

DIGITAL MATURITY AS A FACTOR OF STRATEGIC MANAGEMENT EFFECTIVENESS IN ORGANIZATIONS

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Abstract

This article examines digital maturity as a determinant of strategic management effectiveness, focusing on project-oriented organizations navigating digital transformation. Drawing on comparative analysis, qualitative organizational assessment, and synthesis of contemporary literature, the study maps six core maturity dimensions-data and analytics, process automation, technology integration, organizational culture, strategic leadership, and customer engagement-against a spectrum of management outcomes. Organizations at low maturity levels exhibit a characteristic cluster of dysfunctions: fragmented digitalization, manual coordination dependency, weak analytical infrastructure, communication overload, and limited scalability-conditions that directly erode strategic coherence. A phased development framework is proposed, comprising process formalization, centralized project management, CRM integration, KPI-based monitoring, business intelligence adoption, and digital capability building. The findings contribute to digital strategy literature and offer actionable guidance for practitioners in emerging market contexts.

Keywords: digital maturity, strategic management, digital transformation, organizational effectiveness, process formalization, KPI systems, data-driven management, CRM integration, business intelligence, digital strategy, emerging markets

Introduction

The question confronting many organizations is not whether they have adopted digital tools-most have-but whether their level of digital maturity is sufficient to support effective strategic management. This distinction, between surface-level digitalization and genuine digital readiness, carries substantial organizational consequences. Project-oriented companies are particularly exposed: their operating model depends on coordination-intensive processes, multi-stakeholder environments, and time-sensitive decisions, making digital maturity a structural prerequisite rather than a competitive bonus.

Research on digital transformation has expanded significantly since Westerman, Bonnet, and McAfee's (2014) foundational work, and digital maturity has emerged as

a more precise analytical construct than 'digital transformation' alone, which describes a process rather than a state. Despite this progress, a meaningful gap persists: existing research tends to focus on large multinationals, or to treat maturity as a purely technical problem. The organizational and strategic dimensions-particularly for mid-sized, project-based firms in emerging market contexts-remain underexplored.

This article addresses that gap by examining how digital maturity shapes strategic management effectiveness, analyzing the consequences of low maturity in a project-oriented organizational context, and proposing a phased framework for structured maturity development.

Literature Review and Theoretical Foundations

Strategic management frameworks have been progressively reconfigured by digitalization. Porter's (1980) competitive forces logic remains analytically useful, but Teece (2018) demonstrated that in digitalized markets, dynamic capabilities-sensing, seizing, and transforming-have become the primary source of sustainable advantage, and these capabilities are inseparable from digital infrastructure. Bharadwaj et al. (2013) advanced this further with the concept of 'digital business strategy', treating IT capabilities not as support functions but as constitutive elements of competitive positioning.

Digital maturity refers to the degree to which an organization has developed the capabilities, processes, and cultural orientations required to leverage digital technologies in pursuit of strategic objectives. It is not synonymous with technology adoption: an organization may deploy numerous tools while remaining at a low maturity level if those tools are poorly integrated or unsupported by appropriate governance. Westerman et al. (2014) distinguished maturity types-from 'digital novices' to 'digitati'-based on digital intensity and transformation management intensity. Kane et al. (2019) refined this typology by demonstrating that the distinguishing characteristics of mature organizations are strategic clarity, leadership commitment, and agility-not technology portfolio breadth.

The maturity dimensions encompassed by leading frameworks-data and analytics, process automation, technology integration, organizational culture, strategic leadership, and customer engagement-operate as an interdependent system. Vial (2019) identified organizational inertia and fragmented change efforts as the primary barriers to digital transformation. Peppard and Ward (2016) showed that IT-enabled strategic capabilities are path-dependent: early integration creates compounding advantage, while delayed action generates mounting coordination costs. Kaplan and Norton's (1996) Balanced Scorecard, while predating the current wave, anticipated the multi-perspective performance monitoring that digitally capable organizations can now automate; in low-maturity organizations, however, BSC implementation frequently

degenerates into manual reporting exercises that consume resources without generating strategic alignment.

Research Methodology

The methodological approach is qualitative and analytical, combining comparative analysis, academic literature synthesis, qualitative organizational assessment, and strategic gap analysis. Comparative analysis examines how organizations at different maturity levels differ in strategic management capacity, drawing on published case evidence and established maturity frameworks. Qualitative organizational assessment maps the challenges of a reference project-oriented organization-identified through graduation qualification research-against Westerman et al.'s (2014) typology and the dimensions in Kane et al. (2019). Strategic gap analysis, including SWOT-analog assessment, identifies the distance between current states and effective strategic management requirements. Digital maturity is treated throughout as a mediating variable between organizational conditions and strategic outcomes-a framing that justifies the qualitative approach, since maturity assessment requires interpretive analysis of information flows, decision processes, and coordination mechanisms that cannot be fully captured in single quantitative indicators.

Analysis and Discussion

Analytical precision requires decomposing digital maturity into specific dimensions whose implications for strategic management can be examined both individually and in combination. Table 1 maps six key dimensions across three maturity levels.

Table 1

Digital Maturity Dimensions and Managerial Implications

Digital Maturity Dimension	Low Maturity (Level 1–2)	Medium Maturity (Level 3)	High Maturity (Level 4–5)
Data & Analytics	Ad hoc reporting; decisions based on experience	Structured reporting; partial dashboards	Real-time analytics; predictive modelling
Process Automation	Fully manual workflows; paper-based coordination	Partial automation; mixed digital/manual	End-to-end automation; integrated platforms

Digital Maturity Dimension	Low Maturity (Level 1–2)	Medium Maturity (Level 3)	High Maturity (Level 4–5)
Technology Integration	Isolated tools; no system interoperability	Limited integration; API bridges	Unified digital ecosystem; seamless data flow
Organizational Culture	Resistance to change; low digital awareness	Selective adoption; top-down digitalization	Digital-first mindset; continuous learning
Strategic Leadership	No digital strategy; reactive management	Digital strategy formulated but not embedded	Digital objectives integrated into corporate strategy
Customer Engagement	Minimal digital touchpoints; manual CRM	Basic CRM; inconsistent customer data	Omnichannel CRM; data-driven customer intelligence

The progression from low to high maturity represents a fundamental change in how information is generated and used, how decisions are coordinated, and how the organization positions itself strategically. An organization with high data and analytics maturity can conduct real-time competitive monitoring and evaluate performance deviations as they emerge—capabilities unavailable to an organization relying on ad hoc reporting, regardless of its managers' individual competence. The interdependence of dimensions is equally important: a sophisticated CRM not integrated with project management generates data islands rather than strategic intelligence, and automation built on top of unformalized processes can accelerate inefficiency rather than eliminate it (Vial, 2019; Hess et al., 2016).

Fragmented digitalization-tool adoption without coherent integration—creates a paradox: organizations believe they are digital because they use digital tools, while remaining functionally analog in their decision-making. In a project-oriented context, this fragmentation manifests concretely: project planning in one system, client communication in another, financial tracking in spreadsheets, and team coordination through informal messaging channels. When senior management attempts to assess portfolio performance, they must manually aggregate data from multiple sources,

introducing delays and interpretation inconsistencies. By the time a coherent picture is assembled, its operational moment has passed.

Manual coordination dependency compounds the problem. When workflows are not formalized-when task sequences and handoff criteria live in individuals' tacit knowledge rather than in supported systems-coordination requires continuous personal effort. The organization becomes fragile: personnel changes disrupt processes, absences create bottlenecks, and scaling requires proportional increases in coordination overhead rather than the efficiency gains that formalized systems enable. Johnson et al. (2017) and Teece (2018) both identified process formalization as foundational to strategic agility precisely because agility presupposes stable operational structures.

Weak analytical support represents perhaps the most direct impediment to strategic management effectiveness. Without data infrastructure capable of answering structured strategic questions-which initiatives are generating returns? where are performance problems emerging?-strategic management devolves into periodic opinion aggregation. Davenport and Harris (2007) established analytics capability as one of the strongest organizational performance differentiators, a finding confirmed in digital environments by Ransbotham et al. (2016). Communication overload, meanwhile, is frequently misdiagnosed as a behavioral problem when it is in fact architectural: the absence of integrated systems forces constant back-and-forth communication through unstructured channels, consuming the cognitive bandwidth of precisely those managers who should be engaged in strategic analysis.

Table 2 maps the seven organizational problems of the reference context against their digital maturity root causes and strategic consequences, making explicit the causal chain from operational conditions to strategic outcomes.

Table 2

Organizational Problems, Digital Maturity Root Causes, and Strategic Consequences

Organizational Problem	Root Cause (Digital Maturity)	Strategic Management Consequence
Fragmented digitalization	Absence of integrated digital architecture	Inconsistent data; duplicated work; reporting errors
Manual coordination dependency	Low process automation; informal workflows	Slow decision cycles; high administrative overhead
Weak analytical support	No structured BI tools or dashboards	Decisions based on intuition rather than evidence

Organizational Problem	Root Cause (Digital Maturity)	Strategic Management Consequence
Communication overload	Lack of centralized project management systems	Information loss; team misalignment; rework
Limited scalability	Processes not formalized or documented	Growth creates operational bottlenecks
Weak performance visibility	Absence of KPI systems and monitoring tools	Inability to assess progress or correct deviations

Three broader conclusions follow from this mapping. First, many consequential strategic failures are fundamentally digital infrastructure problems: an organization that consistently misses performance targets because its decisions rest on fragmented, delayed information faces a data problem before it faces a strategy problem. Second, low-maturity dysfunctions are self-reinforcing: fragmented data undermines analytics; weak analytics increases dependence on informal judgment; informal judgment is harder to coordinate; poor coordination increases communication overhead, which further degrades information quality. Without deliberate intervention, low-maturity organizations tend to remain low-maturity. Third, this dynamic is especially damaging in project-oriented contexts, where operational complexity already absorbs disproportionate management attention, leaving insufficient capacity for strategic planning and capability development.

The maturity-effectiveness relationship can be conceptualized as roughly sigmoidal: severely constrained at very low levels, substantially improving as maturity crosses a critical threshold, and yielding diminishing strategic management returns at very high levels. The practical implication is counterintuitive but important-for many organizations, the highest-return strategic investment is not in strategy formulation itself, but in the digital infrastructure that makes strategy execution coherent. Kane et al. (2019) confirmed this empirically: digitally mature organizations are more agile and innovative not because their strategies are superior, but because their organizational foundations allow good strategies to be executed reliably.

Practical Recommendations

Improving digital maturity requires a coordinated, phased developmental process rather than sequential tool adoption. Table 3 presents a six-phase framework sequenced to reflect real implementation dependencies.

Table 3

Phased Digital Maturity Development Framework for Project-Oriented Organizations

Phase	Priority Area	Recommended Tool / Approach	Expected Strategic Outcome
Phase 1 (Months 1–4)	Process Formalization	BPMN documentation; workflow mapping; SOP development	Reduced manual dependency; consistent process execution
Phase 2 (Months 3–8)	Centralized Project Management	PM platform (e.g., Jira, Bitrix24, MS Project) with team integration	Unified task visibility; reduced communication overhead
Phase 3 (Months 6–12)	CRM Integration	CRM system linked to sales, support, and project workflows	Customer data centralization; pipeline transparency
Phase 4 (Months 9–15)	KPI & Performance Monitoring	Balanced Scorecard; automated KPI dashboards	Objective performance evaluation; strategic alignment
Phase 5 (Months 12–18)	Analytics & Data-Driven Management	BI tools (Power BI, Tableau); predictive analytics layer	Evidence-based decisions; early risk identification
Phase 6 (Ongoing)	Digital Culture & Capability Building	Training programs; digital leadership development	Sustained maturity growth; organizational resilience

Process formalization precedes technology implementation because digitizing poorly understood processes institutionalizes confusion rather than resolving it. Centralized project management precedes CRM integration because internal coordination capability is a prerequisite for effective client relationship management. Analytics capability is positioned later because its value is contingent on clean, integrated data from earlier-phase systems.

A centralized PM platform-Jira, Bitrix24, Asana, or a comparable system-achieves several strategic objectives simultaneously: it creates a single source of truth for project status and resource allocation; provides structured visibility into cross-project dependencies essential for portfolio-level decisions; reduces coordination burden through asynchronous information sharing; and generates an audit trail supporting organizational learning. Implementation requires parallel process formalization: PM platforms deployed on undocumented workflows consistently yield disappointing adoption rates and data quality insufficient for meaningful reporting.

A properly integrated CRM transforms customer data from a fragmented asset into a strategic resource. For project-oriented companies, where long-term client relationships drive revenue stability, integrated CRM enables account-level analysis-identifying which clients generate value relative to coordination costs, recognizing satisfaction patterns across project types, and tracking the relationship between communication quality and contract renewal. This analytical depth is available only when customer interaction data is systematically linked to project outcomes, which requires genuine CRM-PM integration rather than standalone deployment.

KPI-based performance evaluation, implemented through a Balanced Scorecard framework (Kaplan & Norton, 1996), addresses the absence of objective multi-dimensional visibility. A well-designed KPI system for a project-oriented company should span financial (project profitability, cost variance), customer (satisfaction scores, retention), internal process (on-time delivery, rework frequency), and learning and growth (capability development, knowledge management maturity) perspectives. Critically, KPIs must be embedded in digital infrastructure: indicators requiring manual aggregation are unreliable and discourage rigorous use. When dashboards connect to operational systems-PM platforms, CRM, financial software-they become genuine strategic navigation instruments rather than ceremonial reporting artifacts.

Business intelligence tools (Power BI, Tableau) represent the analytical capstone: integrating data from multiple systems into real-time visual representations that can be filtered by project, client, team, or period. Their strategic value lies in transforming management meetings from exercises in reconstructing a shared reality to exercises in interpreting that reality and deciding how to respond-a qualitative improvement in management effectiveness. None of these interventions sustains impact without corresponding investment in digital culture and capability. Kane et al. (2019) and Westerman et al. (2014) consistently identify leadership commitment and organizational orientation-not budget or technology selection-as the primary differentiators between organizations that successfully develop digital maturity and those that do not.

Conclusion

This article has examined digital maturity as a structural determinant of strategic management effectiveness, advancing four interconnected arguments. First, digital maturity is a multidimensional organizational construct encompassing data and analytics capability, process automation, technology integration, organizational culture, strategic leadership, and customer engagement; weakness in any dimension creates self-reinforcing cycles of constraint. Second, the dysfunctions characteristic of low maturity-fragmented digitalization, manual coordination dependency, weak analytics, communication overload, and limited scalability-are strategic constraints, not operational nuisances; they limit the quality and speed of strategic decisions and the organization's capacity for growth. Third, for many organizations, the highest-return strategic investment is not in strategy formulation but in the digital infrastructure that makes execution coherent. Fourth, sustainable maturity development requires a structured, phased approach that begins with process formalization and advances toward analytics-driven management supported by a digitally capable culture.

The scientific contribution lies in the integration of digital maturity theory with strategic management analysis for project-oriented firms in emerging market settings-a context underrepresented in existing literature. The practical contribution is a phased development framework adaptable to specific organizational profiles and resource constraints. Future research should pursue longitudinal studies tracking maturity trajectories and strategic outcomes, comparative analysis across sectors and markets, and investigation of how advancing AI accessibility reshapes digital maturity models and their strategic implications.

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