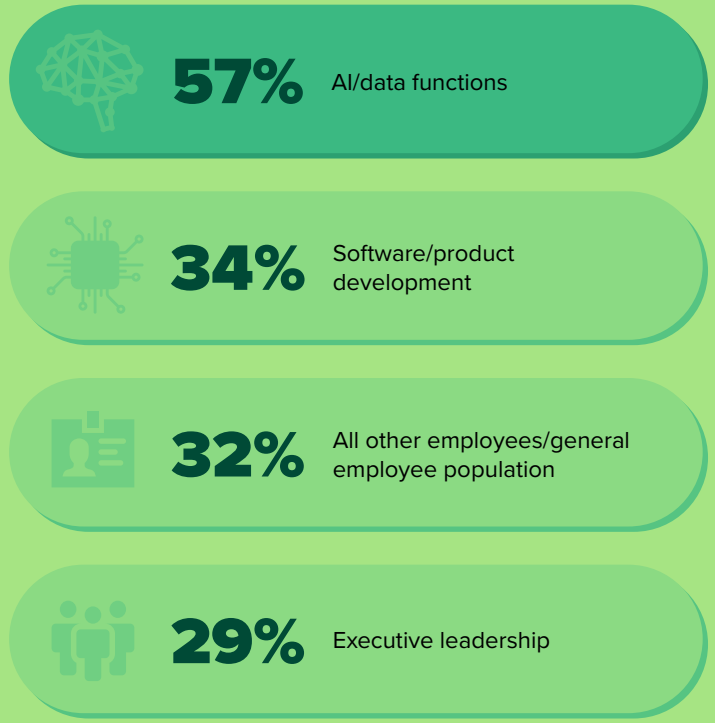
Note: Not showing "Does not perform AI quality assurance"
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

There Is An AI Output Trust Gap Between AI/ Data Functions And End Users

Although most technology professionals developing AI use cases reported high levels of trust in AI outputs, end users exhibited substantial trust gaps and skepticism. While 57% of AI and data teams expressed full trust in AI outputs, only 34% of software and product development teams, 32% of the broader employee population, and 29% of executive leadership shared this level of confidence.

This gap reveals a critical blind spot for technology professionals developing AI use cases: Quality flaws often remain invisible without the domain expertise and day-to-day system familiarity of end users. To address this, organizations need systematic, automated quality assurance processes that build user trust in AI outputs by validating what users actually experience and not just whether technical requirements are met. In fact, 68% of decision-makers cited a significant or critical need to improve AI trustworthiness.

Trust In AI Outputs



Note: Showing combined responses 9 and 10 on a scale of 1 to 10, where 10 is "Full trust in AI tool outputs"
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

Despite A Clear Link Between Quality Assurance And AI Trust, Execution Hurdles Remain

Most organizations recognize the impact that improving AI quality assurance can have on trust — 79% of decision-makers indicated that their organization sees a direct link between AI quality assurance maturity and user trust in AI.

However, despite this recognition, organizations struggle to stand up robust AI quality assurance strategies. Their most significant challenges include a lack of organizationwide governance, model explainability, technical expertise, and pressure for rapid deployment of new capabilities, which limits the time, workloads, and budgets they can dedicate to AI assurance.

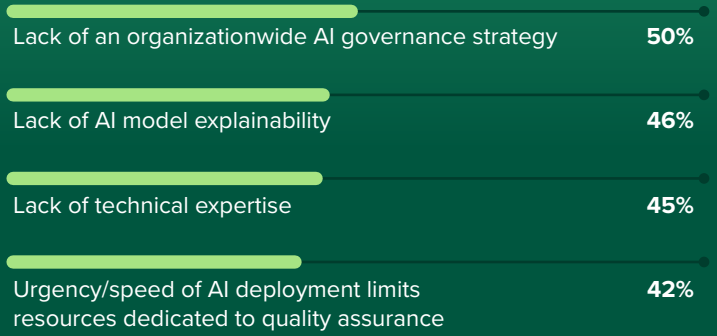
Impact Of Quality Assurance Maturity On AI User Trust

(Showing “Agree” and “Strongly agree”)

79%

My organization sees a direct link between its quality assurance maturity and user trust in AI

Most Significant AI Quality Assurance Challenges*



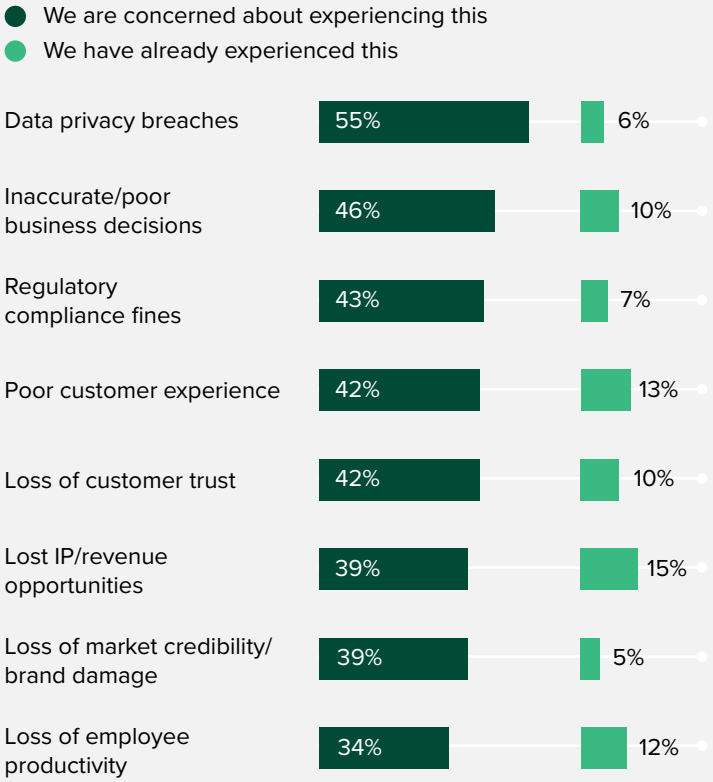
*Note: Showing top four challenges
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester’s Q4 2025 AI Assurance Survey [E-65954]

Poor AI Quality Assurance Can Lead To Negative Business Outcomes If Unaddressed

Failing to address challenges in implementing robust AI quality assurance — covering model security, performance, reliability, accuracy, and ethical compliance — exposes organizations to significant business risks.

More than half of surveyed decision-makers reported their organizations are concerned about data privacy breaches, while more than 40% worry about poor decisions, compliance fines, customer experience issues, and loss of trust. Alarmingly, 15% have already lost IP or revenue, 13% have faced poor customer experiences, 12% have lost employee productivity, and 10% have suffered inaccurate decisions and trust erosion. These concerns highlight the serious consequences of not addressing quality risks.

Implications/Concerns About Inadequate AI Quality Assurance



Note: Showing top eight concerns
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

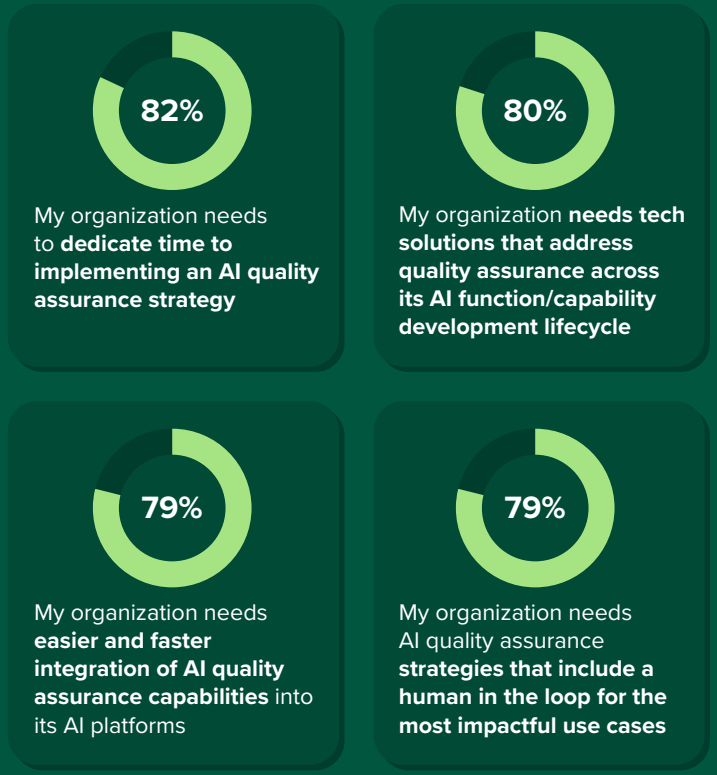
Organizations Need To Allocate More Resources Toward Improving AI Testability And Traceability

Organizations face increasing challenges in establishing robust AI quality assurance strategies, and there are growing risks associated with failing to make improvements. It's increasingly important for them to allocate more resources toward solutions that can drive quality assurance improvements in modeling testability and transparency — 64% of decision-makers indicated they need to improve testability and 60% need to improve traceability.

Executing on this requires more time dedication, tech solutions that address assurance across AI development lifecycles, easier and faster integration of assurance capabilities, human in the loop oversight, and solutions that can directly help with deteriorating defect leakage metrics in AI systems.

AI Quality Assurance Changes Needed

(Showing "Agree" and "Strongly agree")



Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

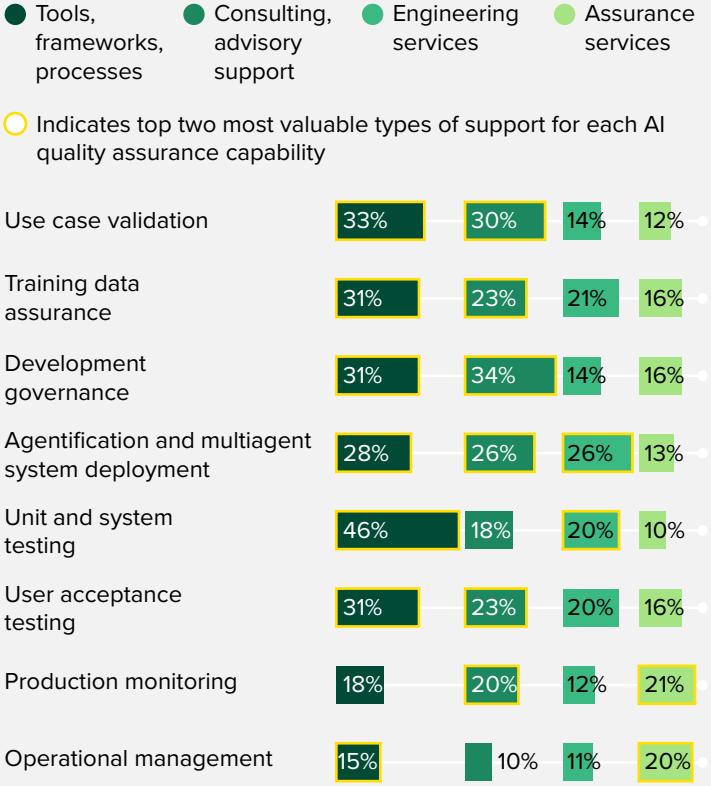
Partners Can Help With AI Quality Assurance Execution Hurdles

To strengthen AI quality assurance capabilities, organizations need a diverse range of partner support. This includes providers of AI quality assurance tools, frameworks, and processes, as well as partners offering consulting and advisory services, engineering expertise, assurance functions, and operational management and monitoring.

More than half of decision-makers in Forrester's State of AI Survey reported relying on external partners to teach AI skills to nontechnical employees, and 37% plan to supplement AI talent with contractors or service providers.[2]

As AI initiatives scale, enterprises increasingly require partners with broad, end-to-end capabilities to help implement and manage quality assurance across entire AI development lifecycles.

Most Valuable Types Of Partner Support Across AI Assurance Capabilities



Note: Not showing "Don't know/does not apply"
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

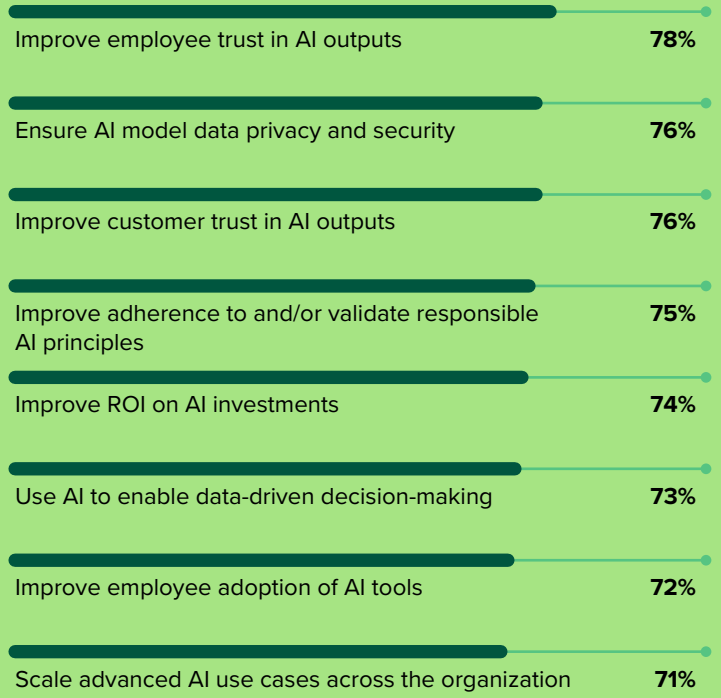
More Effective Quality Assurance Improves User Trust And AI Investment Business Value

Organizations that invest more time, resources, and funding into strengthening their AI quality assurance processes can unlock substantial benefits. Beyond improving security, performance, reliability, accuracy, and ethical compliance of AI systems, these efforts deliver measurable business impact by enhancing user trust and AI's overall business value.

At least three-quarters of surveyed decision-makers reported that their organizations would experience a significant or transformative impact on user trust, AI model and data privacy, and responsible AI principle validation. Additionally, more than 70% anticipated ROI improvements and enhanced AI use for decision-making.

Benefits Of Improving AI Quality Assurance Effectiveness

(Showing "Significant impact" and "Transformational impact")



Note: Showing top eight options
Base: 173 director and above AI strategy development and implementation decision-makers in the US and the UK
Source: Forrester's Q4 2025 AI Assurance Survey [E-65954]

Conclusion

A significant opportunity exists to leverage quality assurance to improve AI security, performance, reliability, accuracy, and ethical compliance, and in turn, provide value to the business. To realize this potential, our research yielded several important conclusions:

- **AI quality assurance extends beyond model testing.** Effectively ensuring AI quality begins during business and use case development and extends throughout AI development lifecycles — including post-deployment monitoring.
- **Partners provide agility and reduce complexities.** Quality assurance across AI development lifecycles requires a broad range of capabilities in addition to time, resources, and expertise. Strategic partners play a critical role in augmenting internal teams, providing guidance on best practices, and implementing comprehensive and scalable processes.

Endnotes

[1] Source: Artificial Intelligence Market Insights, 2025, Forrester Research, Inc., April 25, 2025.

[2] Ibid.

Resources

Related Forrester Research:

Five Essentials Of Governance You Must Address In Your Data And AI Strategy, Forrester Research, Inc., October 6, 2025

In A World Obscured By Cloudy Models, Explainable AI Shines Bright, Forrester Research, Inc., August 25, 2025

Minding Mindful Agents — Trust Is The Primary Challenge For AI Agents, Forrester Research, Inc., June 30, 2025

Artificial Intelligence Market Insights, 2025, Forrester Research, Inc., April 25, 2025

Related Blogs

Oliwia Berdak, Strategic AI Readiness: How To Move From Hype To Scalable Impact, Forrester Blogs

Brendan Witcher, Today's Leaders Must Heed AI Advice For Future Disruptors, Forrester Blogs

Project Team:

Ben Anderson,
Market Impact Consultant

Contributing Research:

Forrester's Data, AI, And Analytics research group

Methodology

This Opportunity Snapshot was commissioned by Cognizant and Microsoft. To create this profile, Forrester Consulting supplemented this research with custom survey questions asked of 173 AI strategy development and implementation decision-makers. The custom survey began and was completed in November 2025.

Demographics

GEOGRAPHY	
US	67%
UK	33%

COMPANY SIZE	
$5B+	36%
$1B to $4.9B	64%

INDUSTRY	
Financial services	21%
Life sciences	20%
Communications, media, and technology	20%
Retail	20%
Healthcare	20%

TITLE	
C-level	20%
Vice president	43%
Director	38%

ROLE	
Data and analytics	18%
AI/ML leads	63%
Software development	55%

Note: Percentages may not total 100 due to rounding.

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