The expansion of Vending in the Automated Retail Sector:
An experiential marketing approach to customer acquisition-
The Italian experience of MatiPay Srl

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Abstract

        "Automated retail" and "vending" refer to the sale of products through machines, often without direct human intervention, acting as unattended points of sale. This includes beverage vending machines, smart fridges, self-service laundromats, car washes, electric car charging stations, and more. Vending is a specific form of automated retail where the vending machine acts as an autonomous point of sale and a payment point. Simultaneously, it serves as a promotional and marketing tool for customer engagement. This objective is both comprehensive and complex, as the point of sale is entirely digital and unattended, yet it establishes a connection and digital dialogue with the customer through dedicated commercial offers and promotional messages. This process creates an innovative Customer Experience that links the customer to novel methods of communication and payment, thereby redefining the brand's image and reputation. **The primary aim** of this paper is to demonstrate the importance of implementing automated payment and telemetry systems to facilitate product sales and service delivery, enabling businesses to reach customers anywhere, even without a human presence. **The methodology** used is a descriptive empirical analysis, based on Data provided by an Italian Company, MatiPay Srl, based in Mola di Bari (Italy). It is based

on company Data collected daily by MatiPay's staff and entered into MatiPay's software systems. The first system is the *Microsoft Dynamics 365° Customer Relationship Management (CRM) System*, which consolidates all data from proactive business development efforts, including leads to opportunities, marketing supplier surveys, and marketing customer surveys. The second system is *MatiPay's E-commerce platform*, which consolidates all inbound business development data, including client profiles, their needs, and their purchases. **The results** of this analysis confirm a strong relationship between the improvement of advanced telemetry systems, new digital payment methods, and the innovative customer experience.

Keywords: Automatic Retail, Vending machine, Business Development, Customer Experience, Brand Communication, Brand Identity

Introduction
The Growth of Automated Retail and Digital Payment Transactions

The retail sector is continually evolving, driven by technological innovations and shifting consumer behaviours. Within this dynamic environment, vending machines have emerged as a valuable and direct retail tool, providing a competitive alternative to traditional brick-and-mortar stores by offering a diverse and consistently available selection of products.

According to Fortune Business Insights, the automated retail market has grown by 20% over the last five years, which reflects the retail industry's strong confidence in this technology. Customers are also increasingly accepting of vending solutions in retail settings, such as those for clothing, convenience foods, self-service laundries, car-wash, healthcare products, and stationery. This acceptance is primarily driven by an appreciation for solutions that are well-suited to unstaffed retail environments.

Automated retail includes a variety of technologies and approaches to sales automation. These include vending machines, which dispense products after payment via coins, credit cards, or mobile apps. Other examples are self-service e-commerce platforms, where customers purchase products online and collect them from automated points such as smart lockers, and automated stores, which are unmanned retail spaces where customers select products themselves and pay through automated systems.

Vending is a specific channel within automated retail, primarily focused on distributing products through vending machines. According to CONFIDA (Italian Automatic Distribution Association) Research (2024), Italy has an extensive network of over 830,000 installed vending machines, with a high annual volume of drinks dispensed. Vending applications can be categorized into the following types:

- *Food and Beverage*: these machines dispense products such as coffee, snacks, and hot and cold drinks, and are typically found in offices, stations, and schools.
- *Non-Food Goods*: this category includes vending machines for items like hygiene products, household goods, and small accessories.
- *Services*: this type of vending provides services such as ticketing, device charging, and printing.

The benefits of automated retail and vending are numerous. These include 24/7 availability, offering customers access to products at any time, as well as enhanced efficiency, which reduces operating costs and increases sales speed. The customer experience is also improved through increased convenience and flexibility, facilitating a quick selection and purchase process.

Additional advantages are adaptability, as vending machines can be strategically placed to reach a broader audience, and innovation, with the integration of technologies like cashless payments, telemetry systems, and user recognition.

As a result, automation has become a necessity in retail. Vending machines enable stores to operate around the clock without requiring staff, thus lowering operating costs and boosting efficiency. Vending technology has evolved beyond manual control, incorporating features such as remote inventory monitoring and payment authorization to simplify sales management significantly (Alfiero, 2015). From this perspective, unmanned solutions ensure a modular use of resources, optimizing both time and costs. Furthermore, a reduced reliance on human labor leads to greater precision and speed, which are crucial aspects of today's economy.

In essence, automated checkout and vending represent a growing trend in the retail world. They provide innovative solutions for selling products and services, benefiting both operators and consumers. These advantages are not limited to digital technologies for distribution and payment; they are also linked to the increasing importance of communication between brands and customers. This leads to an innovative consumer experience and a redefinition of brand image.

Brand Perception through Automated Promo-Marketing and an Improved Customer Experience in Vending

Technological innovation in vending machines has significantly enhanced the shopping experience. Concurrently, the customer experience has also improved through personalization, the use of touch screens, and offers based on artificial intelligence that suggest products according to past preferences, thereby combining convenience with personalization.

A well-structured vending machine can have a positive influence on a company's brand image. A thoughtfully designed vending experience that reflects corporate values can strengthen the perception of employee well-being, improve internal reputation, and reinforce the bond between the company and its employees.

Specifically, vending machines influence brand image through:

- *Perception of well-being*: A well-maintained vending area with quality, varied products can help create a positive atmosphere and improve employee morale. For example, a company focused on employee well-being can offer healthy options, such as fresh fruit or low-sugar snacks.
- *Internal reputation:* a well-maintained vending service demonstrates care for employees and can strengthen positive word-of-mouth within the company.
- *Bonding*: a vending machine consistent with corporate culture and offering products aligned with the company's values can strengthen a sense of belonging and the bond between the company and its employees. For instance, a company that promotes sustainability could choose eco-friendly vending machines and offer organic and locally sourced products.
- *Brand identity*: product selection, machine design, and associated communication can reflect the company's Brand identity, helping to create consistency between the company's stated values and what employees perceive them to be. For example, a company focused on innovation could integrate advanced technologies into its vending machines, such as mobile payments or personalized interfaces.

Another important aspect is that vending machines have acquired a social function in the workplace. For instance, the area around hot beverage machines has become a privileged spot for exchanging opinions on work and personal life. People socialize, sharing jokes and perspectives on a wide range of topics. A company vending machine is a place for gathering and a break from daily work, a meeting point where individuals can relax while sipping coffee or having a snack. This intense potential for communication is one of the great added values of vending.

In short, vending is not merely an ancillary service but an element that can have a significant impact on corporate perception, both internally and externally. In this context, consumption as an experience uses a consumer's experiences as a marketing tool to convey a higher perceived value, achieved through the involvement of senses and emotions.

Therefore, the consumer experience generates significant engagement for the consumer and their social relationships. This is why individuals seek

products and services with symbolic value that allow them to express their personality fully. Consuming means satisfying one's needs but also creating and maintaining social relationship. This innovative consumer experience is based on a different type of consumption than in the past, as it aims not just to satisfy needs, but also to engage consumers, fulfill them, and strengthen their bonds with others through the essential use of emotions. Rationality gives way to a range of emotional factors that characterize experiential purchasing and impact individual perceptions, resulting in a highly emotional experience.

Case History: MatiPay Srl – Italy. The Technology Used in Vending

The consumer experience through vending and the implementation of the technology used is described in this paper through the analysis of an Italian company: MatiPay Srl.

The methodology used to represent the MatiPay case study is based on company data collected daily by MatiPay's staff and entered into MatiPay's software systems.

The first system is the *Microsoft Dynamics 365° Customer Relationship Management (CRM) System*, which consolidates all data from proactive business development efforts, including leads to opportunities, marketing, supplier surveys, and customer surveys. The second system is *MatiPay's E-commerce platform*, which consolidates all inbound business development data, including client profiles, their needs, and their purchases.

Other data comes from outside the company, for example, from inbound emails and customer surveys that the company systematically submits to its users and customers.

MatiPay Srl is a cutting-edge technology company based in Mola di Bari (BA), Italy. Founded in 2016 by CEO Matteo Pertosa, a visionary in technological innovation and digital transformation, and led by Business Unit Director Francesco Liuzzi. MatiPay Srl is an undisputed pioneer and leader in advanced payment and telemetry solutions for the automated retail sector. The company's vision extends from traditional vending machines to other automated retail sectors, including smart-fridge, modern self-service laundromats, next-generation car washes, and, more recently, innovative smart retail solutions for corporate, residential, and public spaces.

MatiPay's mission is to transform traditionally unmanned points of sale, which are often perceived as static and impersonal, into intelligent, dynamic, and interconnected ecosystems. This ambitious goal is achieved by offering a user experience that is not only seamless, intuitive, and highly personalized but also rich in added value and innovative services. Concurrently, MatiPay provides industry operators with powerful tools, in-depth analytics, and innovative solutions to optimize operational management,

maximize revenue, and build lasting, meaningful relationships with their customers.

MatiPay's true essence lies beyond merely facilitating a payment transaction; its core purpose is to revolutionize the entire vending machine shopping experience. Based on internal data sourced from MatiPay's management systems, Figure 1 provides an overview of the number of connected vending machines and the corresponding number of connected users in Italy at the end of 2024.

Figure 1: Number of distributors and connected users in Italy in 2024

Focus of the analysis	Numbers
Connected distributors	70.000
Users connected in the last 12 months year 2024	950.000

Source: MatiPay Data 2024

The underlying mobile technology, which includes Near Field Communication (NFC), Quick Response codes (QR), and Bluetooth, transforms the smartphone into a "personal remote control" for automated retail. This technology creates a direct, instant, and seamless connection between the automated point of sale (e.g., a vending machine, smart-fridge, or a centralized checkout for self-service laundromats or car washes) and the user's smartphone. At the heart of this innovative solution is the App-Based Wallet, a virtual wallet that is exceptionally intuitive, secure, and versatile.

MatiPay's digital wallets, such as MatiPay Motus, MatiPay Meta, and MatiPay Meta-Master-Credit Card, with their respective modifiers, can be topped up in multiple ways. This ensures flexibility for every type of user and payment preference, overcoming the limitations of traditional systems. These topping-up methods include:

- *Cash*: users who prefer or need to use cash can digitize their credit in real time directly through the vending machines' coin mechanism. This feature eliminates the frustration of not having the correct change, simplifies the process of receiving change, and provides a complete digital experience even for those who do not have a credit card or prefer not to use one for small transactions. The digitized credit can then be spent at any vending machine where MatiPay is installed or used for additional services within the MatiPay App.

Figure 2: Example of digital credit on the smartphone App.

Source: MatiPay Data 2024

- *Credit/Debit Cards*: for fast, secure, and fully traceable digital payments, MatiPay integrates the most popular global banking networks, such as Visa, Mastercard, and American Express. This integration offers a level of convenience and familiarity comparable to that of a traditional POS terminal. However, it also provides the inherent flexibility and speed of the MatiPay CC App, which allows users to pay with a simple tap or scan.

Figure 3: An example of a MatiPay POS connected to the MatiPay CC App for payments

Source: MatiPay Data 2024

- *PayPal*: for maximum flexibility and convenience, MatiPay leverages one of the most recognized and widely used online payment methods globally. This allows for fast and secure transactions without the need to repeatedly enter card details, leveraging the trust and ease of use that millions of users associate with PayPal.

Figure 4: An example of payment via PayPal with MatiPay technology.
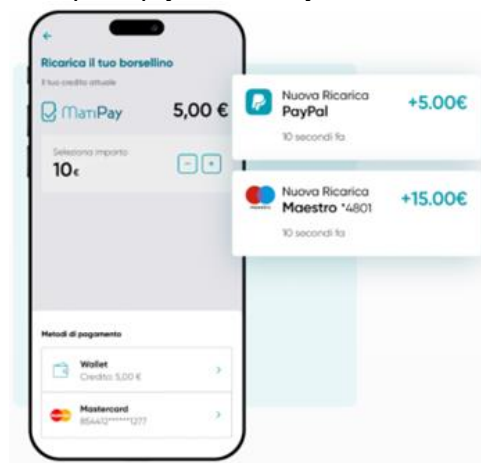
Source: MatiPay Data 2024

The growth percentage of new users utilizing MatiPay over the last four years is noteworthy in Figure 5. By 2024, it is projected that approximately 2,000,000 users will be using MatiPay.

Figure 5: Percentage growth of new MatiPay users in Italy over the last four years.

Years	Growth in % of new MatiPay users
2024	39%
2023	30%
2022	27%
2021	19%

Source: MatiPay Data 2024

It is also important to highlight the growth percentage of App users, particularly in the workplace, and the percentage of NFC card users in professional settings where smartphone usage is restricted (Fig. 6). From a total of approximately 2,000,000 users, it is noteworthy that around 40,000 utilize both the App and the NFC card interchangeably.

**Figure 6:** Percentage of growth in Italy of users using the App and percentage of users using the NFC card

Year	Growth in % MatiPay App Users	Growth in % MatiPay NFC Card Users
2024	82%	18%
2023	78%	22%
2022	76%	24%
2021	65%	35%

Source: MatiPay Data 2024

MatiPay is far more than a simple payment system; it offers a comprehensive, modular suite of services and features that transform the vending experience. What was once a simple, mechanical, and often anonymous transaction is now a smart, interactive, and personalized user

experience. This also exponentially enhances operators' management and strategic capabilities:

- *Advanced Telemetry and Business Intelligence*: This service goes beyond basic remote monitoring, functioning as a predictive and prescriptive business intelligence platform. Operators can monitor and manage their entire fleet of machines in real time, with granular data on every operational aspect, including product inventory, internal temperatures, detailed sales data by item and time slot, and the proactive identification of faults. This in-depth data analysis allows operators to scientifically optimize routes for replenishment and maintenance, accurately forecast demand for specific products, and identify high-performing machines or those needing urgent intervention. The tangible result is reduced operating costs, increased logistics efficiency, minimized machine downtime, and, ultimately, a significant increase in profitability and end-customer satisfaction.

- *Marketing and Customer Relationship Management*: thanks to a deep integration with the MatiPay App, users not only pay but also become part of a "universe of benefits". The App is designed with a focus on User Interface (UI) and User Experience (UX) to provide a seamless, intuitive, and rewarding shopping experience. Through the App, users can easily pay and benefit from personalized promotions based on their purchasing habits, such as a discount on their favourite coffee after a certain number of purchases or offers on complementary products. The App also includes cashback programs and loyalty points systems that reward consistent use and interaction with the service. The data collected via the MatiPay App represents a powerful analytical instrument, offering valuable insights for the identification of strategies aimed at enhancing product, service, and total quality. A significant distinction exists within the concept of quality between:
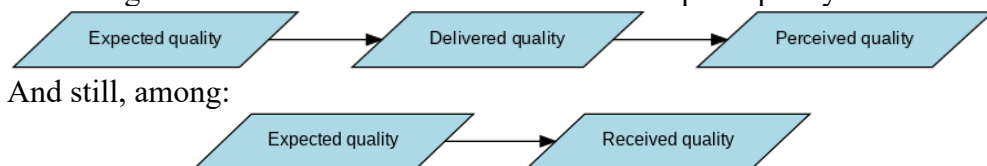
And still, among:

For a customer, the level of satisfaction is largely contingent upon the relationship between perceived quality and their pre-purchase expectations. These expectations, in turn, are informed by prior experiences of acquisition and consumption, which subsequently serve as a key criterion for future choices. Thus, at each point of interaction, the discrepancy between expectations and the actual experience directly impacts the level of customer satisfaction.

For a vending machine to be profitable for its owner, it must generate sales. To achieve this, every detail of the machine must be carefully managed, from the products offered and the machine's layout to the service provided and more. Simultaneously, the purchasing customer must be satisfied with their transaction. Consequently, companies in the vending sector as well as within the automated retail sector have an increasing need for data. In this regard, the data collected using the MatiPay App has the potential to enhance overall quality, which in turn can lead to increased customer loyalty and improved business performance, especially when combined with data collected via telemetry. It is therefore useful to reference the specific academic fields of management and marketing, which propose various analytical models that entrepreneurs can leverage:

- Customer Retention Rate: ((E-N)/S) * 100
  E: Number of customers at the end of the period
  N: Number of new customers acquired during the period
  S: Number of customers at the beginning of the period.
- Net Promoter Score (NPS): % of Promoters - % of Detractors
  Promoters: Customers who give a score of 9 or 10 (on a scale of 0 to 10).
  Detractors: Customers who give a score of 0 to 6.
  Passives: Customers who give a score of 7 or 8.

*NPS can be measured through surveys that investigate the likelihood of future purchases.

- -Customer Lifetime Value (CLTV): (Average order value × Average purchase frequency per period × Average customer lifetime) × Profit margin.
- Customer Loyalty Index (CLI): (Average NPS + Average repurchase probability + Average customer satisfaction) / 3.
- Repeat Purchase Rate (RPR): (Number of customers with multiple purchases / Total number of customers) * 100.
- Net Profit = Total Revenue - (Total Expenses + Taxes + Interest).
- Economic Value Added (EVA): (Net Operating Profit After Taxes - Weighted Average Cost of Capital) * Invested Capital.
- Return on Capital Employed (ROCE): EBIT/Capital Employed.

For an entrepreneur a careful analysis of these metrics provides insights into their customers, their business performance, and, therefore, their corporate and product brands.

- *Additional Services and Extra Value*: The MatiPay App significantly expands the user experience by transforming into a digital services hub. It allows for the purchase of digital gift cards from popular brands across fashion, entertainment, e-commerce, and restaurants. The platform also integrates an e-commerce solution for marketing

products not sold through vending machines. Furthermore, it offers social payment features, such as the ability to send credit to friends and colleagues, which facilitates small digital exchanges or the traditional "free coffee."

MatiPay also integrates the PagoPA system, which allows users to pay bills, taxes, and public administration notices directly from the App. Additionally, it incorporates the Vaimoo Bike Sharing service, enabling users to rent bicycles at reasonable costs for a set period, promoting environmental sustainability.

This diversification not only increases the perceived value for users but also offers the industry new opportunities, such as developing new go-to-market strategies and enabling entrepreneurs to expand their business and increase revenue.

- *Smart Retail and Emerging Businesses:* MatiPay is at the forefront of developing innovative solutions for unattended points of sale that extend beyond traditional vending to meet modern market needs. In addition to self-service laundromats and car washes, other concrete examples include smart-fridge equipped with automated opening and payment systems. These systems are well-suited for high-traffic environments such as corporate dining areas, gyms, hotels, hospitals, and other institutional settings. They offer a wide range of products with intelligent expiration date management, which helps reduce waste. This technology also creates significant new business opportunities for operators, allowing them to expand into new markets, offer 24/7 services, and provide customized solutions for every environment. This directly addresses the growing demand for convenience and accessibility, appealing to a new group of consumers who may prefer not to interact with a person or visit a physical store.

To effectively communicate the value of its technologies, MatiPay constantly updates its users and business customers on new services and features through marketing campaigns, with approximately 35,000 campaigns planned for the 2021-2024 period.

MatiPay Srl: Vending's Vision and Strategies for Significant Growth

To achieve this, MatiPay utilizes a cutting-edge technological architecture founded on key pillars such as the Internet of Things (IoT), Mobile Commerce, and the latest Fintech innovations. This synergy of technologies enables scalable, secure, and reliable solutions capable of handling millions of daily transactions and interactions.

- *Internet of Things (IoT)*: each vending machine or smart point of sale is equipped with advanced sensors and proprietary IoT modules that collect a wide range of real-time data. This data includes product status

(availability, expiration date), internal temperature, detailed sales data, and technical parameters for predictive maintenance. The centralized cloud platform, which acts as the core processing unit of the entire ecosystem, receives and securely processes the transmitted data. This constant, two-way connectivity is fundamental for enabling telemetry, remote management, and the implementation of intelligent business logic.

- *Fintech Innovations*: MatiPay integrates the latest financial technologies to ensure secure and fast transactions that comply with the most stringent national and international regulations. This includes implementing advanced payment processing and fraud prevention systems, as well as financial analysis tools that support operators with cash flow management and accounting reconciliation.

Choosing MatiPay means partnering with a reliable strategic partner that offers a significant competitive advantage in the ever-evolving automated retail sector. The benefits for both operators and end-users are tangible and measurable. MatiPay does not simply follow market trends; it actively shapes the future of automated retail. The company's constant pursuit of innovation, commitment to excellence, and strategic vision are propelling it toward new digital frontiers, making the vending industry more connected, efficient, and sustainable, as well as increasingly user-friendly and value-driven.

MatiPay's growth in business opportunities over the last four years (2021-2024) is evident in Figure 7. MatiPay generated approximately 400 business opportunities in Italy.

Figure 7: Business opportunities generated in the period 2021-2024 in Italy

Year	Business in % realized between years 2021-2024 in Italy
2024	42%
2023	20%
2022	32%
2021	6%

Source: MatiPay Data 2024

Over the four-year period, MatiPay focused on both acquiring new customers and retaining existing ones. This dual focus on customer acquisition and retention highlights MatiPay's emphasis on both its product and service offerings.

Figure 8: Impact of the number of new customers and loyal customers on the percentage of Business opportunities in the period 2021-2024 in Italy

Year	New customers' first-selling	Loyal customers' up-selling
2024	27%	73%
2023	26%	74%
2022	64%	36%
2021	59%	41%

Source: MatiPay Data 2024

MatiPay is actively consolidating its position in the vending sector in Italy and several other European countries. Its expansion strategy is also underpinned by a concerted effort to identify and formulate new value propositions that will differentiate its offerings and capture new market share.

The company is guided by core values that are not just stated principles but are fundamental to every activity, strategic decision, and daily interaction:

Excellence: MatiPay believes that nothing is too small to be perfected, and its methodical, proactive approach leads to the creation of high-value customer solutions. This includes ensuring superior product quality, reliable deliveries, and the integration of distinctive technologies to stay ahead of the competition and anticipate market needs.

Integrity: The Company has an unwavering commitment to sincerity, transparency, and honesty in all areas of corporate life, from relationships with customers and partners to internal team management. MatiPay is committed to doing the right thing, even in the face of adversity, and maintains its corporate culture through organizational integrity and adherence to ethical and regulatory standards. This commitment is demonstrated by its ISO 9001 (Quality) and ISO/IEC 27001 (Information Security) certifications.

Solidarity: MatiPay believes that fostering a culture of solidarity and sharing is essential both within the company and in its impact on society. This value is reflected in its solutions, which aim to make services more accessible and inclusive and to generate a positive community impact.

MatiPay is part of the prestigious Angel Group, an Italian holding company known worldwide for its leadership and innovation in the railway and aerospace sectors. This strategic membership strengthens MatiPay's financial position and innovative capacity, providing it with extensive synergies in joint research and development, access to top-tier technological and engineering resources, a broad market reach, and solid financial support for growth and expansion.

MatiPay's strategic direction has recently included expanding its corporate structure through acquisitions. The purpose of these acquisitions is to broaden the product portfolio, strengthen the existing customer base, and integrate new technological capabilities to create a more robust and competitive company.

Conclusions

IoT machines and wireless solutions are being used to meet consumer demand for quick purchases while simultaneously increasing revenue and reducing overall costs. Automated retail systems represent one of the most popular strategies. A smart vending machine can be used in place of a traditional store, offering customers the freedom to purchase what they need, when they need it. Smart kiosks and vending machines, from food and

beverage vendors to ticket machines and services like airport check-in, are fundamentally changing the way consumers shop.

In summary, 2025 is projected to see continued strong growth in digital payments in vending. User app usage is growing significantly in both the number of transactions completed and the total value generated. Consequently, the number of registered users, the number of sales transactions completed via the app, and the total value of sales transactions via the app are all increasing. Over the next three years, operators anticipate further growth in the share of payment apps in their revenue, attributing this to their ease of use and customer appeal.

One suggestion for enhancing the vending sector is to improve its awareness and image by investing in communication and innovation. This also involves promoting more sustainable practices, such as waste recycling, with a focus on compostable materials, and the use of local products. There is also a growing focus on offering a more inclusive selection, which takes into account food intolerances (e.g., gluten-free or lactose-free products) and consumer preferences (e.g., a wide selection of flavours or different "product combinations").

Finally, other key drivers of future growth in automated retail will undoubtedly include:
- The addition of touchscreens to automated payment systems to display multimedia content and provide customer entertainment.
- The introduction of cashback mechanisms, promotions, and loyalty programs fosters increasingly stimulating and personalized communication with customers.
- Solutions to improve accessibility for users with disabilities, with a focus on inclusivity and breaking down barriers.

Therefore, the main implications of the Automated Retail Sector include increased operational efficiency (cost reduction, improved inventory management), personalizing the customer experience through A.I., increasing sales and productivity, reskilling staff, and evolving physical stores toward hybrid physical-digital experiences. Automation, particularly with A.I., enables smarter inventory management, improves after-sales service, and helps retailers better compete in the hyper-connected market.

In conclusion, the digital age has transformed how brands conduct business. To truly define a consumer experience, a fruitful relationship must be established between the consumer and the company, allowing the individual to engage with and interpret the interaction that occurs during the experience. The nature of the consumer experience is complex, as consumers and their purchasing choices are influenced by emotional factors related to their experiential vision.

For an experience to be considered "good," it must be "unforgettable" (Pine & Gilmore, 1999). This means it must evoke emotions, engage all of the consumer's senses, and produce significant transformations. This is achieved by staging "personal" and "memorable" events that captivate consumers and encourage them to return. The stronger the emotions are linked to consumption, the greater the value the experience will create through the interaction between the consumer and the product.

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