

QUALITY MANAGEMENT IN PROJECTS: CONTEMPORARY APPROACHES TO QUALITY PLANNING IN 2026

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Abstract: *Project quality management has evolved from a narrow focus on inspection and compliance toward an integrated and value-oriented approach that embeds quality into project processes, deliverables, and stakeholder outcomes. Current guidance such as ISO 10006:2017 and the PMBOK 7 perspective emphasizes that quality planning should not be treated as a one-time formal exercise, but as a continuous and adaptive management process integrated across the project life cycle [1–5]. This paper updates the concept of quality planning in projects for the conditions of 2026 and argues that strategic quality objectives, measurable criteria, stakeholder expectations, digital monitoring, and continuous improvement should be integrated into one coherent framework. The paper also highlights the increasing role of hybrid delivery, digital collaboration tools, dashboards, analytics, and AI-supported planning in improving visibility, traceability, and preventive quality management in contemporary projects [6–10].*

Keywords: project quality management; quality planning; project life cycle; digitalization; artificial intelligence

1. INTRODUCTION

Projects are temporary and goal-oriented undertakings, but the quality of their outputs and of the processes used to create them has long-term consequences for organizations, beneficiaries, and stakeholders. Earlier approaches to project quality planning correctly emphasized that quality cannot be planned in the abstract and must follow the definition of strategic objectives. That premise remains valid; however, the managerial context of project quality has changed substantially due to updated standards, hybrid delivery models, and the growing use of digital information in project decisions. [1,6–9] ISO 10006:2017 places project quality management in a broader framework that includes planning, implementation, assessment, and improvement activities tailored to the project environment. PMBOK 7 reinforces this perspective by emphasizing value delivery, adaptability, stakeholder orientation, and the principle of building quality into processes and deliverables. Consequently, quality planning is no longer understood only as the preparation of inspections and checklists, but as the design of a project system capable of producing reliable and demonstrable quality outcomes [3–5].

In practice, project quality is increasingly shaped by AI-assisted forecasting, data-driven decision-making, hybrid work structures, integrated collaboration platforms, and real-time dashboards [6–10]. These developments allow project teams to identify quality issues earlier, improve traceability, and support preventive action rather than late correction. The purpose of this paper is therefore to update the concept of quality planning in projects and to reposition it as a strategic and operational process integrated across the entire project life cycle [6–10].

2. QUALITY MANAGEMENT FRAMEWORK IN PROJECTS

Project quality management must be understood within the logic of the project life cycle. Projects move through initiation, planning, execution, monitoring and control, and closure, while stakeholder expectations and feedback continuously influence the perception of project value [3–5]. In this context, quality emerges from the interaction between planning, implementation, review, and correction rather than from a final inspection step alone [3–5].

The traditional distinction between quality planning, quality assurance, and quality control remains useful, but contemporary practice increasingly includes continuous improvement as an explicit fourth element of project quality management. Quality planning defines standards, metrics, methods, responsibilities, and acceptance criteria; quality assurance verifies that processes are appropriate and correctly applied; quality control evaluates outputs against requirements; and continuous improvement feeds lessons learned back into the project system.



Figure 1. Major processes of project quality management: planning, assurance, control, and continuous improvement.

This broader model reflects the fact that quality in projects is both preventive and corrective. Mature project organizations focus less on detecting defects at the end and more on creating reliable quality conditions from the beginning of the project.

3. QUALITY PLANNING IN 2026

An updated quality planning process can be described through three interrelated dimensions: strategic alignment, operational design, and adaptive control. Strategic alignment links project quality objectives to organizational policy, stakeholder expectations, and applicable standards such as ISO 10006:2017. Operational design translates these objectives into measurable indicators, acceptance criteria, procedures, audits, tests, checklists, and responsibilities, while adaptive control ensures that quality planning is revised as risks, requirements, and implementation conditions evolve.

The inputs of quality planning are broader today than in traditional linear models. Alongside quality policy, project scope, and technical requirements, the planning process should also include stakeholder requirements, regulatory constraints, lessons learned, risk registers, prior performance data, and collaboration structures for document control and reporting. The outputs likewise extend beyond a quality plan and control lists to include quality

metrics, review schedules, escalation rules, and mechanisms for corrective and preventive action.

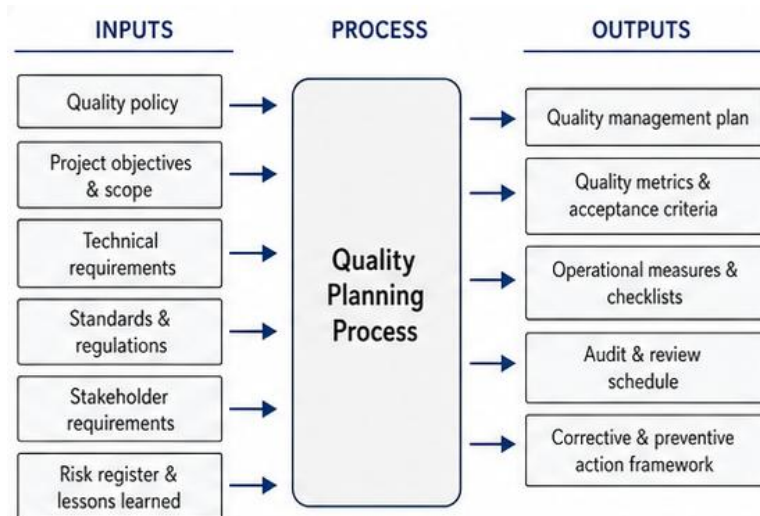


Figure 2. Inputs, process, and outputs of the contemporary quality planning process in projects.

A major implication is that quality planning cannot be treated as a one-time activity performed before implementation and then archived. In hybrid and fast-changing project environments, quality objectives behave as moving targets because stakeholder expectations, technical assumptions, regulatory conditions, and external risks may change during implementation. For that reason, effective quality planning in 2026 must be iterative and review-based, combining initial design discipline with continuous reassessment of quality criteria and performance evidence [7,8,9].

4. STRATEGIC QUALITY OBJECTIVE AND DECOMPOSITION

The classical project management logic is still influenced by the relationship between performance, cost, and time. However, in current quality management, these constraints should not be viewed separately from quality, because quality shows whether their balance produces acceptable and valuable results for stakeholders. Beyond the classical triad, the strategic quality objective may be interpreted in a broader framework that includes performance, compatibility, mobilized organization, cost, and time [5, 7,8].

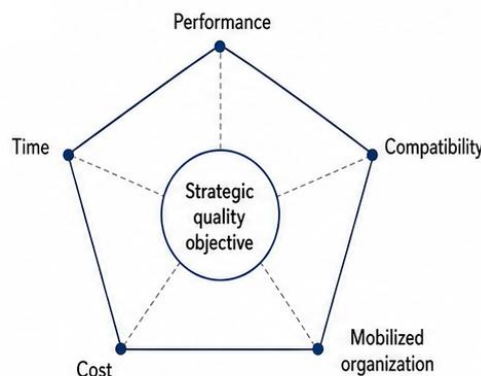


Figure 3. The strategic project quality objective as a multidimensional construct.

A key contribution of the present approach is the idea that the strategic quality objective must be decomposed into lower-level operational objectives. This decomposition converts a general quality intention into operational objectives that can be assigned, monitored, and measured throughout project implementation. Such decomposition supports the quantitative breakdown of objectives, the assignment of responsibilities, and the definition of measurable criteria and review points.

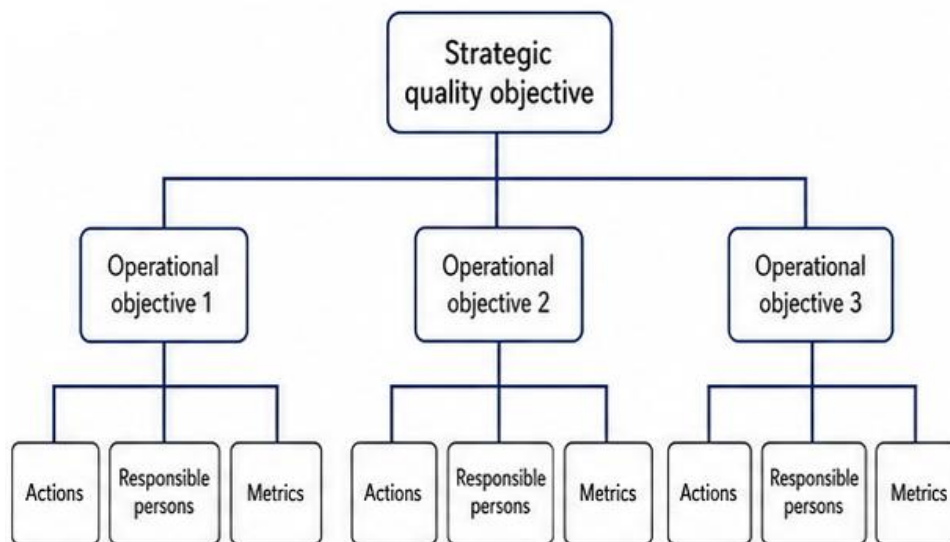


Figure 4. Decomposition of the strategic quality objective into operational objectives, actions, responsible persons, and metrics.

In contemporary projects, this decomposition should also be connected to measurable indicators, evidence-based corrective actions, and clear communication channels. This is particularly important because quality planning in 2026 must support transparency, traceability, and adaptive control rather than merely document initial intentions.

5. DIGITALIZATION AND AI IN QUALITY PLANNING

Digital transformation has become one of the strongest drivers of change in project quality management. Shared digital platforms, automated reporting, version-controlled documentation, and real-time performance dashboards improve visibility and support earlier detection of quality deviations. These tools make quality planning more operational because they connect planned standards and acceptance criteria with live project data rather than leaving them as static statements in a formal document. [6,7,9]

AI adds a further layer of capability by supporting forecasting, anomaly detection, risk anticipation, and prioritization of managerial attention. In the context of quality planning, AI can help identify probable defect patterns, predict slippage in quality-related milestones, and highlight areas where preventive action is more cost-effective than rework. At the same time, technology does not replace the managerial responsibility for defining quality. The project team must still decide which stakeholder expectations are critical, which metrics are valid, and how trade-offs between scope, cost, time, and value should be managed.

6. CONCLUSIONS

Quality planning remains the first major process of project quality management, but in 2026 it must be understood as a continuous and adaptive function rather than a one-time planning exercise. The contemporary project environment requires quality planning to integrate standards, stakeholder expectations, measurable criteria, digital monitoring, and continuous improvement into a coherent managerial framework.

The strategic quality objective of the project is still the starting point of quality planning, but its operationalization must be iterative, evidence-based, and responsive to change across the full project life cycle. In this regard, the combination of classical quality concepts with digital tools, analytics, and AI-supported management offers a more realistic basis for planning quality in current and future projects.

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