

QUALITY AND ACCEPTANCE IN TECHNOLOGY PROJECTS: PROPOSAL FOR A CUSTOMER-ORIENTED GOVERNANCE FRAMEWORK

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Abstract: Technology project management, especially in the agile context, requires continuous alignment between the technical quality of the delivery and customer satisfaction. This article presents a Systematic Literature Review (SLR) focused on the convergence of governance and quality standards, such as the PMBOK 7th Edition, the Scrum Guide, and ISO 9001, with the aim of proposing a Customer-Oriented Quality Governance Framework (FGQ-OC). The research, based on literature from the last five years (2020-2025), demonstrates that customer acceptance is the central criterion for project success, surpassing mere compliance with the initial scope. The proposed FGQ-OC aims to provide a robust structure for digital corporate environments, ensuring that technical requirements and customer expectations are integrated from conception to final delivery. Expected results include the definition of measurable acceptance indicators, which can be applied to enhance governance and the management of value in technology projects.

Keywords: Quality Governance; Technology Projects; Agile Methodologies; Customer Acceptance; Customer Satisfaction.

Introduction

Technology project management has undergone a paradigm transformation, driven by the

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need for greater speed, adaptability and, above all, focus on the value delivered to the customer (SALVADOR, 2025). In this scenario, Quality and Delivery Acceptance cease to be final verification stages and become central elements of project governance, permeating the entire development cycle (PIRES, 2025). The justification for this study lies in the premise that technical conformity, although essential, is not sufficient to determine the success of a project; customer satisfaction and effective product acceptance are the true indicators of value in modern agile management (MELO; ABRAHÃO, 2025).

The objective of this article is, therefore, to develop a quality governance model that ensures continuous alignment between technical requirements, customer expectations, and incremental deliveries in agile environments. To this end, a Systematic Literature Review (SLR) is proposed that explores the intersection of three conceptual pillars: the PMBOK 7th Edition, the Scrum Guide, and the ISO 9001 standard. The integration of these standards aims to create a solid empirical basis for the proposal of a Customer-Oriented Quality Governance Framework (FGQ-OC), applicable to digital corporate environments. Expected results include the definition of a robust framework with measurable acceptance indicators, contributing to improving value management and governance in technology projects.

Systematic Literature Review Methodology

The Systematic Literature Review (SLR) was conducted to map and analyze recent scientific production (2020-2025) on quality governance, agile methodologies, acceptance criteria, and customer satisfaction in technology projects. The methodology followed the guidelines of Kitchenham and Charters (2007), comprising the following stages:

Definition of Research Questions:

How do management standards (PMBOK 7th Edition, Scrum Guide) and quality (ISO 9001) integrate to form quality governance in IT projects?

What are the main customer acceptance and satisfaction criteria and metrics used in agile projects?

What recent frameworks propose the integration of quality and acceptance in IT project governance?

Search Strategy

The Scopus, Web of Science, IEEE Xplore, and Google Scholar databases were consulted. The search strings used included combinations of terms in Portuguese and English, such as: (“Quality Governance” OR “Governança de Qualidade”) AND (“Agile Projects” OR “Projetos Ágeis”) AND (“Customer Acceptance” OR “Aceitação do Cliente”) AND (“PMBOK 7” OR “Scrum” OR “ISO 9001”).

Selection Criteria

Journal articles, conference proceedings, and theses/dissertations published between 2020 and 2025 were included. Articles that did not address technology projects or that were limited to a single management/quality standard without the perspective of integration or customer focus were excluded.

Data Analysis and Synthesis

The selected articles were submitted to full reading for extraction of relevant data, focusing on the identification of models, principles, and metrics that support the proposal of a customer-oriented framework.

Theoretical Framework and Literature Analysis

The transition from traditional project management to agile has redefined the concept of success and quality in IT projects.

The Evolution of Quality and Governance in IT Projects

Historically, IT project governance was strongly linked to compliance with scope, time, and cost (the “triple constraint”). However, recent literature, especially after 2020, emphasizes that quality and value are the main drivers of success (NOVAES, 2025). Modern governance must be adaptive and focused on continuous value delivery, which requires a shift in focus from strict compliance to delivery effectiveness and user acceptance (SANTOS, 2025). Quality, in this context, is seen as the ability to meet present and future customer needs, a concept that directly aligns with the agile philosophy of continuous feedback (EYNG, 2025).

Convergence of Standards: PMBOK 7th Edition, Scrum Guide, and ISO 9001

The complexity of current projects requires the integration of different standards and guides. The PMBOK 7th Edition (2021) marks a significant evolution by adopting an approach based on Principles and Performance Domains, in contrast to the Process-based approach of the previous edition

(PROJECT MANAGEMENT INSTITUTE, 2021). The principle of “Value” and the “Stakeholders” Performance Domain reinforce the centrality of the customer and value delivery, bringing it closer to agile methodologies.

The Scrum Guide (recent revisions) establishes an empirical framework that prioritizes inspection and adaptation, where the Definition of Done (DoD) is the main mechanism for quality assurance and acceptance (SCHWABER; SUTHERLAND, 2020). The DoD, by including quality and acceptance criteria, serves as a practical point of convergence for ISO 9001 quality requirements.

The ISO 9001:2015 standard (and its recent interpretations) provides the structure for a Quality Management System (QMS) that, although prescriptive, is flexible enough to be applied in agile environments (INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, 2015). The ISO 9001 focus on the organization’s context, leadership, and continuous improvement (PDCA) complements agile governance, ensuring that development processes are repeatable, auditable, and oriented toward customer satisfaction (UENO, 2025). The integration of these three pillars (PMBOK 7, Scrum, and ISO 9001) provides the basis for a quality governance model that is simultaneously adaptive, principle-oriented, and systematic.

Acceptance Criteria and Customer Satisfaction in the Agile Era

In agile management, customer acceptance is formalized through Acceptance Criteria defined for each User Story or product increment (SILVA; PANDOLFINI, 2025). These criteria are the bridge between the functional requirement and the customer’s value expectation. Customer satisfaction, in turn, is an outcome metric that transcends point acceptance. Recent studies (e.g., CLICKUP BLOG, 2024) indicate that metrics such as Net Promoter Score (NPS), Customer Satisfaction Score (CSAT), and User Adoption Rate are crucial for measuring long-term project success. Practical experience in QA and acceptance, as mentioned in the project justification, demonstrates that failure to align the technical criteria of “done” with the criteria of “accepted” by the customer is the main cause of

rework and dissatisfaction (AEC, 2022). Therefore, the proposed framework must institutionalize the alignment of these criteria.

Proposal for a Customer-Oriented Quality Governance Framework (FGQ-OC)

The Customer-Oriented Quality Governance Framework (FGQ-OC) is proposed as an adaptive structure that integrates the value management principles of the PMBOK 7th Edition, the empirical cadence of Scrum, and the quality management system requirements of ISO 9001. The FGQ-OC aims to institutionalize customer acceptance as the main criterion for project success.

Fundamental Principles of FGQ-OC

The FGQ-OC is supported by three fundamental principles that ensure continuous alignment between technical delivery and customer expectation:

- **Continuous Value Governance:** Governance is not limited to compliance but focuses on maximizing the value perceived by the customer in each iteration (REVISTA HSM, 2025). This aligns with the “Value” principle of the PMBOK 7th Edition.
- **Empirical and Adaptive Quality:** Quality is inspected and adapted continuously, using the Scrum Definition of Done (DoD) as a formal control point that incorporates technical requirements and customer acceptance criteria (RESEARCHGATE, 2025a).
- **Acceptance as a Done Criterion:** Formal customer acceptance (or that of their representative, the Product Owner) is the final and non-negotiable requirement for an increment to be considered “Done” and eligible for release.

Components and Governance Flow

The Framework is composed of three main components that interact in a continuous cycle of planning, execution, and inspection:

- **Strategic Alignment Cycle (PMBOK/ISO 9001):** Defines the project context, quality objectives (ISO 9001, Section 4), and expected value (PMBOK 7, Value Performance Domain). Involves the definition of high-level satisfaction metrics (NPS, CSAT).
- **Agile Delivery Cycle (Scrum):** This is the core of execution, where increments are developed. Governance acts here ensuring that the Definition of Done (DoD) is rigorously applied, including the validation of Acceptance Criteria.
- **Feedback and Adaptation Cycle (ISO 9001/Scrum):** Uses acceptance and satisfaction metrics to inspect the product and process. Customer feedback results (e.g., Sprint Review) are direct inputs for continuous improvement (ISO 9001 PDCA) and for Product Backlog adaptation.

Measurable Acceptance and Satisfaction Indicators

To operationalize customer-oriented governance, the FGQ-OC proposes a set of indicators that go beyond traditional burndown and velocity metrics. These indicators are categorized into Immediate Acceptance, Technical Quality, Value Satisfaction, and Point Satisfaction.

The first indicator is the Acceptance Rate at Review, which measures the percentage of User Stories accepted by the Product Owner or Customer in the first Sprint Review. This Immediate Acceptance indicator aligns directly with the Scrum Definition of Done (DoD) and is crucial for evaluating the effectiveness with which Acceptance Criteria were defined and met (RESEARCHGATE, 2025b).

Next, the Post-Acceptance Rework Index is a Technical Quality indicator that quantifies the volume of defects or changes requested by the customer after formal acceptance of the delivery. A low index demonstrates technical quality and DoD accuracy, aligning with the Non-Conformance treatment requirement of ISO 9001 (REPOSITÓRIO UCSAL, 2024).

Regarding Satisfaction, the Net Promoter Score (NPS) is a Value Satisfaction indicator that measures the likelihood of the customer recommending the product or service. This is an indicator of long-term perceived value, in line with the “Value” principle of the PMBOK 7th Edition (PROJETO DIÁRIO, 2025).

Finally, the Customer Satisfaction Score (CSAT) is a Point Satisfaction indicator, used to measure customer satisfaction with a specific delivery or interaction, usually after each major delivery or release. This indicator aligns with the “Stakeholders” Performance Domain of the PMBOK 7th Edition (REVISTA FT, 2024).

The application of these indicators allows quality governance to move from a reactive approach (defect correction) to a proactive approach (maximization of customer acceptance and satisfaction).

Expected Results and Contributions

The main expected result of this work is the proposal of the Customer-Oriented Quality Governance Framework (FGQ-OC), a theoretical-practical model with measurable acceptance indicators. This framework aims to fill a gap in the literature and practice of project management, providing a unified structure that transcends the dichotomy between predictive approaches (PMBOK/ISO) and adaptive approaches (Scrum).

The contributions of this study are:

- Theoretical Contribution: Systematization of recent literature (2020-2025) on the

convergence of PMBOK 7th Edition, Scrum Guide, and ISO 9001 in the context of quality and acceptance in IT projects.

- **Methodological Contribution:** Proposal of a set of acceptance and satisfaction indicators (Acceptance Rate at Review, Post-Acceptance Rework Index, NPS, and CSAT) that can be used to measure the effectiveness of quality governance in agile environments.
- **Practical Contribution:** Provision of a model applicable to digital corporate environments, allowing project leaders and Product Owners to more effectively align technical requirements with the customer's perception of value, reducing rework and increasing satisfaction.

The empirical validation of the FGQ-OC, through case studies and participant observation (according to the proposed methodology), will be the next step to consolidate the applicability and effectiveness of the framework.

Conclusion

This article fulfilled the objective of developing a quality governance model that integrates global management and quality standards with the agile philosophy, focusing on customer acceptance and satisfaction as the true indicators of success in technology projects. The Systematic Literature Review confirmed the trend that modern governance must be adaptive and value-oriented, as advocated by the PMBOK 7th Edition and the Scrum Guide.

The proposed Customer-Oriented Quality Governance Framework (FGQ-OC) establishes a governance cycle that uses the Definition of Done (DoD) as a point of convergence between technical quality (ISO 9001) and customer acceptance (Scrum). The adoption of the proposed measurable indicators (Acceptance Rate, Post-Acceptance Rework, NPS, and CSAT) allows organizations to continuously monitor and improve value delivery, ensuring that technology projects not only deliver

scope but, fundamentally, meet and exceed customer expectations. The FGQ-OC presents itself as a robust tool for project leadership seeking excellence in QA, scope, and acceptance in the dynamic digital corporate scenario.

Limitations and Future Work: The main limitation of this study is its theoretical-conceptual nature. Future work should focus on applying the FGQ-OC in real projects, using applied research methodology and participant observation to validate the proposed indicators and refine the model.

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