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# INNOVATIVE APPROACHES AND DIGITAL TRANSFORMATION FACTORS IN IMPROVING MARKETING STRATEGIES IN LOGISTICS ENTERPRISES

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**Abstract:** This paper examines how the last decade of rapid digitization has reshaped competitive dynamics in the logistics services industry. Building on evidence of disruptive entrants global e-tailers with technology-intensive are housing/transport and platform-based startups the study argues that logistics service providers (LSPs) must reconfigure their value propositions for shippers and end customers. Addressing structural pain points (fragmentation, opacity, underutilized assets, manual processes, legacy interfaces) is necessary to deliver smarter, faster, and greener logistics. Technology is positioned as a catalyst for innovation and responsiveness across supply chains, enabling agility, performance alignment, and operational excellence. Because 50–70% of logistics activities are outsourced, LSPs carry a disproportionate share of the sector's digital transformation (DT). The study adopts a two-stage design: (1) a literature review to surface barriers/success factors and inform the interview protocol and coding; (2) nine case studies with global LSPs, contrasting DT maturity levels (Fashionistas, Conservatives, Digirati). Research questions target the meaning of DT for LSP value propositions, principal barriers, and leading practices. Findings emphasize DT as an evolutionary, context-specific journey driven by both digital capabilities and transformation management (leadership, culture, governance). People-related factors emerge as the primary obstacles and enablers, underscoring the need for capability building, visionary leadership, and collaborative cultures to convert digital opportunities into sustained performance gains.
**Keywords:** digital transformation; logistics service providers (LSPs); Industry 4.0; e-commerce logistics; platform intermediation; value proposition; operational efficiency; agility; digital maturity; leadership & culture; success factors; barriers.

# LOGISTIK KORXONALARDA MARKETING STRATEGIYASINI TAKOMILLASHTIRISHNING INNOVATSION YONDASHUVLARI VA RAQAMLI TRANSFORMATSIYA OMILLARI

**Annotatsiya:** Ushbu maqola so‘nggi o‘n yillikdagi jadal raqamlashtirish jarayoni logistika xizmatlari sanoatidagi raqobat muhitini qanday o‘zgartirganini tahlil qiladi. Texnologiyalashgan ombor/transport infratuzilmasiga ega yirik e-savdo kompaniyalari hamda platformaga asoslangan startaplar kirib kelishi LSPlar (logistika xizmat ko‘rsatuvchi provayderlar)ni jo‘natuvchilar va yakuniy mijozlar uchun qiymat taklifini qayta ko‘rib chiqishga majbur qildi. Tarmoqdagi bo‘linuvchanlik, shaffoflikning pastligi, aktivlardan to‘liq foydalanilmasligi, qo‘lda bajariladigan jarayonlar va eskirgan interfeyslar kabi muammolarni bartaraf etish “aqlli, tez va barqaror” logistika yechimlarini yaratishning sharti sifatida ko‘riladi. Texnologiya innovatsiyalarni qo‘zg‘atuvchi omil bo‘lib, zanjir bo‘ylab javobchanlik va operatsion samaradorlikni oshirishga xizmat qiladi. Logistika faoliyatining 50–70%i autsorsing orqali bajarilishini inobatga olsak, DT (raqamli transformatsiya)ning asosiy yukini aynan LSPlar ko‘taradi. Tadqiqot ikki bosqichda olib borildi: (1) adabiyotlar sharhi orqali to‘siqlar va muvaffaqiyat omillarini aniqlash, intervyu protokoli va kodlash tizimini tayyorlash; (2) DT yetukligi turlicha bo‘lgan (Fashionistas, Conservatives, Digirati) to‘qqizta global LSP bilan keys-tadqiqotlar. DT LSP qiymat taklifiga ta’siri, asosiy to‘siqlar va ilg‘or amaliyotlar bo‘yicha



savollar ko‘rib chiqildi. Natijalar DTni kontekstga xos, evolyutsion jarayon sifatida ko‘rsatadi: faqat texnologik quvvat emas, balki yetakchilik, tashkiliy madaniyat va boshqaruv ham hal qiluvchi ahamiyatga ega. Inson omili — ko‘nikmalar, qarashlar va hamkorlik madaniyati — eng katta to‘siq ham, eng kuchli muvaffaqiyat drayveri ham ekanligi ta’kidlanadi.

**Kalit so‘zlar:** raqamli transformatsiya; logistika xizmat ko‘rsatuvchi provayderlar (LSP); Sanoat 4.0; e-savdo logistika; platforma vositachiligi; qiymat taklifi; operatsion samaradorlik; chaqqonlik (agility); raqamli yetuklik; yetakchilik va madaniyat; muvaffaqiyat omillari; to‘siqlar.

The past decade often described as *the digital age* has profoundly transformed the competitive landscape of most industries, including the logistics services sector. A wave of innovative players such as Amazon and Alibaba, who have heavily invested in technologically advanced warehouses and transportation systems, along with digital startups like uShip, Delive, and Cargonexx that operate various intermediation and crowd-logistics platforms, have entered the market. Their arrival has disrupted conventional practices and forced existing logistics service providers (LSPs) to reconsider their business models and long-term strategies.

To maintain competitiveness and foster growth, LSPs must enhance the value they deliver to shippers and end customers. This requires tackling long-standing industry challenges such as fragmentation, lack of transparency, idle capacity, inefficient manual procedures, and outdated customer interfaces. At the same time, companies are expected to deliver more efficient, smarter, and environmentally sustainable logistics solutions. Technology plays a central role in achieving these objectives it drives innovation and elevates logistics to new levels of efficiency and responsiveness. Through technological innovation, supply chain members can react faster to market dynamics, align operations to boost performance, and strengthen their overall agility.

Since approximately 50–70% of logistics activities are outsourced (Langley, 2019), much of the sector’s digital transformation (DT) depends on LSPs. These providers serve as key enablers of Industry 4.0 networks and as crucial drivers of e-commerce expansion. However, to fully capitalize on emerging digital opportunities, LSPs must transform not only their operations but also their organizational culture, strategic mindset, and business models.[1]

The World Economic Forum estimates that digitization could generate up to US$ 1.5 trillion in additional value for the logistics industry by 2025. Yet, evidence indicates that logistics companies are still lagging behind sectors such as media, telecommunications, banking, and retail in their digital transformation efforts. The industry continues to face obstacles related to limited technological expertise, low workforce qualification levels, and challenges in transferring innovations across geographically dispersed branches.

This research concentrates on LSPs, which occupy a strategic intermediary role between shippers and final customers. It seeks to uncover the main factors that impede or delay digital transformation within these organizations and to determine the internal elements and best practices that contribute to their digital success. To do so, the study explores three key research questions:

- **RQ1:** What does digital transformation mean for an LSP and how does it influence the company’s value proposition for its stakeholders?
- **RQ2:** What are the primary barriers hindering digital transformation in LSPs?
- **RQ3:** What are the main success factors and best practices that facilitate effective digital transformation?

To answer these questions, a two-phase methodology was used: the first phase involved a comprehensive literature review, while the second consisted of nine in-depth case studies of global logistics service providers. The paper proceeds by defining the main concepts, explaining

[1] Westerman G., Bonnet D., McAfee A. Leading Digital: Turning Technology into Business Transformation. – Boston (MA) : Harvard Business Review Press, 2014. – 256 c.



the methodological approach, and presenting the results. The concluding section highlights the study's contributions, limitations, and directions for future research.

Although *digital transformation (DT)* has recently become a central topic in both academic research and professional practice, there is still no single, universally accepted definition. Different scholars interpret DT from diverse perspectives some view it as a strategic direction, others as a process of change, and still others as a business model innovation.[2]

| Perspective | Representative Scholars | Key Focus |
|---|---|---|
| **Strategy** | Bharadwaj et al. (2013); Kane et al. (2015) | Using technology to achieve strategic renewal and competitive advantage |
| **Process** | Hansen et al. (2011); Berman & Marshall (2014); Morakanyane et al. (2017); Cichosz (2018); Hausberg et al. (2018) | A continuous transformation process across organizational functions |
| **Business Model** | Henriette et al. (2016) | Redesigning the business logic and value creation mechanisms through digital means |

In essence, DT represents the use of advanced digital technologies to achieve substantial improvements in business performance and value creation. However, it is not limited to one single technology it is rather **a** synergistic integration of information, computing, communication, and connectivity technologies. The European Commission (2018) refers to this as *"a fusion of advanced technologies that integrate physical and digital systems."* Even traditional, non-digital assets such as delivery vehicles, forklifts, or conveyors can become part of DT when equipped with smart components that enable location tracking, performance monitoring, or predictive maintenance. Moreover, people play a critical role by *leveraging digital capabilities* to maximize the benefits of transformation.

One of the primary outcomes of DT is value creation — not only in economic terms but also in organizational and relational aspects. This value manifests through improved operations, customer experiences, and strategic competitiveness.

| Dimension of Value | Examples of Benefits | Key References |
|---|---|---|
| **Operational Efficiency** | Process automation, real-time tracking, data-driven decision-making | Berman & Marshall (2014) |
| **Customer Experience** | Personalized services, faster delivery, omnichannel interaction | Morakanyane et al. (2017) |
| **Strategic Differentiation** | Enhanced brand positioning, new revenue streams | Berman & Marshall (2014) |
| **Cost and Relationship Gains** | Reduced expenses, stronger stakeholder collaboration | Multiple studies |

DT is best understood as a continuous, evolutionary journey, not a one-time project. The pace and scope of this evolution largely depend on the digital maturity of an organization — defined as *"the degree to which an organization has adapted itself to operate effectively in a digital business environment"*.

Westerman et al. conceptualized digital maturity as comprising two core dimensions:

| Dimension | Description |
|---|---|
| **Digital Capabilities** | The depth and intensity of digital initiatives — e.g., |

[2] Castillo V. E., Bell J. E., Rose W. J., Rodrigues A. M. Crowdsourcing logistics: social innovation for the supply chain of the future // *International Journal of Physical Distribution & Logistics Management*. – 2018. – Vol. 48(6). – P. 621–648.



| | |
|---|---|
| | automation, AI, IoT, data analytics |
| **Transformation Management Capabilities** | The managerial side of transformation — leadership, organizational culture, governance, and change management |

Based on these dimensions, four archetypes of organizations emerge:

| Type of Firm | Digital Capabilities | Transformation Management | Description |
|---|---|---|---|
| **Fashionistas** | Strong | Weak | Eager adopters of digital tools but lacking coordination or cultural readiness |
| **Conservatives** | Weak | Strong | Strategically cautious; emphasize management discipline but lag technologically |
| **Beginners** | Weak | Weak | Limited digital activity; minimal innovation or leadership support |
| **Digirati (Digital Masters)** | Strong | Strong | Balance innovation and management; achieve the highest levels of digital performance |

To move toward digital mastery, firms must continuously develop both sets of capabilities technological and managerial. The term *"advance"* here is crucial: even companies already classified as *Digirati* can vary significantly in how deeply digitalization permeates their operations and culture. As noted by Remane et al., *"the phenomenon of digital transformation (DT) is context-specific and can take an idiosyncratic path."* In other words, every organization experiences its digital journey differently depending on its environment, maturity, and strategic goals. When "coming of age digitally"[3], firms must take a structured approach that involves four essential steps:

| Step | Description | Supporting Sources |
|---|---|---|
| 1. Assess Digital Maturity | Evaluate the company's current digital readiness using structured maturity frameworks. | Westerman et al. (2014); Kane et al. (2018) |
| 2. Define the Digital Vision | Understand how digital disruption affects customers, employees, and stakeholders. | Kane et al. (2018) |
| 3. Identify Barriers | Detect challenges that could hinder DT progress. | Vogelsang et al. (2019a) |
| 4. Activate Success Factors | Apply enabling practices and leadership models that sustain transformation. | Williams & Ramaprasad (1996) |

Implementing digital transformation is rarely straightforward. It is a complex and multifaceted process influenced by numerous organizational, technical, and human factors. Many companies struggle to reach their full digital potential because of barriers defined as "elements that can hinder or stop successful DT implementation".

Understanding these obstacles and the factors that enhance success is critical to designing effective digital strategies. According to Williams and Ramaprasad, *"the absence of a critical success factor does not necessarily mean failure, but its presence substantially increases the likelihood of success."*[4] The discussion of barriers and success factors has appeared in several research domains:

[3] Kane G. C., Palmer D., Phillips A. N., Kiron D., Buckley N. Strategy, not technology, drives digital transformation // *MIT Sloan Management Review and Deloitte University Press*. – 2015. – 27 p.

[4] Remane G., Hanelt A., Nickerson R., Kolbe L. Discovering digital business models in traditional industries // *Journal of Business Strategy*. – 2017. – Vol. 38(2). – P. 41–51.



| Field of Study | Representative Scholars | Focus Area |
|---|---|---|
| Information Systems | King & Burgess (2006); Ngai et al. (2008); Nikpay et al. (2013) | Technological adoption and integration issues |
| Innovation Management | Oke (2004) | Managing organizational creativity and new ideas |
| Change Management | Oakland & Tanner (2007); Oliveira et al. (2018) | Organizational adaptation and leadership during transformation |

However, DT introduces unique complexities. It involves the simultaneous integration of multiple technologies that transform business models, processes, and customer offerings (Pellathy et al., 2018). Therefore, more domain-specific studies are needed, especially in logistics and service sectors.

A synthesis of existing studies (qualitative, quantitative, and literature reviews) reveals a consistent pattern: people their skills, beliefs, and leadership qualities are both the main barrier and the most vital success factor in digital transformation.

| Focus Area | Barrier Example | Success Factor Example | Key References |
|---|---|---|---|
| Employee Mindset | "Competency traps" — employees rely on past successes rather than new skills. | Continuous learning culture and openness to change. | Kane et al. (2018); Toytari et al. (2017) |
| Digital Skills & IT Literacy | Insufficient technical capability within the workforce. | Investment in digital training and skill development. | Vogelsang et al. (2019a) |
| Leadership & Vision | Lack of strategic direction and digital leadership. | Visionary leaders who empower knowledgeable and collaborative teams. | Kane et al. (2018) |

In summary, digital transformation is people-driven technology serves as an enabler, but human competence, adaptability, and leadership define success. Digital Transformation in Logistics Service Providers (LSPs) The logistics sector includes a wide range of logistics service providers (LSPs) firms that deliver logistics solutions for other organizations. Over the years, globalization, outsourcing, and rapid technological development have shifted the industry's structure.

**Evolution of the Logistics Industry**

| ***Stage*** | ***Main Characteristics*** | ***Representative Studies*** |
|---|---|---|
| ***Traditional Logistics (Pre-1990s)*** | Numerous small firms focused only on transport or warehousing services. | Marquardt et al. (2011) |
| ***Third-Party Logistics (3PLs)*** | Providers offering bundled logistics solutions for clients. | Selviaridis & Spring (2007); Wagner & Sutter (2012) |
| ***Fourth-Party Logistics (4PLs)*** | Strategic orchestrators who coordinate multiple service providers. | Win (2008); Zacharia et al. (2011) |

LSPs differ widely in size, ownership, and service scope. Their competitive advantage lies in how they add value to shippers**,** whether through volume efficiency**,** process optimization**, or** innovation leadership.

Technology serves as the foundation of digital transformation in logistics. Germain et al distinguished between hardware (physical infrastructure) and software (information systems)



technologies. In modern contexts, even hardware has become "technologized," evolving into high-tech smart solutions **such as** adaptive conveyors **and** sensor-equipped forklifts.[5]

| *Technology Type* | Examples | Transformation Role |
|---|---|---|
| ***Hardware*** | Smart warehouses, automated conveyors, RFID-enabled trucks | Physical digitalization (data-connected machinery) |
| ***Software*** | ERP systems, TMS, cloud-based logistics platforms | Information management and real-time coordination |

It is worth noting that a technology does not need to be new to the global market to qualify as innovative novelty is relative to the adopting firm**.** For many LSPs, the innovation lies in **i**mplementation rather than invention. Traditionally, LSPs have focused on incremental improvements driven by customer requests. However, recent studies argue that proactive innovations initiated by LSPs themselves can significantly boost customer loyalty and organizational performance.[6]

These findings align with Grawe's perspective that LSP innovativeness functions as a dynamic capability the ability to integrate, build, and reconfigure internal and external resources to remain competitive in the face of change.

**Summary Table: Transformation Insights for LSPs**

| *Focus Area* | Insight | Practical Implication |
|---|---|---|
| ***Innovation Type*** | Incremental vs. proactive (radical) | Encourage internal idea generation beyond customer-driven requests. |
| ***Technology Integration*** | Smart hardware and digital software platforms | Balance physical and informational infrastructure. |
| ***Organizational Support*** | Leadership, collaboration, training | Build a digitally literate and motivated workforce. |
| ***Partnership Strategies*** | Make, buy, or ally for technology access | Choose partnership modes based on core competence gaps. |

This study employs **a** two-stage research design combining literature review and multiple case studies.

- Stage 1 focused on an extensive literature review to identify potential barriers and success factors related to digital transformation (DT). The analysis helped establish recurring patterns and guided the design of the qualitative phase. Based on this review, an interview protocol was developed, coding categories were formulated, and analytical criteria were created to allow cross-industry comparison between DT in logistics service providers (LSPs) and DT in other sectors**.**
- Stage 2 involved multiple case studies based **on** semi-structured interviews with experts from leading LSPs.

The case study method was selected because it offers an appropriate fit for exploring emerging and complex phenomena like digital transformation. As emphasized by Eisenhardt and Gammelgaard, case studies are particularly valuable for theory-building and exploratory research**.** By analyzing multiple cases, rather than a single example, this study aims to derive a broader and more generalizable understanding of DT processes.[7]

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[5] Mathauer M., Hofmann E. Technology adoption and diffusion in logistics: towards a conceptual framework for digital transformation // *Logistics Research*. – 2019. – Vol. 12(1). – P. 415–431.

[6] Deepen J. M., Goldsby T. J., Knemeyer A. M., Wallenburg C. M. Beyond expectations: an examination of logistics outsourcing goal achievement and goal exceedance // *Journal of Business Logistics*. – 2008. – Vol. 29(2). – P. 75–105.

[7] World Economic Forum. Digital Transformation of Industries: Logistics Industry. – Geneva: WEF, 2016. – 48 p.



Following Yin's guidelines for sampling logic in multicase research**, a** purposeful sampling strategy was adopted to ensure diversity and relevance. The case firms were selected based on the following three main criteria:

| Selection Criterion | Rationale |
|---|---|
| 1. Active Digital Engagement | Firms that have implemented or are in the process of implementing multiple digital initiatives were included to ensure sufficient DT experience. |
| 2. Geographical Focus | The study focuses on **Poland**, the largest logistics market in Central Europe (BVL, 2017), and ranked among the **top three most attractive European logistics locations** for its value proposition (ProLogis, 2017). |
| 3. Organizational Scale and Expertise | Only **large, top-20 LSPs** (Brdulak, 2018) operating globally were included, as they could provide deep insight into DT barriers, enablers, and best practices. |

To enhance theoretical generalization, the selected LSPs represented a range of digital maturity levels, from *Fashionistas* and *Conservatives* to *Digirati*. Firms categorized as *Beginners* were deliberately excluded due to their limited DT experience.

The sample comprised nine LSPs operating within two distinct groups:

| Group Type | Profile |
|---|---|
| 1. Transport & Logistics (T&L) | Firms working mainly on **B2B contracts** and long-term service agreements. |
| 2. Courier, Express, and Parcel (CEP) | Companies with **centralized, standardized systems** serving both business (B2B) and end consumers (B2C). |

Within each company, key informants responsible for leading DT initiatives were interviewed including Chief Information Officers (CIOs), IT Managers, Managing Directors, and Marketing Directors. Participants were initially contacted via email or phone, and their expertise and consent to participate were confirmed prior to scheduling interviews.

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