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# Lightweight Strategic Path for Digital Transformation in Small and Medium Enterprises — A Solution Based on Management Consulting Practice

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**Abstract:** As global economic digitalization accelerates, small and medium-sized enterprises (SMEs) play a critical role in the U.S. economy. However, due to limited budgets, insufficient technical capabilities, and a lack of management experience, SMEs face significant challenges in digital transformation. This paper focuses on the digital pain points of SMEs and proposes a "lightweight" strategic approach, which emphasizes low-cost, easy-to-implement, and stepwise digital solutions to enhance operational efficiency. Drawing on management consulting practices, the study designs actionable digital transformation solutions encompassing tool selection, phased implementation, budget and resource allocation, and risk management. Case analyses demonstrate the effectiveness of the lightweight strategy in improving operational efficiency, reducing transformation risks, and optimizing resource utilization. Furthermore, the paper highlights the value of management consultants in facilitating SME digitalization. The findings provide practical guidance for SMEs in the U.S. and offer strategic insights for future digital development.

**Keywords:** small and medium-sized enterprises (SMEs); digital transformation; lightweight strategy; management consulting; SaaS tools; phased implementation

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## 1. Introduction

Small and medium-sized enterprises (SMEs) play a pivotal role in the United States economy, accounting for approximately 99% of all businesses and contributing to over half of national employment. These enterprises are not only key drivers of economic growth but also essential sources of innovation, creativity, and social vitality. However, in the context of rapid global digitalization, volatile market conditions, and increasing customer expectations for digitally enabled products and services, the internal management efficiency and technological sophistication of SMEs have become critical determinants of competitive advantage. For SMEs, digital transformation is no longer merely a technological upgrade; it has evolved into a strategic imperative for survival, growth, and sustainable competitiveness.

Despite its importance, SMEs face significant challenges in undertaking digital transformation initiatives. Budget constraints are a primary barrier: unlike large corporations, SMEs often operate with limited financial resources, making the high costs of software acquisition, system development, and ongoing maintenance prohibitive. Limited technical capabilities constitute another obstacle; many SMEs lack specialized IT teams and struggle with data management, system integration, and cybersecurity, reducing their

ability to deploy advanced digital solutions effectively. Furthermore, management experience gaps exacerbate the challenge: senior leadership in SMEs may have limited understanding of digital strategy, resulting in transformation plans that are either overly ambitious, insufficiently actionable, or lack phased implementation roadmaps. These constraints collectively make digital transformation a high-risk endeavor for SMEs, where missteps can lead to wasted resources, operational disruption, and missed growth opportunities.

In response to these challenges, this paper proposes a “lightweight strategic path” for SME digital transformation. This approach emphasizes low-cost, easily implementable, and phased strategies that allow enterprises to adopt digital technologies incrementally while mitigating financial and operational risks. Unlike traditional large-scale IT deployments, the lightweight path prioritizes practical, actionable solutions that integrate technology adoption with management consulting principles. Specifically, it leverages systematic analysis, phased planning, and optimized resource allocation to enhance operational efficiency and organizational performance, forming a structured Systematic Operational Capability (SOC) framework for SMEs.

This paper aims to provide a comprehensive discussion of the lightweight digital transformation strategy by combining theoretical insights with practical management consulting experience. It covers multiple dimensions, including strategic analysis, technology and tool selection, implementation pathways, risk management, and empirical case validation. Through this integrated perspective, the study seeks to demonstrate how SMEs can achieve sustainable digital transformation in a cost-effective, manageable, and strategically coherent manner, ultimately improving operational resilience, decision-making capabilities, and market responsiveness.

## 2. Current State and Challenges of Digitalization in U.S. SMEs

Currently, the overall level of digitalization among small and medium-sized enterprises (SMEs) in the United States remains relatively low. Studies suggest that only around 30% of SMEs have fully integrated digital processes into their core business operations, while the majority still rely on manual or semi-digital workflows to manage day-to-day activities. This limited digital adoption not only constrains operational efficiency but also hampers the ability of SMEs to respond quickly to changing market conditions and customer demands [1].

SMEs face several key challenges in pursuing digital transformation. Budget constraints are a primary issue: large-scale enterprise resource planning (ERP) systems or customized software solutions are often prohibitively expensive for SMEs, making it difficult to justify high upfront investments. For example, a mid-sized manufacturing company in the Midwest attempted to implement a cloud-based ERP system, only to halt the project midway due to cost overruns that exceeded its annual IT budget.

Limited technical capabilities further impede transformation efforts. Many SMEs lack in-house IT expertise, making it difficult to maintain systems, analyze data, and optimize processes. For instance, a regional retail chain invested in an online inventory management tool but faced recurring operational disruptions because their staff were unfamiliar with data integration processes and error resolution, leading to inventory discrepancies and delayed order fulfillment.

Management experience gaps also pose significant barriers. SME leadership often has limited understanding of digital strategy, resulting in transformation plans that are overly ambitious or insufficiently phased. A small logistics firm, for example, attempted to digitize its scheduling and dispatch processes without a stepwise plan, causing confusion among employees and temporary drops in delivery efficiency.

Data security and risk awareness are additional concerns. Without specialized technical knowledge, many SMEs overlook cybersecurity measures and data protection during digital adoption. One case involved a family-owned food distributor that suffered a

minor ransomware attack after deploying an online ordering system without adequate security protocols, highlighting the vulnerabilities associated with rapid digital implementation.

Moreover, the long return-on-investment cycle and difficulty in quantifying benefits make SME decision-makers cautious about digital transformation. In practice, numerous SMEs have spent significant resources on ERP and other digital tools but failed to achieve expected outcomes due to poor implementation, employee resistance, or data migration challenges. These real-world examples underscore the necessity of a lightweight, phased digital transformation strategy that is affordable, practical, and minimizes operational disruption while still delivering measurable benefits.

### 3. Lightweight Strategic Path Framework

The lightweight strategy is designed to enable sustainable digital transformation for small and medium-sized enterprises (SMEs) within the constraints of limited budgets, staffing, and technological capabilities. Its core principles emphasize low cost, ease of implementation, phased progression, and scalability, ensuring that SMEs can adopt digital solutions without imposing excessive financial or operational burdens. Unlike large-scale, one-time digital overhauls, the lightweight approach prioritizes practical, incremental improvements, allowing enterprises to realize immediate operational benefits while gradually building internal capacity for more advanced initiatives.

A central aspect of this framework is the phased implementation of transformation initiatives. By breaking the digitalization process into manageable stages, each targeting high-value, low-risk business modules, SMEs can pilot new systems in small-scale environments, refine processes based on real-time feedback, and scale gradually. For example, a regional retail chain may first deploy a cloud-based inventory management tool for a subset of stores, optimize workflow integration and staff training, and then expand the system to additional locations. This phased approach minimizes disruption, reduces the likelihood of costly mistakes, and allows management to learn and adapt strategies before committing additional resources.

Equally critical is the integration and optimization of digital tools. SMEs are encouraged to select interoperable cloud-based solutions and SaaS platforms that can seamlessly communicate and share data, avoiding duplication of effort and excessive investment. By leveraging modular, off-the-shelf software, enterprises can combine customer relationship management (CRM), inventory control, and financial reporting tools into a coherent ecosystem. This integration not only streamlines workflows and improves operational visibility but also enables data-driven insights to inform decision-making across departments. For instance, linking sales data from a CRM system with inventory analytics can help managers identify stock shortages, optimize procurement, and reduce waste without requiring a fully customized ERP system.

Another essential element is a data-driven approach to decision-making. Throughout the transformation process, SMEs should collect and analyze operational data to evaluate the effectiveness of implemented tools and processes. Performance metrics such as time saved in routine tasks, error reduction, and process efficiency can provide tangible evidence of progress, guiding subsequent steps in the digitalization journey. This iterative, feedback-oriented methodology ensures that transformation outcomes are measurable, sustainable, and continuously improvable.

The lightweight strategic path also emphasizes capacity building and knowledge development within the organization. By implementing incremental changes, SMEs can gradually cultivate internal technical expertise, digital literacy, and process management capabilities. Employees gain hands-on experience with new tools, while managers develop a better understanding of technology-enabled decision-making. Over time, this accumulated knowledge forms a foundation for more ambitious digital initiatives, such as

predictive analytics, AI-driven customer insights, or fully integrated ERP systems, without overwhelming the enterprise at the outset.

The primary advantage of this framework lies in its alignment with the practical realities and constraints of SMEs. By minimizing upfront costs, lowering implementation risks, and supporting gradual learning, the lightweight strategy enables enterprises to achieve measurable operational improvements, enhance decision-making capabilities, and strengthen competitiveness in dynamic markets. Moreover, this approach ensures that digital transformation becomes a sustainable, continuous process rather than a one-off project, allowing SMEs to adapt rapidly to evolving customer expectations, technological innovations, and market conditions. Ultimately, the lightweight strategic path provides a structured, actionable roadmap for SMEs to embark on a cost-effective, scalable, and strategically coherent digital transformation journey.

#### **4. Lightweight Digital Transformation Solutions**

In a lightweight digital transformation strategy, SMEs should prioritize digital solutions that are low-cost, easy to deploy, and scalable, enabling meaningful operational improvements without excessive financial or technical burden. Software-as-a-Service (SaaS) applications, including CRM, ERP, financial management, and human resource management tools, allow SMEs to digitize core business processes rapidly, while cloud services and low-code platforms further reduce IT costs and maintenance pressure. Automation and data analytics tools support operational efficiency and data-driven decision-making, such as sales forecasting, inventory optimization, and customer behavior analysis. For example, a small retail chain can integrate a cloud-based CRM with an automated inventory tracking system to synchronize customer orders and stock levels in real time, improving service quality and reducing manual errors [2].

Beyond selecting appropriate tools, SMEs must also consider the role of collaboration and resource sharing in digital transformation. Trust and reciprocity are critical for effective capacity sharing among firms when SMEs adopt cloud platforms, SaaS applications, or low-code tools, as they often rely on shared infrastructure, external consulting services, or vendor support [3]. Establishing trust and reciprocal relationships ensures resources are utilized efficiently, responsibilities are clear, and collaborative processes function smoothly. Integrating these principles into the phased, low-risk approach of lightweight digital transformation enhances both operational efficiency and the long-term sustainability of the initiatives.

Finally, risk management and sustainability are critical to achieving lasting benefits. Digital transformation initiatives may encounter technical failures, employee resistance, or data security challenges. SMEs can mitigate these risks through phased implementation, clear KPIs to track progress, comprehensive training programs, and contingency planning. By adopting these measures, enterprises not only minimize potential disruptions but also ensure that the results of their digital transformation efforts are measurable, reliable, and sustainable over the long term. In practice, this approach allows SMEs to gradually build internal capabilities, realize tangible operational improvements, and establish a foundation for continuous digital maturity, all while keeping costs and risks under control [4].

#### **5. Application and Insights from Management Consulting Practice**

Management consulting plays a critical and multifaceted role in enabling small and medium-sized enterprises (SMEs) to successfully implement lightweight digital transformation strategies. Consultants provide structured guidance that bridges the gap between technological capabilities and business objectives, helping SMEs navigate budget constraints, limited IT expertise, and operational complexities. The consulting process typically unfolds across several interconnected stages, each designed to maximize impact while minimizing disruption [5].



The initial stage is enterprise assessment and diagnostic analysis. Consultants systematically evaluate existing business processes, IT infrastructure, data management practices, and organizational structures. By identifying inefficiencies, workflow bottlenecks, and digital capability gaps, this assessment helps pinpoint priority areas for intervention. For example, in a mid-sized U.S. manufacturing firm, consultants discovered that manual tracking of inventory led to frequent stockouts and delayed order fulfillment. By quantifying the inefficiencies, they were able to recommend targeted digital interventions with measurable benefits [6].

Following the diagnostic phase, consultants work on digital transformation strategy design, which aligns the enterprise's operational needs, resource availability, and long-term goals with a phased implementation roadmap. Unlike one-time, large-scale IT projects, the lightweight approach prioritizes initiatives that deliver high-value outcomes quickly and can be scaled over time. For instance, a regional retail chain began its transformation by integrating a cloud-based CRM system to centralize customer interactions, followed by phased deployment of automated inventory management and digital marketing tools. This staged approach ensured that staff could adapt gradually to new systems, reducing resistance and improving adoption rates.

The implementation and optimization phase is where consulting expertise is most actively applied. Consultants assist in selecting appropriate tools, integrating systems, and establishing monitoring mechanisms. Each step includes performance tracking, iterative adjustments, and knowledge transfer to internal teams. In practice, this could involve guiding employees on data entry standards, configuring workflow automation, or developing dashboards for real-time operational insights. For example, a small logistics company improved delivery scheduling accuracy by 35% after consultants helped implement a cloud-based route optimization tool, trained staff on its use, and monitored performance metrics over several weeks.

Outcome evaluation and capability building constitute the final, yet ongoing, stage of the consulting process. By establishing KPIs, performing regular audits, and training internal teams, consultants ensure that digital transformation gains are sustainable. SMEs not only realize immediate improvements in efficiency and accuracy but also build internal competencies that enable continuous digital evolution. For example, after implementing a phased SaaS solution, a mid-sized services company trained its internal IT team to manage automated reporting tools, allowing the firm to maintain and expand digital capabilities independently, reducing reliance on external support.

Real-world case studies reinforce the effectiveness of management consulting in lightweight digital transformation. In one instance, a U.S.-based specialty retailer achieved a 30% reduction in customer response times and a 25% improvement in inventory turnover through incremental CRM integration and workflow automation guided by consultants. Another example involves a regional logistics firm that reduced manual scheduling errors by 40% while simultaneously training employees to interpret and act on analytics insights, ensuring that improvements were both immediate and sustainable.

Overall, these examples highlight several important insights. First, management consultants play an irreplaceable role in aligning technology adoption with business strategy, ensuring that digital tools are not implemented in isolation but as part of an integrated operational ecosystem. Second, phased, low-cost interventions enable SMEs to achieve tangible results without overextending financial or human resources. Third, capability-building and knowledge transfer are crucial to sustaining transformation gains, allowing SMEs to continue improving processes, leveraging data, and scaling digital solutions independently. Collectively, these practices demonstrate that lightweight digital transformation is not only feasible but can also deliver substantial operational, strategic, and competitive advantages when guided by experienced consultants.

## 6. Conclusion and Future Outlook

The lightweight strategic approach provides small and medium-sized enterprises (SMEs) with a practical, low-cost, and low-risk pathway for digital transformation. By implementing initiatives in phases, prioritizing high-value processes, and optimizing the integration of digital tools, SMEs can steadily enhance operational efficiency while simultaneously building internal digital capabilities. This approach allows enterprises to experiment with new technologies, measure outcomes, refine processes incrementally, and adapt to emerging business requirements, all while minimizing disruption and financial exposure. Furthermore, it enables SMEs to cultivate a culture of digital awareness, where employees gradually develop the skills and confidence necessary to operate and leverage digital tools effectively.

Despite its advantages, the lightweight strategy is not without limitations. Rapid technological advancements may render selected tools or platforms outdated, requiring continuous monitoring and timely upgrades. SMEs remain highly dependent on internal digital talent and external consulting expertise, which can constrain scalability and slow the pace of transformation if resources are limited. Additionally, lightweight initiatives may sometimes emphasize short-term operational gains over long-term strategic alignment, potentially overlooking holistic enterprise-wide integration. To address these challenges, SMEs should integrate lightweight strategies into a broader, sustainable digital transformation roadmap that anticipates technological trends, aligns with long-term business objectives, and fosters the ongoing development of internal capabilities.

Management consulting proves particularly valuable in supporting lightweight transformation efforts. Consultants provide strategic guidance, assist with tool selection and system integration, and facilitate phased implementation. By combining advisory support with hands-on implementation, consulting interventions help ensure that digital transformation outcomes are not only measurable and practical but also sustainable over the long term. Evidence from real-world cases demonstrates that SMEs working with consultants are better equipped to navigate the complexities of digital adoption, optimize workflows, reduce implementation risks, and achieve tangible improvements in operational performance.

Looking forward, SMEs should continue to monitor emerging technologies, invest in internal digital skills, and align lightweight strategies with long-term planning. This holistic approach enables enterprises to maintain a competitive edge, scale digital initiatives effectively, and ensure that improvements are sustained over time. In essence, the combination of lightweight digital transformation and strategic consulting provides a feasible, evidence-based, and actionable pathway for SMEs to achieve meaningful digitalization, improve operational efficiency, and secure enduring competitiveness in an increasingly digital and dynamic business environment.

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