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Digital Pricing Transformation & Pricing Technology

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Abstract: *This paper explores key trends in B2B pricing within the realm of digital technologies. The focus is on how pricing strategies in B2B markets evolve in response to digital transformation, especially in the context of contemporary trends such as the ongoing digital revolution. The discussion delves into the intersection of pricing and artificial intelligence, examining how AI technologies impact B2B pricing models. The research aims to provide insights into the intricate relationship between digital advancements and the transformation of pricing strategies in B2B sectors.*

Furthermore, this paper commences with a literature review and case study analysis to discern the impact of digital technologies on pricing models. Next, historical data and economic indicators are scrutinized to understand how businesses navigate pricing challenges during digital transformation. Lastly, the paper investigates the dynamics of pricing technology and its adoption in B2B markets in the digital age.

1. INTRODUCTION

Revolutionary business strategies, data analytics, and emerging technologies are drastically reshaping price administration in B2B markets. More and more firms are initiating digital pricing transformations to adapt to the ever-evolving macro and micro environments, seeking rapid and enduring value generation, and reinforcing and augmenting their competitive edge. To achieve efficacy, pricing transformations and the choice of pricing technologies must be rooted in a complete overhaul of the existing pricing process, taking into consideration the integrated business objectives and pricing tactics and addressing the specific demands of the company. Pricing has become a key element in new business models in the era of digitization. At the same time, price management is facing significant changes, opportunities, and challenges brought about by new business models, and the volume and quality of data that create entirely new potential. Technologies such as artificial intelligence, robotic process automation (RPA), and cloud applications for faster data analysis and storage often set the stage for comprehensive, real-time data-driven pricing (Beutin et al., 2020). Such changes not only impact business models but also create opportunities for competitive advantage and value-oriented products (Beutin et al., 2020; Karvounakis, 2021). Research shows that innovations in pricing are a potent but often underestimated source of success (Hinterhuber and Liozu, 2014; Copperberg & Vendavo, 2023). Innovative pricing models with the help of technological advancements are new pathways to achieving competitive advantage through pricing, which involves transforming transactional relationships into long-term partnerships (Cöster et al., 2022).

2. THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK OF DIGITAL PRICING

2.1. The Shift from Traditional to Digital Pricing: Drivers and Influencing Factors

Traditional pricing strategies have long been a cornerstone of commerce, encompassing methods such as cost-plus pricing, competition-based pricing, and value-based pricing, each with its

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unique approach. Despite the merits of these traditional methods, they also present significant limitations, such as a lack of personalization, inflexibility, an overemphasis on cost or competition, and limited data usage. This lack of data-driven decision-making can result in missed opportunities for profit maximization. Traditional pricing methods often fail to consider individual customer preferences, willingness to pay, or purchasing behavior, leading to suboptimal outcomes. In the increasingly digital and interconnected world, these methods have struggled to adapt to the evolving market dynamics and customer expectations.

The shift from traditional to digital and dynamic pricing is driven by several key factors, including globalization, increased competition, technological advancements, and E-commerce Growth. As businesses expand their reach, they must navigate different markets, customers, and economic conditions. Digital pricing allows companies to tailor prices to various regions based on local market conditions and consumer behavior. In highly competitive markets, businesses need to adjust prices quickly to maintain a competitive edge. Digital pricing enables real-time price adjustments based on changes in market conditions. The development of AI, machine learning, and big data analytics has made it possible to analyze vast amounts of data for pricing. These technologies enable businesses to accurately predict trends and customer behavior, allowing them to optimize prices accordingly. The contemporary consumer seeks personalized experiences, and this expectation extends to pricing strategies. Businesses can harness data and technology to devise personalized pricing strategies that cater to individual preferences. The e-commerce sector's growth has made price comparisons effortless for customers, compelling businesses to adopt competitive and dynamic pricing.

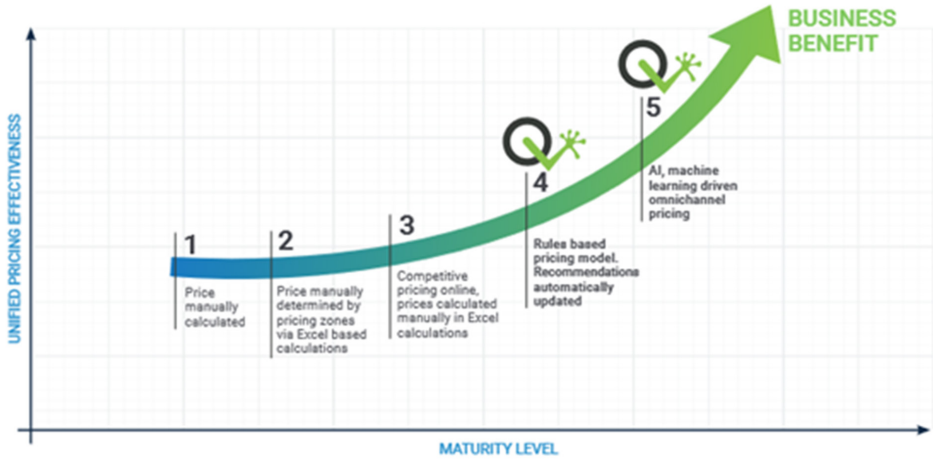

Figure 1. Evolution of pricing – from basic Pricing to Pricing model revolution
Source: Gartner, 2020

2.2. B2B Sales Transformations and Pricing Model Revolution

Digital transformation is a multifaceted process that consequently alters sales management (Guenzi & Habel, 2020). The boundaries between „Industry 4.0" and sales processes are blurring, enhancing synergistic benefits, encouraging company representation, and leading to a strong competitive advantage. In the era of digitization, customers have easier access to information, and this process begins far before the buying phase. Decisions have become more rational, and market fragmentation has distanced companies from mass marketing, in some cases ignoring traditional media (Emmer, 2019). According to forecasts, up to 80% of the B2B interactions between buyers and sellers will be conducted through digital channels by 2025 (Gartner,

2020). However, many companies refuse to undergo digital transformation even though they recognize its significance (Guenzi & Habel, 2020).

The future of B2B market sales lies in consistent adaptation and transformation, underpinned by the synergistic connection among **Hyperautomation** (the application of a comprehensive suite of tools that mechanize and augment business procedures), **Digital scalability** (utilizing new capabilities and digital resources to help sellers evolve into digital-priority vendors and reform sales enablement practices), and **Artificial Intelligence** (shifting from predominantly analog decision-making to automated, algorithm-driven decisions, which assist in aligning sales procedures, channels, and seller competencies around customers) (Gartner, 2020).

According to Zatta (2023), the Pricing model revolution refers to a significant and transformative change in the way businesses approach and structure their pricing strategies. This revolution often involves the adoption of new methodologies, technologies, or innovative approaches to determine the prices of products or services. The foundation of this radical shift in how businesses capitalize on the value they offer their clients is made up of specific catalysts that Zatta (2023) classifies into four categories: technological innovation, data science progress, new ecosystems, and marketing of the future. These are the driving forces behind the pricing model revolution.

3. THE CONCEPT OF DIGITAL PRICING TRANSFORMATION

3.1. Digital Transformation and Automation – Trends and Preconditions

According to Dilmegani (2023), "digital transformation is the process of integrating digital technologies into all aspects of a business to respond to the market and changing business requirements. It aims to improve the efficiency of business operations and customer relationships. To achieve these goals, organizations need to update their systems, processes, organizations, and culture" (Dilmegani, 2023). Digital transformation pertains to the "process of using digital technologies to create new or modify existing business processes, culture, and customer experiences to meet changing business and market requirements" (Guenzi & Habel, 2020).

An IBM (2022) study found that 60% of organizations accelerated their investments in digital technologies due to COVID-19, and more than half (55%) have permanently adjusted their organizational strategies. They see that technology plays a key role in building resilience and adaptability, ranking it as the top external force that will impact their business in the near future, above regulatory concerns and market factors. Internet of Things (IoT, 79%), cloud platforms (74%), and artificial intelligence (52%) are the top technologies expected to deliver business results. The technology industry is one of the leading sectors in the world, with its share in global and regional GDP increasing annually. Experts identify the following leading trends in the industrial sector for 2023: Artificial Intelligence (AI), Blockchain, Robotic Process Automation (RPA), Industrial cloud platforms and XaaS, and Digital twins (Dilmegani, 2023).

New technologies make processes more manageable and efficient and, consequently, more appealing to price leaders (Lee, 2021). Digital transformation is a comprehensive expression denoting major technology-driven shifts across various business areas, such as human resources, supply chains, customer service, marketing, and finance systems. The forms of digital transformation can vary, ranging from integrating e-commerce features and introducing novel digital services to transitioning internal systems to the cloud. This change process should also be

viewed as an opportunity for innovation and improved pricing strategies (McCabe, 2023). Despite this, many companies refuse to undergo digital transformation, even though they recognize its importance (Guenzi & Habel, 2020).

3.2. Digital Pricing Transformation – an Overview

Digital Pricing Transformation refers to the modernization of pricing strategies and execution by leveraging digital technologies and data-driven insights. This is a significant shift from traditional pricing models, which are often simplistic, static, and lack personalization. Digital pricing transformation can help businesses overcome these limitations and tap into new growth opportunities. By leveraging technology, these new methods offer potential for dynamic, responsive, and personalized pricing strategies. A genuine digital pricing transformation signifies transcending beyond rule-regulated spreadsheets and abandoning the manual entry of competitor offerings into your database. It leverages dynamic pricing methods, as it auto-generates pricing guided by preset rules or data influenced by artificial intelligence (QuickLizard, 2021). Pricing transformations are adopted by organizations aiming to seize value rapidly and efficiently. This implies that B2B pricing proficiency hinges on precision, meticulousness, and speed, all of which are facilitated by Digital Pricing Transformations (McCabe, 2023).

Digital pricing transformation provides a wealth of advantages for enterprises aiming to maintain their competitiveness in the ever-evolving market landscape today.

Table 1. Key Advantages of Digital Transformation

	Advantages
Dynamic Pricing	The ability to adjust prices in real-time based on various factors, such as demand fluctuations, competitor actions, or customer behavior, can significantly boost revenue and profitability.
Increased Efficiency	Increased efficiency automation of the pricing process minimizes manual errors, improves speed, and allows businesses to react promptly to market changes, thereby enhancing overall efficiency.
Informed Decision-Making	An approach to pricing provides valuable insights into market trends and customer preferences, enabling businesses to make strategic pricing decisions.
Personalization	Digital pricing tools can segment customers based on their behavior, preferences, and buying history, allowing personalized pricing that enhances customer satisfaction and loyalty.

Source: Own processing

Digital pricing transformation can manifest in various directions and aspects, with its main expressions including:

- **Pricing Automation:** Pricing automation refers to the use of software or other digital tools to streamline and automate the process of setting, updating, and changing prices for products or services. This can be based on a wide range of factors, such as market demand, competitor pricing, cost of goods, and seasonality, and is often adjusted dynamically in real time. The goal of pricing automation is to improve efficiency, reduce manual errors, optimize pricing strategies, and ultimately increase profitability. This allows companies to make pricing decisions based on real-time data, analytics, and predetermined rules, thereby reducing the need for human intervention.
- **Dynamic Pricing:** Utilizing real-time data, algorithms, and AI to adjust prices dynamically based on various factors, such as market demand, competitor pricing, customer behavior, and time of day. This enables companies to maximize their profitability and

customer engagement. Dynamic pricing engines aim to pinpoint precise pricing that meets each company's objectives. For instance, an enterprise with ambitious profit targets will establish pricing meant to boost profits maximally, whereas a company favoring a larger market share will devise pricing designed to augment sales (QuickLizard, 2021).

- **Segmented Pricing**: Leveraging big data analytics to segment customers based on various characteristics (e.g., purchasing behavior, demographics) and optimize pricing strategies for each segment.
- **Price Optimization:** Advanced software and algorithms are used to determine the optimal price point that maximizes profit while maintaining customer satisfaction and market share.
- **AI and Machine Learning:** Utilizing AI and machine learning algorithms are utilized to predict market trends, customer purchasing behavior, and tailor prices accordingly. According to Gartner, the ultimate level of advantage is realized by integrating artificial intelligence (AI) and Machine Learning (ML) processes into pricing models. Algorithms can scrutinize customer behavior, enabling the system to propose the best pricing for each online engagement. AI and ML demonstrate considerable potential in the domains of inventory turnover and profit optimization. This technology comprehends how pricing influences sales and employs that knowledge to suggest perfect price points to achieve those objectives. Pricing at this stage spans across channels and incorporates extensive product data, pricing intelligence, and market data into its pricing suggestions (QuickLizard, 2021).

The goal of digital pricing transformation is not just to obtain the price right; it is also about enhancing customer experience, providing value, and driving business growth. Companies that successfully execute digital pricing transformations can achieve higher margins, improved customer loyalty, and a competitive edge in the marketplace.

3.3. Stages of the Digital Pricing Transformation Process

Digital transformation can impact all aspects of price management and allow innovative solutions throughout the different stages of the pricing process. Frohmann (2023) identifies the business model as the starting point of the transformation. The focus on the four components of the business model - target customers, customer value, value creation architecture, and profit model (especially „value to the customer") - is crucial for the success of digital pricing (Frohmann, 2023; Hermann, 2015).

For the transformation to fully deliver its advantages, the pricing strategy, staff roles, and process routines must change. Upon completion of the transformation, the enterprise witnessed a refined pricing process and enhanced pricing levels. This transformation has also influenced sales and marketing. Together, teams need to comprehend the effect of dynamic prices on their sales and marketing plans (QuickLizard, 2021).

As per the experts at KPMG (2017), the path to digital transformation is a continuous voyage filled with iterative procedures and shifting objectives. Nonetheless, we endeavored to classify the transformation process into four general phases: defining a digital vision and strategy, constructing customer propositions, formulating business design, and planning execution. Every company and transformation will have distinct requirements; hence, decision-makers should initially comprehend their organization's specific core pricing challenges and necessities (McKinsey, 2021).

According to McKinsey's research, to ensure its success, the digital pricing transformation requires progression through the following six stages (Hudelson et al., 2021):

Stage One: Designing and building the necessary pricing processes for the company

This comes down to evaluating the current systems and understanding exactly what is needed for this to occur. It may even require a change in the price-formation process at each stage. Owing to the increasing variety of available channels and the adoption of a more dynamic approach to accounting, the assessment of pricing systems and tools currently in use is crucial.

Stage Two: Choosing a technology for digital transformation

Before evaluating technologies and tools, an organization's needs must be defined through the prism of customer value, and a pricing strategy should be formulated that best serves the business, taking into account the nature of sales, ordering methods, and manufacturing. Since discounting practices can vary significantly within a given business, dynamic approaches such as micro-segmentation can help reduce this variability and provide more informed discount guidelines to the frontline.

Stage Three: Assessment of existing systems

Organizations differ in terms of how ready their systems are to support price changes; therefore, it is beneficial to evaluate their maturity against clear criteria and industry indicators. This assessment can help companies to identify the most significant gaps between their current and future processes. At higher levels of technological maturity, technical tools can support a company's transition to omnichannel sales, especially e-commerce, which is becoming increasingly common in B2B sales.

Stage Four: Designing future systems

Formulated requirements for desired pricing tools and technologies are needed, along with improvements to existing technologies and investments in new tools and systems. Organizations with the lowest level of technological maturity can derive significant benefits from implementing basic pricing tools and processes for productivity management and embedding them in their customer efficiency management processes. However, companies with institutionalized customer efficiency management processes could improve their pricing strategy execution by integrating deal CPQ capabilities into their CRM tools.

Stage Five: Assessment of capabilities and implementation of a new system

To ensure alignment between the solution and business, companies must tailor each set of solutions to their specific needs and consider costs beyond the initial implementation. Not every transformation requires many new technical tools. While high-tech maturity companies may be able to extend existing systems, such as CRM, those with low technological maturity may find new solutions difficult to reproduce and scale. Mandatory transformation activities include a detailed project management plan, a test of the user experience of front- and back-office applications, and a system for measuring the impact of the project and its success. These measures can help institutionalize updated processes and key performance indicators and ensure that implementation is sustainable.

Stage Six: Maintaining the systems and their added value

After the initial transformation, maintaining the benefits requires an ongoing assessment of the efficiency of pricing tools. Companies must make changes as necessary to adjust and adapt to new needs (Hudelson et al., 2021).

Pricing transformation is not a one-time initiative but an ongoing process that requires continuous assessment of business requirements. Companies that understand how pricing technology impacts productivity and are ready to adjust wherever and whenever necessary reap far more benefits in the long run (Lee, 2021).

3.4. Challenges of Digital Pricing Transformation for Effective Implementation

Although the shift to digital pricing is full of potential, it also introduces several challenges that businesses must overcome. Several factors influence the successful transition from traditional to digital pricing (Table 2).

Table 2. Factors Influencing The Successful Implementation

Factors	Description
Data Quality and Data Management	High-quality data and data management are essential for accurate and effective digital pricing. Businesses must ensure that they have reliable data sources and robust data management processes. With digital pricing, the volume of data that businesses must handle increases significantly. Ensuring the quality, security, and privacy of data is a significant challenge.
Technological Infrastructure and Technology Adoption	Implementing digital pricing requires a solid technological infrastructure, including the necessary hardware and software, as well as integration capabilities with existing systems. Implementing new pricing technologies requires investments in terms of time, funds, and resources. It also demands technical expertise for successful implementation and integration with existing systems.
Change Management	Transitioning to digital pricing requires changes in business processes and may encounter employee resistance. Effective change management is crucial for ensuring smooth implementation.
Personalization	Digital pricing tools can segment customers based on their behavior, preferences, and buying history, allowing for personalized pricing that enhances customer satisfaction and loyalty.
Organizational Readiness	The shift to digital pricing requires change management including staff training, process changes, and potential restructuring.
Regulatory Compliance	When implementing digital pricing, businesses must consider the legal and regulatory implications, ensuring that prices are fair and non-discriminatory. Businesses must ensure that their pricing strategies comply with all relevant regulations in order to avoid legal complications. This can be particularly difficult when dealing with dynamic and personalized pricing models.

Source: Own processing

A successful transformation requires auditing internal data and systems, considering what external data are needed, and identifying new capabilities that can better meet the organization's needs. Digital transformation can be a double-edged sword. If not implemented correctly, it can lead to unsatisfactory results or even generate losses. According to experts from KPMG (2017), the key moments in the implementation of digital initiatives are the involvement of leaders, planning, execution and expectations of adoption. Results show that B2B companies are aware of the potential margin benefits and efficiency of digital engagement and automation, but only 7% plan to activate the process in the next 1-2 years and 31% in the next 3-5 years (Rinn et al., 2021, Allan, 2022).

However, the operational application of "future pricing" poses significant challenges such as hiring new employees due to a lack of internal skills in the area of new technologies (49%), fear of negative customer reactions when changing the pricing model (53%), and above all, high investment costs for new technologies (54%) (Beutin et al., 2020). Digital pricing transformations have the potential to stimulate margin growth between 2% and 7% (Lee, 2021), but success depends on demonstrated leadership qualities and the commitment of key individuals. Tools and processes that are integrated with business objectives are necessary.

Digital pricing transformation is already being effectively employed across diverse industries. These examples (Table 3) provide a glimpse into how companies can leverage technology to implement dynamic, responsive pricing strategies that enhance profitability and customer satisfaction.

Table 3. B2B Companies Have Successfully Implemented Digital Pricing Strategies

B2B companies	Description
Grainger (n.d.)	A leading B2B industrial supply company, implemented a digital pricing strategy to optimize their long tail of products. They used advanced pricing software to adjust prices based on the competition, product type, and location. This granular approach allowed them to increase their overall profitability while maintaining customer satisfaction.
General Electric (n.d.)	GE uses advanced analytics and digital pricing software to optimize its pricing strategies across different product lines and regions. They take into account factors such as customer behavior, competitive landscape, and market dynamics. This digital pricing approach has helped GE realize more value for its diverse product portfolio.
BASF (n.d.)	One of the world's leading chemical companies has implemented a digital pricing system that allows them to dynamically adjust prices based on fluctuating raw material costs, supply-chain considerations, and market demand patterns. This has led to optimized profitability and improved response times to market changes.
Honeywell (n.d.)	Honeywell uses digital pricing tools to streamline pricing processes across its numerous divisions and product lines. By moving away from manual pricing methods, Honeywell has been able to make quicker pricing decisions, improve margins, and provide better pricing information to its sales team.
Cisco (n.d.)	Cisco, a worldwide technology leader, uses digital pricing tools and AI to segment customers and personalize pricing. They use data about customers' past behavior, business size, and potential value to offer tailored pricing and discounts. This approach has helped to increase revenue and improve customer relationships.
Hitachi (n.d.)	Hitachi changed the value creation architecture ("operating model") in one of its B2B business units a few years ago. The business model was transformed from "selling products" to "offering software-based services."

Source: Own processing

In each of these B2B instances, companies are leveraging digital pricing to make more precise, data-driven decisions. This shift not only helps in maximizing profitability but also in delivering an improved customer experience by providing more transparent and personalized pricing.

4. PRICING TECHNOLOGY AND KEY ELEMENTS TO ADOPTION

Pricing technology refers to digital tools and systems that companies use to plan, determine, analyze, and adjust their prices. Typically, these technologies leverage data, analytics, AI, and machine learning to optimize pricing strategies in a fast and efficient manner. By using digital technologies to optimize pricing decisions, improve customer experiences, and stimulate business growth, organizations can effectively respond to the changing dynamics of demand and supply in the digital age.

4.1. An Introduction to the Different Types of Pricing Technology Available Today

As the digital transformation of pricing continues to evolve, a variety of pricing technologies have emerged to facilitate this process. Digitization and automation as processes and phenomena contribute to and accelerate the trend for marketing analyses in the field of pricing and price formation

to not only be performed using Excel, SPSS, etc. but to be successfully implemented in management-accessible software, evolving in three directions: 1) pricing software; 2) marketing analysis software; and 3) forecasting analysis software. Many contemporary tools for marketing analysis can be useful in B2B pricing. The pricing tools range from those that handle simple automation tasks to sophisticated solutions that leverage advanced analytics, AI, and Machine learning (Table 4):

Table 4. Pricing Technologies

Pricing Technology	Description
Pricing Automation Software	Pricing automation software simplifies the pricing process by automating tasks such as data collection, price calculation, and price updating. This not only increases efficiency but also minimizes the risk of human errors and helps reduce manual interventions, saving time. Tools like Pricefx and Vendavo fall under this category.
Dynamic Pricing Tools	These are sophisticated tools that enable businesses to adjust their prices in real-time based on changing market conditions. They leverage real-time data feeds to monitor various factors such as demand, competition, and customer behavior. An example is the pricing algorithms used by ride-sharing apps or airline ticketing systems. Examples include Uber's surge pricing algorithm and Amazon's dynamic pricing tool.
Revenue Management Systems	Used predominantly in hospitality and airline industries, these systems help companies optimize their revenue by managing demand and adjusting prices accordingly. Systems like IDeaS, Duetto, and PROS are popular choices for revenue management.
Price Optimization Software	Price optimization software uses advanced algorithms and machine learning to determine the optimal price point that maximizes profit while ensuring customer satisfaction. It analyzes data on costs, competition, and customer behavior to recommend the best prices. These technologies use complex algorithms to analyze numerous variables such as sales history, product costs, competitor pricing, and customer demand. They then suggest the optimal price point that would maximize profitability. Tools like Zilliant, Pricemoov, and Pricefx offer such capabilities. Price optimization and management software is being increasingly used by B2B and B2B2C business models.
Predictive Analytics Tools	These tools use historical data and machine learning to predict future trends, customer behavior, and market conditions. This predictive capability can help businesses to proactively adjust their pricing strategies. Software like RapidMiner and Alteryx provide predictive analytics capabilities.
Competitive Pricing Intelligence	Competitive pricing intelligence tools monitor competitor prices and provide critical insights into their pricing strategies. They allow businesses to respond effectively to changes in competitor prices. Tools like Competera and Prisync offer such services.
AI and Machine Learning	AI and Machine Learning techniques are increasingly being integrated into pricing technologies to improve pricing decisions. They help in model complex pricing scenarios, predict outcomes, and continually learn from the results to refine the pricing models.

Source: Own processing

The pricing technology landscape today offers a wide range of solutions designed to cater to different business needs. According to Gartner and Deloitte's (2022) research among the most popular technological solutions for B2B pricing and price analysis for 2023 are: Deloitte Pricing Analytics, Periscope by McKinsey, Zilliant, Tableau, Power BI, IBM Watson Studio, SAS Marketing Automation, RapidMiner, Alteryx and Vendavo Pricing Solution. The choice of technology largely depends on the specific requirements, goals, and resources of the business. Businesses must select the technology that best aligns with their pricing strategy and overall business objectives.

The market for B2B Price Optimization and Management Software is projected to expand from a value of USD 479.00 Million in 2022 to reach USD 975.70 Million by the year 2030. This represents a Compound Annual Growth Rate (CAGR) of 10.70% throughout the forecast timeframe (Reportprime, 2023).

4.2. Key Elements and Important Factors by Pricing Technology Adoption

Adopting pricing technology can greatly enhance a company's ability to respond to market changes and make data-driven decisions, ultimately leading to increased profitability. However, before implementing any new technology, it is crucial to ensure ***compatibility*** with the existing IT infrastructure, including hardware, software, and other technological systems. Failure to do so may result in significant integration challenges and additional costs. Therefore, it is essential to have ***clear business objectives*** before adopting new technology, such as improving price consistency, increasing margins, or accelerating the pricing process. Pricing technologies heavily rely on data, so businesses must ensure they have reliable data sources and robust ***data management*** practices. This includes dealing with issues of data quality, security, privacy, and integration. To ensure successful implementation, businesses must carefully evaluate available pricing technologies based on their pricing needs, business objectives, and existing technology infrastructure. Considerations such as scalability, user-friendliness, and integration capabilities are essential. Successful implementation of pricing technology requires users to understand how to use it effectively, which includes ***technical training and education*** on new pricing strategies and methodologies enabled by the technology. The level of training and support provided by the technology vendor is a crucial factor in ensuring optimal usage of the technology. Comprehensive training and ongoing technical support can significantly smooth the transition process and ensure employees understand how to use the technology effectively (Bages-Amat et al., 2021). Transitioning to a technology-driven pricing approach often necessitates substantial modifications to business operations and may encounter employee resistance. ***Effective change management*** is vital to ensure seamless implementation and acceptance of the new technology. For many organizations, transforming pricing processes represents a significant shift. Thus, it is essential to manage this transition carefully, address potential resistance, communicate the benefits clearly, and secure leadership buy-in. Implementing pricing technology involves expenses associated with ***acquisition, integration, training, and maintenance***. Thus, it is crucial to perform a thorough ***cost-benefit analysis*** to ensure that the expected benefits, such as improved efficiency, increased margins, or enhanced customer satisfaction, outweigh these expenses. Lastly, the pricing technology adopted must adhere to ***all relevant regulations***, particularly those pertaining to data privacy and fair pricing.

5. THE FUTURE OF DIGITAL PRICING AND THE PRICING TECHNOLOGY

In the 21st century, the use of technology to develop business strategies, particularly in the realm of pricing, has become increasingly prevalent. The evolution of technology has revolutionized digital pricing, and this trend is expected to continue in the future. Digital pricing is poised to undergo further transformation as technology advances and consumer behavior changes. Although digital pricing has already made significant strides in the business world, its full potential is yet to be fully realized.

Artificial intelligence (AI) and machine learning are expected to play a significant role in the development of pricing strategies. These technologies enable businesses to analyze large volumes of data quickly and accurately, providing insights that human analysis may not detect. Dynamic pricing models, enabled by AI and machine learning, can adjust in real time in response to changes

in supply and demand, as well as anticipate such changes. As these technologies continue to learn and adapt, their predictive capacity will become increasingly precise (Deloitte, 2023; Gartner, 2021). A study conducted by Fortune and Deloitte (2023) among business leaders revealed that 80% of them believe that generative AI will enhance the efficiency of their business operations, while only 37% have implemented applications that utilize generative AI in their business. The rise of e-commerce and the widespread use of mobile devices for purchasing goods online will have a lasting impact on digital pricing strategies. To remain competitive, businesses are compelled to implement dynamic and competitive pricing approaches in response to price comparison tools and customer reviews available on these platforms. Furthermore, mobile devices will enable businesses to offer location-based pricing by harnessing geolocation technologies.

As businesses delve into the potential of blockchain technology, one possible application is to enhance pricing transparency. With this application, customers can track a product‘s pricing history, empowering them to make more informed purchasing decisions while fostering trust in businesses. The role of predictive analytics in B2B pricing is anticipated to expand significantly, as technological capabilities are integrated into optimization algorithms, scenario analysis, real-time pricing, and other systems such as ERP and CRM.

In the future, digital twins are likely to have a significant impact on digital pricing by offering a virtual replica or reflection of a product, service, or process in the digital world. The ongoing evolution and innovation in digital pricing and pricing technology necessitate businesses to continuously adapt and incorporate cutting-edge technologies into their pricing strategies to remain competitive. Nevertheless, it is essential for companies to carefully consider the ethical implications of these advancements and to maintain transparency and fairness in their pricing practices.

6. CONCLUSION

Digital pricing transformation is not a single occurrence but rather a constant evolution that necessitates a continual evaluation of business needs. After the preliminary transformation, the sustenance of the benefits demands an ongoing evaluation of the effectiveness of pricing tools, coupled with necessary adjustments to ensure long-term success. McKinsey (2021) states that digital pricing transformations have the potential to drive continuous margin growth between 2% and 7%. The benefits of these transformations are evident but rely on strong leadership from decision-makers and the implementation of pricing processes and technologies that consistently support business goals. The presence of tools and processes that align with the organization‘s future objectives is a crucial part of the puzzle. However, completing the picture requires the flexibility to respond to constantly changing needs.

References

Allan, D. (2022). High-voltage digital sales transformation: Accenture. Retrieved from: https://www.accenture.com/us-en/blogs/industrialist-blog/electrify-your-industrial-sales

Bages-Amat, A., Baker, W., Magnette, N., & Winkler, G. (2021). What really matters in B2B Dynamic Pricing. McKinsey & Company. Retrieved from: https://www.mckinsey.com/business-functions/growth-marketing-and-sales/our-insights/what-really-matters-in-b2b-dynamic-pricing

BASF. (n.d.). *BASF*. https://www.basf.com

Beutin, N., Kirchner, P., & Demmelmair, M. (2020). The pricing revolution. *Sales Excellence, 29*(12), 16-19. https://doi.org/10.1007/s35141-020-0413-8

Cisco. (n.d.). *Cisco*. https://www.cisco.com
Copperberg & Vendavo. (2023). Copperberg and Vendavo's Pricing Excellence Report and Outlook 2023. Retrieved from: https://www.vendavo.com/pricing-excellence-report-and-outlook/
Cöster, M., Iveroth, E., Olve, N.-G., Petri, C.-J., & Westelius, A. (2022). *Strategic and Innovative Pricing: Price Models for a Digital Economy*. Routledge.
Deloitte. (2022). *2022 Technology Industry Outlook*. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/2022-technology-outlook.pdf
Deloitte. (2023). *Tech Trends 2024*. Deloitte Consulting LLP. Retrieved from: https://www2.deloitte.com/us/en/insights/focus/tech-trends.html
Dilmegani, C. (2023). *Digital Transformation: Technologies, Steps & Use Cases in 2023*. Retrieved from: https://research.aimultiple.com/what-is-analytics/
Emmer, M. (2019). *New Pricing Models for the Digital Era*. Forbes Magazine. Retrieved from: https://www.forbes.com/
Frohmann, F. (2023). Excerpt from 'Digital Pricing: A Guide to Strategic Pricing for the Digital Economy, *PPS Journal Q123 Three*. Retrieved from: https://publications.pricingsociety.com/wpcontent/uploads/2023/03/PPS_Journal_Q123_Three.pdf
Gartner. (2020). *The Future of Sales: Transformational Strategies for B2B Sales Organizations* (Report). Retrieved from: https://emtemp.gcom.cloud/ngw/globalassets/en/sales_service/documents/trends/future_of_sales_ebook.pdf
Gartner. (2021). *B2B Price Optimization and Management Software*. Gartner Peer Insights. Retrieved from: https://www.gartner.com/reviews/market/b2b-price-optimization-and-management-software
General Electric. (n.d.). *GE*. https://www.ge.com
Grainger. (n.d.). *Grainger*. https://www.grainger.com
Guenzi, P., & Habel, J. (2020). Mastering the digital transformation of sales. *California Management Review, 62*(4), 57-85. https://doi.org/10.1177/0008125620931857
Hermann, S. (2015). *Confessions of the Pricing Man: How Price Affects Everything*. ſSpringer; 1st ed.
Hinterhuber, A., & Liozu, S. M. (2014). Is innovation in pricing your next source of competitive advantage? *Business Horizons, 57*(3), 413-423. https://doi.org/10.1016/j.bushor.2014.01.002.
Hitachi. (n.d.). *Hitachi*. https://www.hitachi.com
Honeywell. (n.d.). *Honeywell*. https://www.honeywell.com
Hudelson, P., Magnette, N., Moss, S., & Prabhu, M. (2021). Digital Pricing Transformations: The key to better margins. McKinsey & Company. Retrieved from: https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/digital-pricing-transformations-the-key-to-better-margins
IBM. (2022). *Cost of a Data Breach 2022*. Retrieved from: https://www.ibm.com/reports/data-breach
Karvounakis, K. (2021, July 06). *A B2B Startup's Guide to Pricing*. MetaBronze Ventures. Retrieved from: https://metavallon.vc/blog/a-b2b-startups-guide-to-pricing/
KPMG. (2017). *The Digital First Journey*. Retrieved from: https://assets.kpmg.com/content/dam/kpmg/in/pdf/2017/09/The-Digital-First-journeyV2.pdf
Lee, M. (2021). Digital Pricing Transformation & Pricing Technology. Vendavo. Retrieved from: https://www.vendavo.com/pricing/b2b-digital-pricing-transformation/
McCabe, K. (2023). *Pricing and Digitization*. Iris Pricing Solutions Ltd. Retrieved from: https://www.pricingsolutions.com/
McKinsey. (2021). *Digital Pricing Transformations: The key to better margins*. Retrieved from: https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/digital-pricing-transformations-the-key-to-better-margins#/

McKinsey. (2023). *The state of AI in 2022–and a half decade in review.* Retrieved from: https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2022-and-a-half-decade-in-review

QuickLizard. (2021). Optimizing Pricing [E-book]. Retrieved from: https://www.quicklizard.com/wp-content/uploads/2021/12/eBook_Optimizing-Pricing-_-Final.pdf

Reportprime. (2023). https://www.reportprime.com/

Rinn, et al. (2021). *High-Voltage-Digital-Sales: Lessons from industrial leaders to spark digital sales transformation now.* Accenture. Retrieved from: https://www.accenture.com/_acnmedia/PDF-150/Accenture-High-Voltage-Digital-Sales-FY21.pdf

Zatta, D. (2023). Innovative Pricing Models: The New Source of Competitive Advantage*, PPS Journal Q123 Four.* Retrieved from: https://publications.pricingsociety.com/wpcontent/uploads/2023/03/PPS_Journal_Q123_Four.pdf