

Master's Degree Program in **Data-Driven Marketing**

Specialization in
Marketing Intelligence

Integration of Digital Technologies and Loyalty:

The role of Data-Driven Customer Experiences through the
ARCS Model

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Integration of digital technologies and customer loyalty:

The role of data and technology in the omnichannel experience

by

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ABSTRACT

This thesis investigates how data and emerging technologies, such as artificial intelligence, can be used to design customer-centric experiences that reinforce loyalty and foster long-term relationships. Based on Keller's ARCS (Attention, Relevance, Confidence, and Satisfaction) model, it examines how the proposed variables (technological tools, data infrastructure, personalized experience, multichannel integration, and the effective integration of these resources) influence customer perception across the different touchpoints with which it interacts. Through a mixed methodological approach, combining literature review with qualitative and quantitative data analysis, this paper examines the processes of data collection and use, the technical and structural conditions necessary for their effective implementation, and the potential challenges associated with integrating these resources at different points in the strategy. It offers a practical view of how these capabilities are applied in real organizations through the vision and comments of professionals on their implementation and execution. Together, the results will help clarify what is needed to translate new technological options into emotionally meaningful experiences.

KEYWORDS

Data-driven decision making; Emerging technologies; Loyalty; ARCS model

Sustainable Development Goals (SDG):



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LIST OF ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
ARCS	Attention, Relevance, Confidence, Satisfaction
CCI	Cross-channel Integration
CL	Customer Loyalty
DI	Digital Infrastructure
EI	Effective Use and Integration of Resources
IoT	Internet of Things
KPIs	Key Performance Indicators
ML	Machine Learning
PE	Personalized Experience
PM	Predictive Models
TT	Technological Tools
UX	User Experience



1. INTRODUCTION

1.1 CONTEXTUALIZATION AND RESEARCH QUESTION

In recent years, all industries have been forced to reconvert due to the new emerging technologies and the growing access to information. The COVID-19 pandemic not only accelerated global digitization but also forced companies to quickly adapt to new ways of engaging with their customers, changing their offer and business model (O'Toole, 2020).

Among other things, this sudden transformation revealed that many organizations are not yet ready to harness the true potential of all these data-driven resources, based on implementing and managing a fully digitalized approach. (Ochuba, N. A., 2024)

To contextualize this figure we must consider that the pandemic accelerated hyperconnectivity: the growing ability of people worldwide to access the internet. In 2019, around 51% of the global population was online. The Digital 2024 report by We Are Social and Hootsuite shows this number has increased to 66% (around 5.35 billion people). On average, people spend 6 hours and 36 minutes per day online, across social media, news consumption, apps, online shopping, and other digital activities (Hootsuite & We Are Social, 2024).

At the same time, the growing use of data introduces a key challenge: determining which data truly adds value to the organization and how to measure it so it can be effectively integrated into the company's strategy. Companies face the dilemma of how to transform large volumes of information into decisions that help drive customer loyalty. As Ijomah (2024) states, many organizations either lack the analytical capabilities or are unaware of the real impact on their customers through these strategies, which are necessary to extract real value.

These tasks involve not only collecting data, but also interpreting it properly, using other tools such as artificial intelligence (AI), machine learning (ML) or predictive models (PM), which allow behavioral patterns to be identified, audiences to be segmented and the user experience to be personalized among other things. At this stage, the challenge isn't simply adopting an omnichannel approach, but using all the available information effectively, adapting it to each channel and touchpoint.



All of this aims to better understand consumer behavior, personalize the customer experience, and strengthen emotional loyalty across both digital and physical environments (Aguinaga, 2024).

In this scenario, Keller's (1987) ARCS model can become relevant, as it provides the necessary structure to understand how to impact consumer motivation in an environment saturated with information. Capturing consumer's attention among multiple stimulations, ensuring the relevance of both channels and messages, building trust through ethical and transparent data use, and delivering real satisfaction at every interaction are essential to long-term loyalty (Paz, M., 2020).

This perspective also allows for a better understanding of the customer's emotional response to the application of this data, providing companies with the basis for transforming the information into actions that connect with users through personalization, but also empathy and responsibility.

In this rapidly changing context, we are faced with the following challenges: in a world where customer loyalty has become an essential factor for business survival, can organizations implement strategies that use these available resources to influence customer behavior across the different touchpoints? Can we rely on a strategy that captures consumer attention, ensures relevance, builds trust and guarantees satisfaction for customer fidelity?

This leads to the main **research question** guiding this thesis: *"How can organizations leverage data analytics and emerging technologies to deliver emotionally personalized experiences that foster loyalty across an integrated omni-channel environment?"*

1.2 RESEARCH OBJECTIVE

Today's markets are increasingly saturated and competitive, making differentiation harder than ever. Modern consumers move seamlessly between physical and digital touchpoints, which forces companies to adopt technologies that facilitate a consistent user experience (Foroudi et al., 2018). However, this makes it more challenging for companies to understand behavior and deliver successful experiences.

In this scenario, establishing connections with consumers has become an increasing challenge, but it is a key factor in building strong, lasting relationships over time.



Nowadays, there is abundant documentation on the potential offered by data analytics tools, and AI. However, it is more challenging to understand how these organizations, especially those with limited resources, can use these tools to build customer loyalty and relationships that strategically integrate these elements with the consumer's emotional experience.

This gap lies in understanding how companies can use practical mechanisms to transform raw data into useful insights that truly improve attention, relevance, trust, and satisfaction throughout the customer journey, while also strengthening customer relationships in a sustainable way. To fulfill this central purpose, we will set the following steps:

1. Identify and frame the main technological tools and set potential benefits offered by each of them. Understand how they enable the collection, analysis and usage of customer data across physical and digital channels. Also, how companies can use it to comprehend customer behavior and needs in real time.
2. Discover how companies can design and deliver personalized data-driven experiences, and how they can provide a solid basis for strategy at every touchpoint. This includes the study of personalization mechanisms and emotional drivers that increase awareness, relevance and customer satisfaction.
3. Explore how the use of an integrated cross-channel strategy, delivering consistent customer experiences, can reinforce trust and loyalty.
4. Investigate the role of the moderating effect of effective use and integration of the available resources in transforming collected data into valuable strategic actions at each part of the customer journey. To understand limitations and main objectives to be obtained from this integration.
5. To assess the impact of the strategic variables on customer loyalty, understand it in terms of emotional connection and long-term engagement.
6. Propose a conceptual framework, based on the ARCS model of Keller's model of motivation. Base it in a current context and link technological, strategic and



emotional dimensions to customer loyalty outcomes in an omnichannel environment.

These objectives are set with the aim of obtaining the relevant answer to our research question and will guide the development of the thesis, as well as the collection of information sources and empirical validation through qualitative and quantitative research.

The study aims to contribute both to the academic literature and to practical applications in marketing, also to serve as a useful tool for companies that are considering offering an improved customer experience and want to better understand how to do it using data.

It will provide a theoretical overview of certain basic concepts for understanding data collection methods, how companies manage it and ways of measuring its impact. Subsequently, Keller's ARCS model will serve as a theoretical framework for analyzing how these tools can be applied to the user experience and the generation of loyalty.

To conclude, a qualitative and quantitative study based on interviews with industry professionals will be conducted to understand how organizations can implement this strategy internally, and finally, to synthesize all this information and obtain insights with which companies can offer value to their customers.



2. LITERATURE REVIEW

2.1 DIGITAL TRANSFORMATION AND DATA USAGE

2.1.1 INDUSTRY 4.0

Industry 4.0, or the Fourth Industrial Revolution, represents a transformative shift in the relationship between production and consumption. This wave integrates complex physical machines and devices with networked sensors, software and automation systems, unlike its predecessors: Industry 1.0, driven by steam engines, Industry 2.0, is characterized by mass production and electricity, and Industry 3.0, marked by the integration of digital systems. (Papadopoulos, T. 2022)

Industry 4.0 fosters interdisciplinary collaboration between different fields (machine learning, cybersecurity, mechanical and electrical engineering, economics and business management, sustainability, etc.) Following Nguyen (2022) this approach also ensures a better flow of information, from ideation and creation to the end of the cycle, which would be distribution.

This integrated approach allows one to control and plan the results much more effectively and comprehensively, enabling one to adapt to a new social context where product sales alone are insufficient. Instead, businesses must deliver individualized experiences. By combining factors such as the Internet of things (IoT), artificial intelligence and big data analytics, the value chain is enriched, enabling offering personalized solutions and creating new opportunities to improve the customer experience. (Skender, F., 2019)

These new systems have facilitated quick adaptation to changing customer needs and completely reconverted new consumption and production habits. However, all these changes have also brought new implications for organizations. (Skender, F., 2019)

All these technologies allow for greater automation, prediction and personalization, essential pillars for the digitalization of any company. In this context, tools such as artificial intelligence and machine learning, which we will discuss later, stand out as critical tools (Ochuba, N. A., 2024). They allow companies to automate tasks, personalize recommendations, anticipate trends and understand client needs in real time. Moreover, their use can be applied to any kind of sector, including some as



disparate as health, education or finance, making them a key element in business innovation (Campbell, C. 2019).

On the other hand, there are platforms such as Power BI or Tableau, which provide dashboards that reflect all this information and allow all this data to be used with real-time information. These tools enable decision-making and organization based on up-to-date key performance indicators (KPIs) and intuitive visualizations (Ajax, R. 2025).

2.1.2 DIGITALIZATION

Digitalization represents a complete transformation in business structure through the implementation of emerging technologies. It involves the application of these new technologies to transform processes and create value in business. Not only technological modernization, but also a change in the way companies design and deliver their value propositions (Ritter, T., 2020).

As Ritter, T. (2020) describes digitalization, it is not a recent phenomenon, but it has gained importance in recent years thanks to the massive access to data and advances in analytical tools. These changes have enabled companies to adapt to this context, improving the customer experience by using their own information to meet their needs and deliver a personalized experience.

Moreover, this transition must not only be technical, but also structural. Companies have been forced to undergo a complete transformation of information flows and the management of the vast amount of data they now have at their disposal. (Ochuba, N. A., 2024)

In summary, this process is now a redefinition of design and delivery of value proposition, and this requires a complete shift in companies of their business models to adapt to the digital environment. (Blackburn S., 2021)

For companies, differentiation today lies not only in the product, but in how data and technology tools are used to create value, focusing on the customer experience and using this as a competitive advantage. (Rahmawati, 2022)



2.2 THE CHANGING CONSUMER AND NEW EXPECTATIONS

2.2.1 UNDERSTANDING THE MODERN CONSUMER

As Blackburn. S (2021) describes, today's consumers are more demanding, more informed and are looking for personalized, seamless and consistent experiences across all the channels they use.

Today's consumers not only expect their basic needs to be met, but are looking for emotional, intellectual and memorable experiences, known as the experience economy. They value personalization and relevance in all interactions, where experiential marketing plays a key role. Interaction with technologies are now essential factors to be able to meet expectations and generate an impact on the customer (Santos, 2019).

Today's consumers demand personalization, simplicity, and consistency as mechanisms to stand out in a saturated environment (Casaca and Miguel, 2024). These expectations, focused on trust, accessibility, and content relevance, find their best strategic response in this personalization.

Digitalization has impacted the average consumer by increasing the level of sophistication they expect from their shopping experience, ranging from personalized offers to instant interactions through digital platforms. The data that users provide to companies also plays a key role in this situation and allows them to tailor this content effectively to enhance the experience (Blackburn S., 2021).

Several authors also talk about omnichannel during the shopping process, from the online product search to the in-store experience. This hybrid behavior is now a basic element for companies to offer favorable customer contact. Unlike the traditional consumer, the modern consumer is highly educated and connected, using digital technologies such as smartphones, tablets and computers to make purchases, interact with brands and continuously search for information. This shift has created more demanding consumers who seek relevant experiences at all touchpoints with companies (Santos, 2019).



2.2.2 EMOTIONAL EXPERIENCE AND DATA ETHICS

The consumer's emotional experience has become central to understanding behavior in omnichannel environments. This experience translates into a set of aspects that influence the consumer's intention to re-purchase, as well as their perception of the company.

A positive shopping experience or a sense of belonging to the brand creates a favorable environment for purchase intent. By tailoring content to each user, the connection with customers becomes deeper, according to Rahmawati (2022) personalization plays a key role, as it directly influences the customer's emotions and cognitive reasoning. It is more likely to make an experience relevant if the consumer feels aligned with the product, brand, and environment (Roggeveen, et al. 2021).

For example, in physical retail points of sale, physical products can now be pre-introduced through other channels to gain presence in the consumer's mind. In digital media, on the other hand, the user can be reached through personalized mailings or offers.

However, this personalization based on data collection also generates mixed feelings among consumers. On the one hand, although they value the convenience and relevance of a tailored experience, they find it difficult to accept this positive reality, as concerns arise about privacy, data management, and lack of control over their data. As Santos (2020) states, many consumers perceive a loss of control over their personal information, especially when they do not understand how this data is collected, stored and used in digital environments.

The data collection process, while essential for businesses to personalize the experience and improve loyalty, can be perceived by the user as invasive. This can particularly harm companies when users feel that their data is being used to influence or manipulate them or for illicit uses without their explicit consent or in an opaque way. This perception can generate distrust towards the brand, negatively affecting their emotional connection with it. In this sense, transparency and clear communication about the use of their data become key elements to reduce this feeling of intrusion (Dolin, C., 2018).



Therefore, there is a dilemma: a user who is not confident about the management and storage of their data and who, at the same time, is looking for an offer tailored to their tastes and needs.

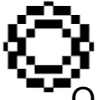
2.3 CROSS-CHANNEL USER EXPERIENCE (UX)

In recent years, physical retail outlets have been completely reconverted. Traditional stores now serve as extensions of digital media, focusing more on completing the experience through personalized customer outlets rather than mere spaces. Krisprimandoyo (2024) mentions that companies have adapted these spaces to align them with digital expectations, now using technologies such as interactive screens and in-store order collection systems that allow for greater agility and fluidity in dealing with users.

As a result, in recent years, the physical points of sale have been completely reconverted. Today we have evolved towards a new form of multi-channel consumption: physical, remote or both simultaneously. This is what we call omnichannel (Manzano & Gavilán, 2012). However, we understand that this refers to the variety of contact channels through which consumers and brands interact: apps, websites, social media, etc.

One of the drivers behind this is globalization: a growing trend in which brands expand internationally, creating extensive networks that connect companies across countries. In this context, the need to reach large-scale audiences often comes at the expense of personalization, increasing the need for more targeted, individualized sales strategies to connect with the customers brands want to reach (Manzano & Gavilán, 2012).

According to the 2021 Digital Consumer Survey, a report by Nielsen, the main reasons users prefer the physical shop over online are being able to see and touch items for 56%, being able to try products for 40% and being able to have a shopping experience for 38%.



Omnichannel also explains the transition to new media that were not previously considered. For example, there are more than 5 billion active users in social media in 2024, more than 3 times the 1.48 billion in 2012. (Hootsuite, & We Are Social, 2024)

On the other hand, the wide availability of data from all these sources allows companies to better understand consumers, adapting their offerings according to their consumption patterns, needs and preferences. The combination from various data sources (social media, purchase historic, etc.) is key to generating personalized value in all channels (Ochuba N.A, 2014). All these sources offer valuable information when designing our strategy.

2.4 DATA MANAGEMENT TOOLS TO FOSTER CUSTOMER LOYALTY

2.4.1 HOW CAN NEW TECHNOLOGIES HELP IMPROVE UX?

New technologies help companies improve the User Experience in several keyways:

1. **Process automation:** AI can automate repetitive tasks, which streamlines processes and reduces waiting time for users. One example is how chatbots can provide immediate and personalized customer service, improving interaction with consumers (Drave, V. A., et al. 2021).
2. **Advanced personalization:** Thanks to the ability to analyze large volumes of data, user preferences can be understood and predicted. This allows personalizing recommendations, products and services, creating a more relevant experience for each client (Oumaima, J., 2024).
3. **Increased accuracy:** The implementation of AI provides quality results in an efficient way, which translates into better products and services. This reinforces users' trust in the brand (Oumaima, J., 2024).
4. **Data-driven:** Digital platforms impulse massive data collected from social media, web traffic analysis and other sources to anticipate customer needs in real time (Drave, V. A., 2021).
5. **Optimization of time and resources:** AI can perform complex tasks in less time and with greater accuracy than humans. This translates into faster and



more efficient service, a key aspect of a good User Experience. (Drave, et al., 2021).

In short, these technologies not only improve the UX, but are also key elements for companies to adapt to dynamic market demands and respond to user expectations, new payment methods also adapted to the physical sale points, smarter product recommendations, automated customer support, etc.

2.4.2 BIG DATA

Refers to the accumulation of structured and unstructured data in real time through digital media. It is characterized by volume, variety and speed. This way of data storage requires new technologies and methods to be properly processed. It allows the collection and storage of information from any business relevant process and its integration (from social media, transactions, types of devices, etc.) (Weng, Y., 2014).

The real value of big data lies not in this information as such but in how it is managed. Good management becomes an important competitive advantage when collecting and using it: it allows companies to understand consumer behaviors, forecast market trends and improve operational efficiency (Weng, Y., 2014).

Big data serves as the basis for many other sources of insights such as artificial intelligence or predictive models. Thanks to this, companies can anticipate future needs, automate customized responses, optimize resources efficiently... (Paramesha, 2024).

In this context, the role of this tool in digital strategy becomes a key factor in decision making, allowing to do so in real time, improving customer experience and generating sustainable value in highly competitive environments (Paramesha, 2024)

2.4.3 ARTIFICIAL INTELLIGENCE (AI)

According to Aguinaga (2024), artificial intelligence is the ability of machines to simulate processes that are characteristic of a human such as learning and reasoning without the need to be specifically programmed to do so.



It allows processing the information in real time and is possible to adapt according to the context, optimizing both operational efficiency and interaction with users (Aguinaga, 2024).

Moreover, advances in artificial intelligence have facilitated the integration of these capabilities into digital platforms, transforming the way businesses behave. It is now possible to better understand a brand's consumers, predict behavior or offer personalized services, analyze the customer journey in detail to see what the pain points are, etc. (Gallastegui, 2022)

Therefore, the opportunities offered by artificial intelligence become a great opportunity for companies to improve the customer experience in digital environments. As Gallastegui (2022) states it gives a great competitive advantage: not only to attract new users, but also to build loyalty among current clients through more relevant and satisfying experiences, as well as strengthen the brand-customer relationship.

2.4.4 MACHINE LEARNING (ML)

Machine learning is a variant of artificial intelligence that allows systems to train on historical data and improve their performance in the future without being explicitly programmed to do so. It is used to build models that detect complex patterns in large volumes of information (Adewusi, 2024).

Companies can use machine learning for customer segmentation, fraud detection, price leveling, etc. This allows companies to adapt their strategy in real time and deliver experiences that are more relevant to each customer as individual (Weng Y., 2024)

It offers the possibility of recognizing non-linear relationships between variables, which makes it especially useful in more complex contexts, such as omnichannel customer journeys, as Paramesha (2024) states. It also provides a leading role in customer contact by facilitating recommendation systems and automated communications, which offers better adjustment to the client's interests and, consequently, a more loyal customer.

Machine learning can analyze time sequences and anticipate with some confidence critical events in the client lifecycle, allowing actions to be taken even before they materialize. (Paramesha, 2024). Other options offered by machine learning models



include the ability to segment customers, predict purchasing behavior, and identify complex patterns in user preferences. All of this enables data-driven decision-making and improves companies' responsiveness in the market. (Gallastegui, 2022).

2.4.4 PREDICTIVE ANALYTICS

Predictive analytics is the process of using data to predict future events using the historical one through statistical techniques, machine learning and data mining. Predictive analytics is inductive: it starts from data without prior hypotheses to discover patterns and relationships that would otherwise be hidden and that allow anticipating future behaviors. This makes it a tool that allows organizations not only to understand what has happened, but also what is likely to happen and to think about how to act accordingly (Kumar, 2018).

It is based on the data itself, allowing insights to be obtained without prior intervention. It helps to identify hidden relationships in large volumes of data, to transform information into knowledge of our audience and possibilities to maximize all business investments (Eckerson, 2007).

These models allow companies to identify in advance which customers are at risk of abandonment, predict which profiles will respond to a campaign or segment them more precisely to target certain communications. This is a great tool to improve loyalty and optimize personalization in digital media. It can also be used as a tool to improve sales, cross-selling and upselling.

2.5 MEASURE LOYALTY IN CUSTOMER ANALYTICS

2.5.1 WHY IS DATA RELEVANT IN CUSTOMER ANALYTICS?

One of the main motivations in the development of data analytics is customer segmentation, as it allows grouping consumers based on common characteristics: demographics, behavior, opinions, etc. to tailor messages, channels and content to their specific interests (Adeniran, I., 2024). This strategy helps to improve the effectiveness of campaigns and reinforce the perception of relevance to the consumer, which is key to a long-term relationship.

Therefore, the most relevant data coming from users are those that help to understand the customer in depth about their behavior, motivations, frustrations, habits,



challenges, etc. (Bringas, P., 2021). This can include accessing their purchase history, or interaction with campaigns.

All of this becomes essential elements to optimize the customer journey and support to manage the data in such a way that we can try to predict their behavior in the future and apply techniques such as personalizing offers, recommending products or improving retention strategies, improving both the experience and the probability of long-term relationships (Adeniran, I., 2024).

- **Behavioral Data**

This data provides insight into how consumers interact with the brand across different touchpoints. In digital media, these are user actions such as clicks, time on the page, apps using or shopping cart abandonment, among others. On the other hand, physical points of sale feature technologies such as sensors and cameras that can record movement patterns and scan promotions, helping to understand what attracts customers' attention, as well as the use of QR codes to find out what content is being viewed (Lorente, M., 2024).

They allow patterns, frequency of use, or indicators of disinterest to be identified. They enable consumer decisions to be predicted and proactive strategies to be developed to prevent customer loss and optimize the experience by anticipating consumer tastes and interests (Mansilla, R., 2024).

- **Transactional Data**

It allows understanding user behavior in any type of transaction; purchases, after offering a service, recurrence, average ticket, product combinations, preferred payment methods, etc. (Mansilla, R., 2024). With the incorporation of digital methods at physical points of sale, this is integrated through digital receipts, apps with registration, or loyalty cards (Lorente, M., 2024).

The analysis of this data even makes it possible to predict future purchases or abandonment using different models (Mansilla, R., 2024).

- **Engagement metrics**



Although the classic web indicators are visits, clicks and bounce rate, Haven (2007) also proposes other measuring methods: as comments, reviews, network interactions, recommendation intent, user-generated content or web reviews. This allows us to have a perspective on websites, apps and social media at the level of emotional connection with the user and whether it is relevant to them.

- **Psychographic and Emotional Data**

This is data that reflects values, lifestyle, tastes or motivations. They can be generated in blogs, forums, etc. Points where the user can detail their experience with the brand. They can be collected at physical points through ethnographic studies or by collecting users' addresses. They can also be measured through semantic measuring in networks or by conducting surveys (Mansilla, R., 2024).

2.5.2 PERFORMANCE INDICATORS TO MEASURE LOYALTY

Customer loyalty is not just about repeating purchases, it is a relationship that is built on customer engagement, satisfaction and positive brand perception.

One of the dimensions in which we can measure the level of customer engagement is the customer interaction score, which refers to the frequency, quality and intensity of the relationship between client and company. It is built from customer service data, customer responses to campaigns and behavior on digital platforms. These scores are used to segment customers according to their loyalty and are useful to guide retention strategies (Chen,B., 2025). In addition, Rothwell (2024) suggests that metrics such as recurring feedback are valuable for assessing sustained interaction over time.

On the other hand, market response rates reflect the reaction to specific marketing actions: campaigns, promotions, newsletters or specific personalized actions are analyzed. They indicate the effectiveness of the strategy being implemented to generate engagement with the brand (Emma, O., 2023).

Finally, we could use brand perception as an indicator, which explores the customer's intention to continue to be linked to the brand in the future. As Chen, B., (2025) states, through surveys, social media monitoring tools and the Net Promoter Score (NPS), we can find out the customer's willingness to recommend a brand or try to find out the average Customer Lifetime Value (CLV) or the Customer Acquisition Cost (CAC), tools



that become basic key performance indicators (KPIs) to find out the customer's profitability and better understand their behavior.

As Chen, B. (2025) mentions, the value of all these data lies in analyzing them properly. Their usefulness requires the support of tools such as those mentioned above: predictive models, machine learning algorithms, artificial intelligence... Technologies that allow complex patterns to be detected. This enables organizations to turn large volumes of data into insights that guide strategic decisions, this process helps anticipate customer needs and continuously strengthen the relationship.

2.6 COSTS AND CHALLENGES OF DATA COLLECTION

While data collection offers numerous advantages, it also presents significant challenges for companies. A strong approach to data management, applied transparently and responsibly, can help build customer trust.

Furthermore, these changes necessary to adapt to digitalization must not only be adopted towards consumers, but also internally. This process requires a large, digitalized infrastructure that allows data to be collected and used for business strategy.

There are significant costs for companies, from investment in advanced technologies to employee training. Tripathi (2022) notes that around 70% of digital transformation programs fail, largely due to resistance to change and insufficient internal support.

Some of the main challenges for organizations on data collection and storage are:

- Lack of a digitalization strategy with clear steps to follow. This can create problems for employees to adapt and makes coordination difficult (Parviainen, 2017).
- The effectiveness of many of these tools depends heavily on the quality of the data and expert interpretation of the results. The use of tools such as predictive modeling or machine learning involves intensive work: data cleaning, selection of relevant variables, model validation and, in many cases, constant redesign. On the other hand, not all the insights obtained are always valuable, as they can sometimes be observed with minimal effort. (Eckerson, 2007)



- The lack of employee training can be unfavorable when it comes to adopting and implementing certain digital solutions (Parviainen, 2017).
- Organizational barriers: Resistance to change or lack of support for new proposals are some of the main internal difficulties (Telukdarie, A., 2023).
- The opacity of some models sometimes makes it difficult to understand how decisions are made. This raises problems of explainability, especially in sensitive contexts such as healthcare or finance (Paramesha, 2024)
- Ethical dilemmas on data collection
 - a. Companies use big data to collect information about consumers without, in most cases, the consumer being aware of it or giving explicit approval. In some cases, they blur terms into words the user does not understand and excessively long texts (Leung, 2020).
 - b. The way in which this data is stored and managed can create security risks, enable profiling or sale to third parties, and increase vulnerability to potential cyberattacks.
 - c. While adapting to the customer experience is important, taking personalization too far can be risky, especially if it crosses privacy boundaries or makes customers feel uncomfortable (Dhirani, L, 2023).
 - d. On the other hand, there is a risk of misappropriating its use, manipulating the consumer to decide by influence rather than by choice (Leung, 2020).

2.7 RELATIONAL VALUE MODEL - JOHN M. KELLER

John M. Keller's ARCS model was originally formulated in 1987 and was proposed as a model for the educational field; however, it is possible to apply it to many areas of human interaction (Keller, J. 1979).

It arises by explaining the magnitude and direction of behavior, in other words, the goals that are set and the individual's effort to achieve them, being this motivation of any kind or type. It is based on the idea that a person's motivation to perform an activity



depends on two key elements: the expectation of success and the person's perceived value of the activity. (Keller, J. 1979).

In his research, Keller proposed that the root of motivation in people depends on four dimensions:

- **Attention:** Refers to capturing and maintaining the individual's interest through elements of surprise or stimulation, variety, etc. (Keller, J., 2009)
- **Relevance:** Align the activity or content with the individual's personal characteristics: needs, own goals, interests or lived experiences. (Keller, J., 2009)
- **Confidence:** An individual's level of perception that can achieve success; Keller maintains that this part needs to be strengthened through clear goals, positive feedback and opportunities for success. (Keller, J., 2009)
- **Satisfaction:** The individual categorizes how feels about the experience, to ensure that the experience is rewarding for the person, comparing it with previous experiences or those of other individuals. (Keller, J., 2009)

The model is built around these four core pillars and aims to guide the design of engaging experiences, in which motivation acts as a catalyst that drives people towards the desired outcome. It was developed to understand how to influence behavior, it is particularly relevant for analyzing how brands can influence consumer perceptions. In this context the brand must display identifiable characteristics to connect with consumers and build strong relationships with them (Ishak, F., et al., 2016).

Keller's motivational model (1979), transferred to a digital and omnichannel landscape, in which we can use consumer data to capture, hold and convert their attention, may be key to a new approach to customer loyalty.

From this perspective, we will build on the idea that companies can design experiences based on these four elements to capture consumer interest, connect with their needs, convey security during the process, and reinforce final satisfaction as the core elements for building and strengthening the bond with the consumer.



Authors such as Makarem, Mudambi, and Podoshen (2009) argue that satisfaction functions as the ultimate psychological outcome of the experience and translates into positive behavioral intentions, which in this case we translate as loyalty (e.g., repeat purchase, recommendation, etc.).

In this context, the impact of any data-driven strategy that is implemented depends on whether these tools can integrate these conditions into their actual interactions. The effectiveness of a data-driven innovation strategy goes beyond its technical components; its true value lies in how consumers perceive, interpret, accept, and integrate these into their decision-making processes in relation to brands (Casaca & Miguel, 2024).

Technology alone does not change behavior; it requires elements such as attention, relevance, trust, and satisfaction. These elements create real emotional motivation in the customer throughout the entire journey. They are elements that must be present in the multiple channels where the customer is present (Foroudi, P., et al. 2018)

2.7.1 ATTENTION

In a market where consumers are inundated with information, authors as Casaca & Miguel (2024), contemplate tailoring content to individual preferences to capture consumer attention through information accuracy.

Emerging technologies, such as artificial intelligence enable more frequent and segmented interactions with customers. This technical capability, integrated into what Foroudi et al. (2018) called “smart technologies”, transform the dynamics between the customer and the brand, making each interaction more valuable, while helping customers perceive the brand as attentive, understanding, and able to anticipate their needs.

In this context, brands can use eye-catching visual resources, interactive content, and real-time personalization strategies to capture user interest. Some good examples of this are: social media use, the integration of different digital elements in physical media, personalized ads, etc.



2.7.2 RELEVANCE

The option of using big data and predictive analytics sources allows companies to offer products, services and messages that are aligned with individual consumer expectations and needs.

For customers to develop true loyalty, they must perceive that the brand aligns with their desires and lifestyle. This is achieved through precise segmentation and deep personalization that transforms the offering into an individualized solution, making it a relevant option (Casaca & Miguel, 2024).

By strategically integrating different channels, the organization allows the user to enjoy a seamless and accessible experience, reducing the expectation of effort (Foroudi et al., 2018).

Some ideas to exemplify this concept are: availability of different channels of contact, app availability, etc.

2.7.3 CONFIDENCE

As Ishak et al. (2016) argue, trust is not a superficial attitude toward a brand but a form of validation that bridges the path to loyalty. It strengthens the customer's belief that their purchase decision is sound, reinforces the brand's credibility, reduces uncertainty when comparing alternatives, and signals consistency over time, ultimately fostering the commitment that characterizes loyalty.

A coherent experience, with an intuitive interface, a simple using design, clear policies, consistency across all touchpoints, giving them choice and the power to decide how they want their experience to be, through clear expectations, reinforces the customer's self-efficacy, making them feel confident and in control.

User experience and ease of use of the digital channel play an important role. Foroudi, P., (2018) states that companies must create a seamless experience between online and offline: the possibility of following up on orders or clarity of information among others, act as essential basis for creating that fluidity and contribute to this self-perception of competence.



Transparency in the company's data management can help the user not to feel insecure in the processing of his data and not to be suspicious of the communications received. According to Ishak, F., et al. (2016), loyalty is a relationship that requires solid cognitive and emotional foundations. When a company is transparent in its data management, it allows the client to evaluate the brand as a credible and ethical entity.

Some other examples are the availability of different payment methods or a chatbot to solve doubts.

2.7.4 SATISFACTION

We would translate satisfaction as confirmation that the technological interaction has been useful, fluid, and consistent with what the customer expected, which reinforces the willingness to maintain the relationship with the company (Foroudi, P., et al. 2018).

The final experience should be rewarding at all levels, and the preliminary process should be smooth and meet customer expectations in terms of efficiency. This is what will motivate the customer to repeat a purchase and become a regular consumer of the brand, as well as spreading the word about it. Exceeding the user's expectations through easy experiences is a key factor in loyalty (Foroudi, P., et al. 2018)

Some examples are personalized offers, loyalty programs, facilitating use based on their history, predicting their possible behaviors to anticipate them, etc.



3. METHODOLOGY

This thesis adopts an exploratory, model-informed research design to examine how companies leverage digital tools, data infrastructure, and personalization strategies to strengthen customer loyalty. It combines descriptive analysis with empirical evidence to capture both how these practices are implemented and how they are perceived in an omnichannel context.

The proposed relationships will help to better understand the dynamics and perceived impact of these concepts in a real-world scenario in terms of how they contribute to consumer motivation and lead to a long-term relationship. Therefore, the study aims to identify the motivations, and perceived benefits of incorporating advanced technology to companies for a better performance.

It is increasingly important to understand how organizations can effectively convert information into useful insights that improves emotional engagement and strengthens customer fidelity in multichannel environments. Although adoption of technologies such as artificial intelligence and machine learning has accelerated in recent years, many companies continue to struggle to translate data into coherent experiences that reinforce attention, relevance, trust, and satisfaction across all touchpoints.

Therefore, this thesis integrates emotional engagement, customer insights, and data strategy within an omnichannel perspective, using Keller's (1979) motivational framework, the main objective of this research is to develop and validate a model that identifies the key variables that explain how data-driven initiatives can influence loyalty as the outcome.

The research framework was defined after reviewing the academic literature on digital transformation and customer experience enhancement. Based on this review, six constructs were selected. Four of them were defined as independent variables, representing the most relevant and frequent factors in today's context: technological tools, data infrastructure, personalized experience, and cross-channel integration. In addition, effective use and integration was included as a moderating construct, and customer loyalty as the dependent variable and the result of effective management.

This selection was based on the idea that these dimensions are complementary and connected in a way that organizations often need all four to create value for customers



across all touchpoints. Together, they offer a comprehensive and up-to-date view of what is associated with loyalty.

Variable's structure is the following one:

- Independent variables:
 - Technological tools
 - Data infrastructure
 - Personalized experience
 - Cross-channel integration
- Moderating variable:
 - Effective use and integration of these resources
- Dependent variable:
 - Customer loyalty

On the other hand, the model aims to support in:

- Assess how emerging technologies, such as AI and predictive analytics, contribute to personalizing the customer experience.
- Analyze how data-driven personalization strategies can increase relevance across digital and physical touchpoints.
- Understand how emotional perception influences customer retention.
- Identify the moderating role of organizational capability in the effective integration of these tools.
- Offer a framework that companies can apply to design personalized loyalty strategies within an integrated omnichannel environment.

The interview process was structured according to a robust and transparent process, and the study applied a qualitative content analysis approach. Through the interviews with experts in the field of data management and customer-oriented strategies in



companies where these tools are implemented, the relevance and applicability of the model in today's companies is explored, and respondents are presented with the concepts and their perceived impact on the emotional experience.

In order to complement the qualitative analysis of the interviews in a more measurable way, a quantitative assessment is included using a Likert scale from 1 to 5, asking the interviewee to assign a score (1 = strongly disagree/impact, 5 = strongly agree/impact) to each statement linked to the items and then give a brief explanation to allow for a better understanding of the topic.

Estimating the level of relevance that interviewees give to each item from their professional point of view is the main goal. To interpret the results, both the mean and the median were calculated for each item, and then an aggregate value was obtained for each set of items, thus providing a better understanding of which dimensions are considered most relevant.

At the end, the content of the interviews will be evaluated to validate whether the constructs are applicable and make sense to provide a structure for other companies to guide their omni-channel strategies.

Within this entire process, the study was continuously improved and adjusted to increase its clarity and align it with the empirical material through minor adjustments as the work progressed (e.g., clarifying concepts, expanding information, changing explanatory nuances, etc.).

All these modifications did not affect the central theme or the main items that influenced the model but strengthened its coherence and ensured it to be consistent with the interview evidence.



4. RESEARCH FRAMEWORK

This research model aims to examine how digital tools and data-management capabilities can improve customer loyalty within an omnichannel environment, adapted to the expectations and emotions of today's consumer.

The four independent variables are: technology tools, data infrastructure, personalized experience and integration between physical and digital channels. These variables represent the main enablers of a successful marketing strategy, as they provide the foundation across the different dimensions (technological, analytical, experiential, and operational).

These enablers are required to deliver consistent, relevant, and seamless customer interactions across all touchpoints. Their impact is expected to be stronger when they are effectively integrated into a unified strategy, and weaker when integration is fragmented or inconsistent.

The moderator variable establishes the assumption that the mere presence of each element is not enough to generate loyalty on its own. Organization's ability to integrate it in a consistent and customer-oriented way drives data-driven decisions and delivers experiences that meet customer expectations.

Lastly, the dependent variable is customer loyalty, measured through attention, relevance, confidence and satisfaction.

The research model is designed to be validated through a qualitative and quantitative approach, supported by academic literature and empirical analysis to understand how these dimensions relate to each other and how they have the capacity within an organization to build lasting connections with its consumers through its omnichannel strategy.

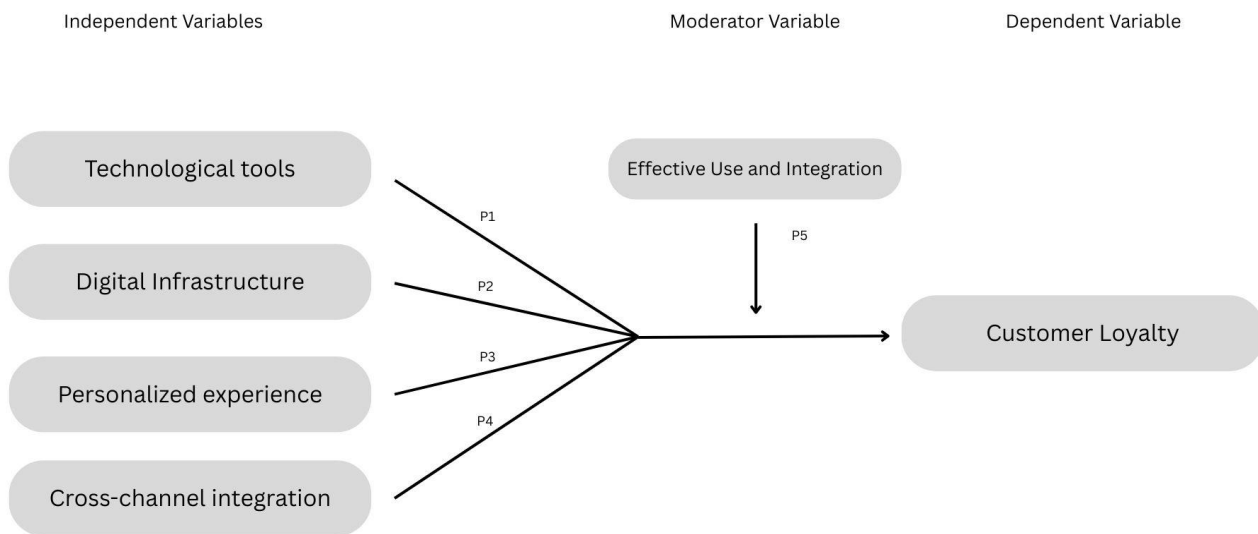


Figure 1 – Research framework figure

The main objective is to explore how these constructs are understood, implemented and interconnected within real business contexts. Additionally, the interviews will provide detailed insights about internal processes, main difficulties, success factors and prospects in the process of implementing these tools to better understand these data infrastructures, personalization initiatives and strategy across the various integrated channels.

By analyzing and understanding the patterns emerging from the interviews, the study will assess whether the relationships proposed in the model are validated or challenged by these practitioners, while offering a practice-based view of how the model is being implemented.

4.1 INDEPENDENT VARIABLE: TECHNOLOGICAL TOOLS (TT)

Technological tools refer to digital enablers that allow interactions, they are artificial intelligence, automations, predictive models, machine learning and a trained team. These tools allow firms to automate processes, shorten timeframes, improve



interactions, and anticipate user needs. They act as key drivers of dynamic engagement and interaction.

The adoption of digital tools strengthens and supports the strategic and operation decision-making process, as digitalization and connected technologies are structurally transforming all industries, increasing efficiency, shortening cycles, etc. As a result, companies rely on modern technological solutions to stay up to date and adapt to a competitive market (Ignat, V., 2017).

Proposition 1: The availability and use of technological tools positively influence customer loyalty by enabling more responsive, relevant, and efficient interactions across the omnichannel journey.

4.2 INDEPENDENT VARIABLE: DATA INFRASTRUCTURE (DI)

Data infrastructure refers to the organization's capacity to collect, process, store, and analyze data in a secure and structured way. A strong data infrastructure enables the generation of customer insights and supports its integration into strategic and operational decisions. In contrast, as Drave, et al. (2021) states, the lack of available data or poor data management can render any initiative that depends on it unreliable.

When data is accurate and relevant organizations are better able to understand the customer and anticipate their needs. However, this depends on customers' willingness to share this information (Drave et al., 2021).

Proposition 2: A quality and well-developed data infrastructure positively influences customer loyalty by enabling more accurate and data-based strategies that promote better customer understanding across customer journey

4.3 INDEPENDENT VARIABLE: PERSONALIZED EXPERIENCE (PE)

Personalized experience is the organization's ability to tailor its offering to individual customer preferences by adapting content, interactions, or value propositions to the specific needs, behaviors, and preferences of each customer (Emma, Maddog, & Templer, 2023).

According to the study by Sindwani, R. (2015) personalization emerges as the critical factor of differentiation. Aspects such as speed are considered basic for consumers,



but it is the ability to offer an individualized experience that really impacts loyalty. This reinforces the idea that technology should not only be functional, but also relevant.

This capability reflects how effectively a company can adapt its offer to each customer based on the available customer data: past behavior, preferences, and expectations. As Emma, Maddog & Templer (2023) states, through advanced analytics and segmentation, companies can tailor their content to their customers in different ways. The goal is to deliver relevant, timely, and meaningful content that resonates emotionally and cognitively with the consumer.

Proposition 3: Personalized experiences positively influence customer loyalty by strengthening the customer's emotional connection and increasing satisfaction.

4.4 INDEPENDENT VARIABLE: CROSS-CHANNEL INTEGRATION (CCI)

Cross-channel integration refers to an organization's ability to create consistent and coherent experience across channels. An effective omnichannel strategy enables the company to build trust and familiarity in all customer interactions.

Customers expect smooth transitions among channels, efficient processes for both purchases and returns, consistent real-time information, and a unified brand image throughout the entire journey. When these touchpoints are understood as a single element by the customer they contribute to client trust and higher satisfaction, however, the absence of integration in hybrid retail strategies might result in incoherent and unsatisfactory customer experience (Nikhashemi, S. et al. 2025).

Proposition 4: Effective cross-channel integration positively influences customer loyalty by improving brand consistency and reinforcing customer trust throughout their journey.

4.5 MODERATOR VARIABLE: EFFECTIVE USE & INTEGRATION OF RESOURCES (EI)

The moderating variable reflects the measure to which an organization successfully implements and coordinates the four dimensions within an integrated, customer-oriented strategy. The effectiveness of these strategies depends on how well applied and ethically these elements are deployed.



It is assumed that the value of these resources does not lie in their existence, but in the organization's ability to align them seamlessly across processes and teams. As Foroudi (2018) states, without the integration of all these resources, the value of smart technology is diluted, becoming an expense rather than a generator of long-term loyalty. Lack of organizational alignment acts as a roadblock between the use of technology and the creation of a successful customer experience.

Inconsistent data is not just a technical flaw; it is a flaw that prevents customers from perceiving the brand as a competent and relevant organization (Casaca & Miguel, 2024).

Proposition 5: The effective use and integration of the available resources positively moderate the relationship between technological tools, data infrastructure, personalized experience and cross channel integration on customer loyalty, strengthening their positive impact when integration is right.

4.6 DEPENDENT VARIABLE: CUSTOMER LOYALTY

Customer loyalty is the commitment of the customer to a company, which can be expressed through different ways: repeat purchases, continue using a product or service, recommendation or low churn, even when circumstances might encourage to change the behavior. It is a psychological commitment that can even transcend external factors. (Ishak, F., & Abd. Ghani, N. H., 2016)

Loyalty reflects positive feelings towards the brand, such as commitment, trust and preference. It exists when both dimensions coexist: solid attitudes and repeated behavior, not just habitual purchasing or inertia. It is closely related to satisfaction, perceived value and trust, and manifests itself in various ways, such as lower price sensitivity and greater resistance to competitors' offers. (Ishak, F., & Abd. Ghani, N. H., 2016)

Proposition 6: Customer loyalty is strengthened when data infrastructure, technological tools, personalization capabilities, and cross-channel integration work together to deliver consistent experiences that sustain attention, increase relevance, build trust, and ensure satisfaction across all touchpoints.



4.7 FRAMEWORK ITEMS

Construct	Explanation	Questions related	Items	Base Literature
Technological Tools (TT)	The availability and use of technological tools influence a company's ability to offer more personalized and relevant experiences; this helps to strengthen the relationship with the customer.	T1	Usage of technological tools (ML, predictive models, automation, etc.) to personalize the customer experience	Tahir Jan, M., & Abdullah, K. (2014).
		T2	These tools enable to anticipate customer needs	
		T3	Business has a trained team to use these technologies effectively.	
		T4	Technology is not just a technical resource. It is also connected with CX	
Data Infrastructure (DI)	A quality data infrastructure enables better customer understanding	DI1	Collection and management of customer data is well structured and organized	Shabani, L., Behluli, A., Qerimi, F., Pula, F., &



	and contributes to design strategies that allow promote customer loyalty	DI2	Data is regularly used to make decisions about customer strategy	Dalloshi, P. (2022).
		DI3	Integration between data from different channels	
		DI4	Data quality allows to identify customer behavior patterns	
Personalized Experience (PE)	Personalized experiences strengthen emotional connection, which translates into greater satisfaction and loyalty.	PE1	Offers, content, or communications are tailored based on customer interests or behavior.	Sindwani, R. (2015).
		PE2	Historical data is used to personalized customer data	
		PE3	Personalization exists in the different type of channels	
		PE4	Personalization influences customer satisfaction	



Cross-Channel Integration (CCI)	Effective integration between different channels improves the perception of brand consistency, strengthening customer confidence on the customer journey.	CCI1	Client experience is consistent between different channels	Nikhashemi, S. R., Paim, L., Haque, A., Khatibi, A., & Tarofder, A. K. (2013).
		CCI2	Tools (such as apps, QR codes or order tracking) are used to connect different environments	
		CCI3	The customer can start an interaction on one channel and continue it seamlessly on another	
		CCI4	This consistency across channels contributes to greater trust in the brand	



Effective Use & Integration (EI)	The effective use and alignment of digital tools moderate the impact of the available resources on customer loyalty.	EI1	Digital tools are well integrated into the marketing strategy or customer experience	Foroudi, P., Gupta, S., Sivarajah, U., & Broderick, A. (2018).
		EI2	Technologies are implemented with a customer-oriented approach.	Rafi, M., JianMing, Z., & Ahmad, K. (2020).
		EI3	Decisions regarding use of digital tools are aligned with loyalty goals	
		EI4	Ethical and transparent use of customer data	
Customer Loyalty (CL)	Customer loyalty depends on the other variables developing successfully.	CL1	Company's digital actions effectively capture customer's attention	Shabani, L., Behluli, A., Qerimi, F., Pula, F., & Dalloshi, P. (2022).
		CL2	The experiences offered are aligned with the customer's interests and needs.	Ishak, F., & Abd. Ghani, N. H. (2016).



		CL3	Well-executed omnichannel experience transmits security and confidence	
		CL4	Loyalty strategy generates repeat behaviors (repurchase, recommendation, etc.).	

Table 1 - Interview items



5. EMPIRICAL STUDY AND DISCUSSION

5.1 DATA COLLECTION (INTERVIEWS)

For this research, participants were selected with the intention of being consistent with the study and under the following criteria:

- Respondents had to be part of organizations with an active presence in Europe, as it is easier to define a limited geographical area under the same regulation.
- Operates with at least two channels of customer interaction, thus ensuring an omnichannel approach. All channels are considered, with preference given to mixed physical and online channels.
- Professionals had to be directly or indirectly involved in some phase of the data management cycle, whether it was collection, processing, analysis, interpretation, or strategic application of such data, with the aim of obtaining practical insights into how these dimensions impact customer experience and loyalty.

The interviews were conducted in a manner that could be adapted to the availability and circumstances of the participants. Most interviews were conducted remotely via Google Meets, one was conducted by telephone, and two were conducted in person. The duration of the sessions ranged from approximately 30 to 45 minutes.

All of them were conducted with the previous consent of the interviewees, and notes were taken of the responses and transcripts of each conversation.

At the beginning of each question formulated, each participant was asked to rate their level of agreement with items corresponding to the concepts in the research framework (technological tools, data infrastructure, personalized experience, omni-channel integration, effective integration, and customer loyalty) using a Likert scale from 1 to 5 with some affirmations.

These evaluations were designed to provide a certain measurable numerical criterion for each dimension. After each item, participants were invited, if they deemed it necessary, to briefly explain their score, clarify the reasoning behind their assessment, or give specific examples.



These qualitative questions helped to contextualize the numerical responses and better understand the nuances in each company's practices. Both the quantitative assessments and the qualitative explanations formed the basis of the analysis.

The aim of this research is to reflect organizational, regulatory, and cultural realities representative in Europe. The selection of interviewees is based on the relevance and transferability of the content provided to real-world strategies.

	Company size	Industry	Position
1	> 250 employees	Digital employee platform	<i>Machine Learning Engineer</i>
2	50 - 250	Market Studies Agency	<i>AI Team Manager</i>
3	>250	Retail (Supermarkets)	<i>Digital Marketing Manager</i>
4	>250	Energy & Utilities	<i>Senior Data Scientist</i>
5	<50	Clothing Brand	<i>Product Owner eCommerce</i>
6	>250	Banking	<i>Customer Success Manager</i>
7	>250	Security Systems	<i>Head of Data and Innovation</i>

Table 2 - Participants information

Some of the most relevant excerpts from the interviews are included, selected and taken directly from the transcripts described in Appendix A.



5.2 RESULTS

The following table shows the quantitative assessments collected during the interviews after asking respondents to rate the relevance of the different statements related to the propositions already presented. The scores for each participant are shown individually, as well as the mean and median for each item. In addition, a “mean dimension” score is calculated as the sum of the items within each construct, providing a general indication of the perceived relevance of each dimension.

Questions	P1	P2	P3	P4	P5	P6	P7	AVG	MEDIAN	AVERAGE DIMENSION
TT1	3	4	5	4	2	4	4	3.71	4.00	3.89
TT2	4	3	4	4	3	4	3	3.57	4.00	
TT3	4	4	4	5	3	5	4	4.14	4.00	
TT4	4	5	5	4	4	4	3	4.14	4.00	
DI1	3	5	4	5	3	5	4	4.14	4.00	4.11
DI2	3	4	5	5	4	5	5	4.43	5.00	
DI3	3	4	4	4	2	4	4	3.57	4.00	
DI4	4	5	5	5	3	4	4	4.29	4.00	
PE1	4	4	5	4	4	4	3	4.00	4.00	4.00
PE2	4	3	5	5	4	5	4	4.29	4.00	
PE3	2	3	4	3	2	4	3	3.00	3.00	
PE4	5	5	5	4	5	5	4	4.71	5.00	
CCI1	3	4	4	4	3	5	4	3.86	4.00	4.25
CCI2	3	5	5	5	2	4	3	3.86	4.00	
CCI3	5	5	4	4	2	5	3	4.00	4.00	



CCI4	5	4	5	5	4	5	5	4.71	5.00	
EI1	4	4	5	5	4	5	4	4.43	4.00	4.36
EI2	4	4	5	4	4	4	4	4.14	4.00	
EI3	4	5	4	4	2	5	4	4.00	4.00	
EI4	5	5	5	5	4	5	5	4.86	5.00	
CL1	4	4	5	4	4	4	3	4.00	4.00	4.43
CL2	4	4	5	5	5	5	4	4.57	5.00	
CL3	4	4	5	5	4	5	5	4.57	5.00	
CL4	4	5	5	4	4	5	5	4.57	5.00	

Table 3 - Interview results

5.3 DISCUSSION OF RESULTS

This section analyzes the quantitative results together with the qualitative explanations obtained from the interviews. By combining both sources, the analysis offers a more comprehensive overview of how the different dimensions of the framework are perceived and applied in organizations in a real-world context. At this point, various conclusions are presented, along with insights from interviewees and relevant literature.

5.3.1 TECHNOLOGICAL TOOLS

Average dimension: 3.89

Most of the tools currently being implemented are based on AI and machine learning. At the same time, many companies are in the process of automating a large part of their processes to save costs and improve integration across workflows.

However, adoption varies widely depending on each organization's capabilities and constraints. Several interviewees highlighted that larger firms often face significant technical limitations that slow down or complicate the implementation of new tools.



- Many professionals say they use AI primarily for customer segmentation and product personalization, supported by models and dashboards that facilitate information visualization and decision-making. The goal is to tailor offerings to customer demand and improve the relevance of communications.
- They also mention predictive models for mapping the customer journey, estimating lifetime value, and anticipating customer churn so that it can be proactively addressed.
- While respondents highlight the wide range of possibilities these tools offer, some acknowledge that they struggle to maximize their value due to high workloads and limited training, which makes it difficult to keep up with new capabilities.

Technological tools should not only improve internal efficiency but also be aligned with the customer experience, by using automation while maintaining personalized and relevant communications. As Ignat (2017) argues, digitalization must shift from being a mere technological solution to a customer-oriented solution.

A lack of internal technical capabilities and an unsupportive culture can significantly reduce the impact of these initiatives. Drave (2021) affirms that operational and cultural barriers are one of the main causes why AI and digital technology implementations often fail. Stronger adoption could be supported through targeted training, interdisciplinary workshops, and talks or masterclasses on AI and automation.

5.3.2 DATA INFRASTRUCTURE

Average dimension: 4.11

Although most interviewees agree on the importance of data organization, they also emphasize how difficult it is to manage large, fragmented data sources that flow across multiple areas of the company. In practice, data often sits in different systems owned by different teams, formats, etc. which makes it hard to build a single view of the customer. As a result, integrating data into day-to-day decision-making becomes slower and less reliable, limiting the organization's capabilities



- Several professionals note that data organization is challenging partly because some datasets lack the context needed to interpret them, which can make them difficult to use or even useless in practical terms.
- Despite differences in data sources and maturity, interviewees consistently emphasize the efforts made to use data strategically. However, some comment that long delays exist between data being collected and it is becoming meaningful within the organization, in many cases, by the time the data is reviewed it may no longer reflect the current situation and can lose relevance.
- Participants agree that data offers strong opportunities to better understand the customer journey and predict patterns

Sometimes data is duplicated or misaligned. Data quality and consistency directly affect the accuracy of marketing strategies and customer loyalty. Investing in data quality frameworks and data governance is key to a successful process (Chen, B., 2025).

Data infrastructure is not always ready to support advanced algorithms. Sometimes teams face platform limitations, inconsistent data formats, or even manual integration work to connect key sources. In many AI initiatives, failures are not driven by the model itself but by upstream issues such as weak infrastructure, unreliable APIs, fragmented storage, and limited data accessibility (Drave et al., 2021)

As Ishak, F., & Abd. Ghani, N. H. (2016) points out, the affective dimension plays a significant role in shaping customer responses, making it essential to capture data that can reliably reflect customers' levels of satisfaction and trust.

5.3.3 PERSONALIZED EXPERIENCE

Average dimension: 4.00

Personalization is widely seen as a priority, but it relies heavily on having sufficient data depth and quality. Several interviewees noted that they do not always have enough historical data to ensure that newly implemented strategies are robust or stable over time. They also mention temporary fluctuations caused by events such as fads, seasonality, etc.



- Whenever possible, companies try to tailor offers and communications to each user, but interviewees noted that this is not always feasible due to high workloads and the need to reuse existing materials.
- They also emphasized that the more personalized communications are, the better the results tend to be, as products and messages are aligned with customer needs.
- In many cases, different channels are integrated, and information is mainly transferred through internal software that allows the customer's journey to be saved where they left off last time and provides greater understanding.

Predictive data-driven personalization directly improves loyalty by adapting to customer habits and preferences (Chen, B., 2025). Sometimes this personalization occurs within each channel individually, but not across channels. One possible solution is to unify information in systems that span the various channels.

As Ishak, F., & Abd. Ghani, N. H. (2016) note, emotional elements are key to building commitment and, ultimately, long-term relationships. For this reason, it is important to integrate elements that allow users to identify more closely with the brand.

5.3.4 CROSS-CHANNEL EXPERIENCE

Average dimension: 4.25

Although companies recognize that this is a key factor for a positive customer experience, many still lack a robust omnichannel process. Respondents highlighted how difficult it is to connect digital and physical channels, especially when customer interactions are sporadic and there is little continuity between touchpoints.

- Employees agree that consistency in communication is essential, but they also note how challenging it is to maintain it when dealing with customers, especially in customer service contexts.
- Interviewees comment that the transition between the different available channels is not as smooth as it should be, sometimes mentioning gaps between two channels, as well as misunderstandings and customer complaints for this reason.



- Interviewees consistently view cross-channel consistency as a strong driver of trust.

Many companies show insufficient consistency across their channels. Ignat, V. (2017) highlights the importance of integration between systems to provide a seamless experience. Consistency becomes an essential factor.

Ignat, V., (2017) states that new technologies bring production and customers closer together, reducing times and improving the experience, for example through digital assistance at physical points of sale or interactive resources.

5.3.5 EFFECTIVE USE AND INTEGRATION OF DIGITAL TOOLS

Average dimension: 4.36

Professionals consistently agree that these elements (technological tools, data infrastructure, personalization practices, and cross-channel integration) need to be aligned for the company to operate effectively and efficiently. When one part fails to fit within the overall structure, data often accumulates without a clear purpose, insights are not activated, and resources are not focused on value creation.

- They explain that when one part does not fit within the overall structure, data ends up being stored without a clear purpose and resources are wasted unnecessarily.
- They also emphasize the importance of customers voluntarily sharing their data, as this enables more relevant offers and stronger performance.
- Finally, pre-selecting which information matters helps reduce unnecessary steps and avoids significant time and cost investments.

For an organization to transform user dynamics into a memorable and satisfying experience, it must go beyond simply installing tools. According to Rafi, et al. (2020), this requires an infrastructure in which expert knowledge is combined with models that provide clarity and support. Without this foundation, as Drave et al. (2021) warn, advanced technologies are doomed to failure due to a lack of internal alignment or lack of management support.



The impact on loyalty that occurs when all strategic elements are integrated. All resources must be aligned with the user experience to generate a sustainable competitive advantage and encourage positive customer behavior (Foroudi, P., et al. 2018).

5.3.5 CUSTOMER LOYALTY

Average dimension: 4.43

Customer loyalty is preceded by a consistent journey and a satisfying experience. When customers repeatedly encounter smooth, positive interactions, they are more likely to repeat it and become loyal to the brand. Over time, these experiences foster an emotional connection, turning satisfaction into commitment and, ultimately, loyalty.

1. Respondents agree that it is important to measure customer touchpoints and that they do so continuously, at least at key moments in the journey.
2. When executed effectively, this measurement supports strategies that can build a stronger connection with customers over time.
3. A consolidated brand image and consistent messaging across channels matter to customers, as consistency reinforces clarity, trust, and the overall quality of the experience.
4. Personalization and alignment with customer needs help the brand feel more approachable, which strengthens the relationship over time. Especially in sectors with lower-need products, they emphasize that this offering can create a sense of belonging among customers.

Loyalty depends more on the customer's perceived experience than on repeat purchases (Ishak, F., & Abd. Ghani, N. H. 2016). That is why it is important to prioritize strategies that help build emotional values.

The companies that best retain customers are those that anticipate needs. Some models improve loyalty by anticipating consumption or needs and response to campaigns (Chen, B., 2025) It is important to study the ideal type of model for each business in terms of churn, propensity to purchase, price sensitivity, etc.



6. LIMITATIONS OF THE STUDY

This study confirms the logic of the business approach that has become established in recent years: a customer-centric model, where loyalty becomes a strategic priority. In this context, new digital capabilities significantly expand the possibilities for understanding consumers, personalizing the experience and optimizing the relationship over time.

However, despite the relevance of this study and the insights generated, several limitations should be acknowledged:

- Lack of an overarching model to support construct selection. The selection of key constructs in the research framework, such as data infrastructure, technological tools, personalization, and multichannel integration, is based on empirical and practice-oriented literature rather than on a single unifying model. Given the novelty and rapid evolution of these topics, it remains difficult to identify a model that comprehensively explains the full set of variables and their joint effects, which may limit the theoretical cohesion of the framework and its comparability with previous theory-based models.
- Theoretical scope of the ARCS model in the context of loyalty; although Keller's ARCS model provides a useful perspective for interpreting customers' emotional responses (attention, relevance, confidence, and satisfaction), its application in the specific context of customer loyalty and data-driven omnichannel environments has been little explored in the literature. As a result, the ARCS-based interpretation in this thesis is based on related evidence and conceptual alignment rather than a fully consolidated body of ARCS research focused on loyalty.
- Limited evidence for the moderator construct (effective integration and implementation): Although the reviewed literature supports the importance of digital technologies and resources for improving customer experience and supporting loyalty strategies, no studies were identified with any specific model that uses this variable as a moderator related to the effective integration and implementation of digital and technological resources as included in the project



itself. The variable was constructed from related literature and by adapting concepts; however, this may weaken the proposed connection.

- Subjectivity in interview-based measurement: The interview is conducted in such a way that certain parameters of the company are measured subjectively, meaning that it is subject to the experience and perception of the interviewee, which conditions the study itself. Although this subjectivity also helps to better understand the business, it is also limiting when it comes to interpreting each case.
- Small sample size: The approach of the study is limited to a few interviews that aim to be representative of different realities. Although the conclusions are valuable and intended to be exploratory, they cannot represent the entire European market due to its great variability in areas, sectors, and spatializations.
- European context: The study was limited to companies operating in Europe to ensure consistency. However, this geographical restriction may limit the applicability of the results to other cultural and social contexts. Furthermore, it is important to consider that data processing in the European Union is strongly conditioned by its own regulations, such as the GDPR, which involves a regulation of the use of personal data and strict transparency and limitation regulations (Wolford, B, 2025). This environment, which is heavily regulated to protect users, influences consumer personalization, as well as the identification and integration of information. It should be noted that there are other markets with more flexible regulations. Therefore, the loyalty strategy and its implementation should vary depending on the context and specific characteristics of each region.
- The questions explored and the field examined are continuously evolving given the rapid advances of digital transformation and variability in customer behavior, the theoretical framework adopted in this study may change and require future updates to remain aligned with emerging technologies and market dynamics.



7. CONCLUSIONS

This thesis supports the conclusion that loyalty, both in digital or mixed environments is not the result of a single element, but rather a set of integrated elements, understood as a whole and applied consistently. This set of elements triggers a motivational process in consumers, as described in Keller's ARCS model (1979, 2009).

Companies rely on multiple enablers: technological tools, data infrastructure, personalization capabilities, and cross-channel integration. These are the independent variables of this model and support the ARCS dimensions. Their contribution to customer loyalty depends on how effectively these resources generate attention, relevance, trust, and satisfaction at each customer touchpoint.

The moderating variable, “Effective integration,” becomes in this case a connector that reinforces the ability to adapt all of this to meaningful customer experiences (Foroudi, P., et al, 2018). Therefore, this entire strategy is successful when it is coherently integrated into an experience-oriented design. Otherwise, the lack of integration and disconnection between teams, along with other factors, limits the ability to activate these ARCS dimensions in the customer. Without this component, digital initiatives become disconnected and reduce their influence on loyalty.

Finally, customer loyalty, the dependent variable, is understood as the result of this set of correctly articulated elements. The brand manages to attract consumer's attention, demonstrates relevance through experiences tailored to their needs, inspires trust through consistency and transparency, and ultimately generates satisfaction through fluid and emotionally positive interactions. It depends on the organization's ability to make the right choices in how initial data is properly transformed into coherent decisions and experiences.

Satisfaction is directly related to all these previous elements generated during the experience (Noor, N. H., 2023). This allows organizations to use their resources to create meaningful experiences that not only meet customer needs but also build lasting relationships in an increasingly competitive omnichannel ecosystem.



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APPENDIX A

Attached interviews fragments:

1. Machine Learning Engineer

Digital employee platform

250 employees

BLOCK 1

- **TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions.**

(3)

- **TT2 - The technological tools we use allow us to anticipate customer needs. (4)**

“If they can be applied to the customer's needs but there are nuances, we always try to ensure that everything we do meets the customer's needs as far as possible.”

- **TT3 - We have a trained team to use these technologies effectively. (4)**

- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource. (4)**

“This is always the goal, but it is not always achieved. And sometimes a lot of time is wasted iterating with other teams about the resources we need.”

BLOCK 2



- **DI1 - Customer data collection and management is well structured and organized in my company. (3)**

“The cloud management situation is currently confusing. We have information in Snowflake that doesn't match the local databases, which means we have to do weekly downloads and manually cross-reference the data in Excel, a task that takes up a lot of time.”

- **DI2 - Data is regularly used to make decisions about customer strategy. (3)**
- **DI3 - There is clear integration between data from different channels (digital and physical) (3)**
- **DI4 - In my company, data quality allows us to identify customer behavior patterns (4)**

“We do identify behavioral patterns, but the data quality and workflow aren't consistent yet so I still spend more time than necessary on manual cleanup and validation before I can trust the final outcome.”

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (4)**
- **PE2 - Historical data is used to personalize the customer experience (4)**
- **PE3 - Personalization is present across all channels (2)**



“It depends a lot on the channel. For example, email is very simple to personalize, while others, such as telephone, offer almost no personalization because it requires time to track the client if he calls spontaneously”

- **PE4 - I perceive that personalization directly influences customer satisfaction (5)**

“Yes, of course. When something is well customized, you can appreciate it. Customers value it, and it obviously improves the experience and increases satisfaction.”

BLOCK 4

- **CCI1- The customer experience is consistent across all channels (3)**
- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (3)**

“We use tools such as apps, QR codes, and order tracking to connect channels. However, synchronization is not always in real time. For example, promotions may appear on the website before they appear in the app, and some of the information in the app may be temporarily out of date. This creates occasional discrepancies although this is usually corrected on the same day.”

- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (5)**
- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (5)**



BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (4)**

“We are actively using machine learning to improve the CX and marketing strategy for example, using machine learning models to predict churn and trigger retention actions, as well as recommendation models that identify the best offer for each customer at the right time.”

- **EI2 - Technologies are implemented with a clear customer focus. - 4**
- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives.. (4)**
- **EI4 - Customer data is used ethically and transparently. (5)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (4)**
- **CL2 - The experiences offered are aligned with customer interests and needs. (4)**

“The segmentation and predictive models help personalize experiences, although data inconsistencies and the lack of proper customer profile identification sometimes create limitations. We are always testing what works best”



- **CL3 - The omnichannel experience well executed conveys safety and confidence. (4)**
- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (4)**



INTERVIEW 2:

IA Team Manager

Market Studies Agency

50–250 employees

BLOCK 1

TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (4)

TT2 - The technological tools we use allow us to anticipate customer needs.(3)

TT3 - We have a trained team to use these technologies effectively. (4)

“Our team is well trained and brings strong ideas for implementation, but currently our main challenge: we are too few to meet demand, which slows down project delivery and the adoption of new tools”

TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource.(5)

BLOCK 2

DI1 - Customer data collection and management is well structured and organized in my company. (5)

“Data management is highly structured; it is the main driving force behind the company. From participant recruitment to results integration, all processes are controlled.”



DI2 - Data is regularly used to make decisions about customer strategy. (4)

DI3 - There is clear integration between data from different channels (digital and physical) (4)

DI4 - In my company, data quality allows us to identify customer behavior patterns (5)

“The data quality is very high, which allows us to see behavior patterns quite clearly. We can identify motivations, changes in attitude, or contradictions for disposable opinions.”

BLOCK 3

PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (4)

“We adapt offers and communications based on the target audience, their motivations, and their availability. We adapt aspects such as prior communications and incentive suggestions to increase participation.”

PE2 - Historical data is used to personalize the customer experience (3)

PE3 - Personalization is present across all channels (3)

PE4 - I perceive that personalization directly influences customer satisfaction (5)



BLOCK 4

CCI1- The customer experience is consistent across all channels (4)

CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (5)

“We have efficient tools for connecting environments: real-time dashboards, panelist apps, dynamic participation links, with global participation...These enable coordinated activation and monitoring at scale, supporting global participation.”

CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (5)

CCI4 - I believe this channel coherence contributes to greater trust in the brand (4)

BLOCK 5

EI1 - Digital tools are well integrated into the marketing or customer experience strategy (4)

EI2 - Technologies are implemented with a clear customer focus. (4)

EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (5)



EI4 - Customer data is used ethically and transparently. (5)

“We are very strict about data use. By law, we must always explain what data is collected, why, and for how long, depending on the type of customer, the permissions they grant us...Data practices also vary depending on the customer’s consent and, especially, their location, since regulations and expectations differ”

BLOCK 6

CL1 - My company's digital actions effectively capture the customer's attention. (4)

CL2 - The experiences offered are aligned with customer interests and needs. (4)

CL3 - The omnichannel experience well executed conveys safety and confidence. (4)

CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (5)

“Our loyalty strategy works very well. When customers feel that the experience is simple and that it has been enriching they return, and recommend the product or service.”



INTERVIEW 3:

Digital Marketing Manager

Retail (Supermarkets)

250 employees

BLOCK 1

- **TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (5)**

- **TT2 - The technological tools we use allow us to anticipate customer needs.(4)**

“We anticipate quite a lot, especially when it comes to inventory. However, in food, there is always variability: a product may be unavailable due to production problems, special dates, or even the weather... That's why our models are good, but they are not infallible.”

- **TT3 - We have a trained team to use these technologies effectively. (4)**

- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource.(5)**

“If we want to implement a tool but it does not reduce friction or add enough tangible value, it is not approved. This is something that is already internally standardized.”



BLOCK 2

- **DI1 - Customer data collection and management is well structured and organized in my company. (4)**
- **DI2 - Data is regularly used to make decisions about customer strategy. (5)**

“No customer decision is made without data. When we propose changes to segmentation, promotions, frequency adjustments, or content, we always justify them with analytics: impact on NPS, open rates, conversion, etc.”

- **DI3 - There is clear integration between data from different channels (digital and physical) (4)**

“Integration is essentially well resolved: what the customer does in the app and what they buy in the store is reasonably connected. But there is a very important part that we cannot control as if the customer pays in cash or with other cards.”

- **DI4 - In my company, data quality allows us to identify customer behavior patterns (5)**

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (5)**



- **PE2 - Historical data is used to personalize the customer experience (5)**

“History is the basis of everything, without understanding what a customer has purchased over several months, you cannot make a credible personalized recommendation. People tend to have their trusted products and brands, and if they are not available at the supermarket, they will likely look for them elsewhere.”

- **PE3 - Personalization is present across both digital and physical channels (4)**

“We have achieved significant success in the digital sphere; in person it is more limited because it is difficult to individualize each experience, but we have still managed to achieve a certain degree of continuity thanks to digital coupons and experiences linked to the loyalty program.”

- **PE4 - I perceive that personalization directly influences customer satisfaction (5)**

BLOCK 4

- **CCI1- The customer experience is consistent across all channels (4)**
- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (5)**
- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (4)**



- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (5)**

BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (5)**
- **EI2 - Technologies are implemented with a clear customer focus. (5)**
- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (4)**

“Decisions are aligned with customer loyalty, although sometimes in the short term there is a lot of pressure on the promotional side.”

- **EI4 - Customer data is used ethically and transparently. (5)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (5)**
- **CL2 - The experiences offered are aligned with customer interests and needs. (5)**
- **CL3 - The omnichannel experience well executed conveys safety and confidence. (5)**

“Well-executed omnichannel retailing conveys security. Customers feel that everything is connected, which reduces friction. Emotional security plays an important role in supermarket loyalty, conveying trust.”



- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (5)**



INTERVIEW 4:

Senior Data Scientist

Energy & Utilities

250 employees

BLOCK 1

TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (4)

- **TT2 - The technological tools we use allow us to anticipate customer needs. (4)**
- **TT3 - We have a trained team to use these technologies effectively. (5)**
- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource. (4)**

“The User Experience and data departments collaborate continuously, but prioritization is sometimes influenced by regulatory issues or day-to-day operational pressures, and we leave things unfinished.”

BLOCK 2

- **DI1 - Customer data collection and management is well structured and organized in my company. (5)**



- **DI2 - Data is regularly used to make decisions about customer strategy. (5)**

- **DI3 - There is clear integration between data from different channels (digital and physical) (4)**

“Integration is good, although not completely homogeneous. The digital part is fairly well established”

- **DI4 - In my company, data quality allows us to identify customer behavior patterns (5)**

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (4)**

“We customize rates, loyalty plans, and messages based on energy profiles and behavior, but this takes a lot of initial hours”

- **PE2 - Historical data is used to personalize the customer experience (5)**

- **PE3 - Personalization is present across all channels (3)**

- **PE4 - I perceive that personalization directly influences customer satisfaction (4)**

“Personalization improves long-term satisfaction, even if the customer prioritises price and clarity in the short term, as well as simple and smooth processes.”



BLOCK 4

- **CCI1- The customer experience is consistent across all channels (4)**

“Customers do not usually look for the same thing in online or in-person/telephone channels; in our case it varies quite a bit.”
- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (5)**
- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (4)**
- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (5)**

BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (5)**
- **EI2 - Technologies are implemented with a clear customer focus. (4)**



- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (4)**

“It heavily focuses on maintaining a favorable experience, without difficulties or things that the user does not understand, especially in terms of churn and customer satisfaction in the post-incident experience.”

- **EI4 - Customer data is used ethically and transparently. (5)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (4)**
- **CL2 - The experiences offered are aligned with customer interests and needs. (5)**
- **CL3 - The omnichannel experience well executed conveys safety and confidence. (5)**
- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (4)**

“If customers feel they are paying too much or experiencing frequent issues, they may be loyal but dissatisfied. It's a market where customers don't often switch companies.”



INTERVIEW 5:

Product Owner (eCommerce)

Clothing Brand

<50 employees

BLOCK 1

TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (2)

- **TT2 - The technological tools we use allow us to anticipate customer needs.(3)**

- **TT3 - We have a trained team to use these technologies effectively. (3)**

“We have a small team, we have a lot of practical knowledge, but we don't have anyone who is solely dedicated to in-depth technical specialization.”

- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource.(4)**

BLOCK 2

- **DI1 - Customer data collection and management is well structured and organized in my company. (3)**

“We collect data on browsing, purchases, newsletters, and social media, but it is not all centralized. It is more a collection of sources than a defined architecture.”



- **DI2 - Data is regularly used to make decisions about customer strategy. (4)**

- **DI3 - There is clear integration between data from different channels (digital and physical) (2)**

- **DI4 - In my company, data quality allows us to identify customer behavior patterns (3)**

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (4)**

- **PE2 - Historical data is used to personalize the customer experience (4)**

- **PE3 - Personalization is present across all channels (2)**

- **PE4 - I perceive that personalization directly influences customer satisfaction (5)**



BLOCK 4

- **CCI1- The customer experience is consistent across all channels (3)**

“We try to maintain a consistent visual style. Online is fluid; in pop-ups it depends on the stock we release, equipment, etc. We try to make our strongest point in consistency be as a brand.”

- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (2)**

- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (2)**

“We are working on improving this, for example, customers will soon be able to save their shopping carts using only their username.”

- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (4)**

BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (4)**

- **EI2 - Technologies are implemented with a clear customer focus. (4)**



- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (2)**

“Our customers are highly loyal, but that loyalty is based on a sense of belonging to the brand. As a result, digital tool decisions are not always explicitly linked to loyalty objectives”

- **EI4 - Customer data is used ethically and transparently. (4)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (4)**

“Our digital actions capture attention effectively. We use very visual and dynamic content, and our target audience is young and responds particularly well to digital channels, especially social media, where we run campaigns and where engagement is easiest to generate.”

- **CL2 - The experiences offered are aligned with customer interests and needs. (5)**

- **CL3 - The omnichannel experience well executed conveys safety and confidence. (4)**

“Some of our success factors are good reviews and fast service, which convey confidence”



- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (4)**



INTERVIEW 6:

Customer Success Manager

Banking

250 employees

BLOCK 1

TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (4)

- **TT2 - The technological tools we use allow us to anticipate customer needs.(4)**

“With digital customers and profiles that have sufficient history, our models work very well and allow us to anticipate needs in advance. As new technologies continue to emerge, we can understand customers more deeply and better replicate consumers behavior patterns”

- **TT3 - We have a trained team to use these technologies effectively. (5)**
- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource.(4)**

BLOCK 2

- **DI1 - Customer data collection and management is well structured and organized in my company. (5)**



- **DI2 - Data is regularly used to make decisions about customer strategy. (5)**

- **DI3 - There is clear integration between data from different channels (digital and physical) (4)**

- **DI4 - In my company, data quality allows us to identify customer behavior patterns (4)**

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (4)**

“Offers and content are tailored to the customer's financial profile and habits. Not all customers can access the same products or are looking for the same thing, so we personalize according to a long list of criteria”

- **PE2 - Historical data is used to personalize the customer experience (5)**

- **PE3 - Personalization is present across all channels (4)**



- **PE4 - I perceive that personalization directly influences customer satisfaction (5)**

“Personalization allows us to offer products and deals that meet customer needs, inform them of what is available, etc. It gives us many more possibilities and also allows them to feel much closer to us.”

BLOCK 4

- **CCI1- The customer experience is consistent across all channels (5)**
- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (4)**
- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (5)**
- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (5)**

“All channels must convey the same message, as this reinforces the feeling of security. Conversely, inconsistencies create confusion and a bank simply cannot afford to communicate incoherently.”

BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (5)**



- **EI2 - Technologies are implemented with a clear customer focus. (4)**

- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (5)**

“All communications received by the customer are aligned with improving their experience; some focus solely on engagement, while others are more commercial in nature, but capturing interest and maintaining relevance are both seen as part of building loyalty.

- **EI4 - Customer data is used ethically and transparently. (5)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (4)**
- **CL2 - The experiences offered are aligned with customer interests and needs. (5)**
- **CL3 - The omnichannel experience well executed conveys safety and confidence. (5)**



- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (5)**

“We assess loyalty through indicators such as customer loyalty through NPS and referral programs, but also through repeated behaviors that signal trust, such as choosing us for a mortgage or depositing their salary, etc. It is important to retain customers, but the more they have with us, the more loyal they are and the less inclined they are to switch banks”



INTERVIEW 7:

Head of Data and Innovation

Security Systems

250 employees

BLOCK 1

TT1 - My company uses technological tools (AI, automations, predictive models, etc.) that make it possible to personalize customer interactions. (4)

“We adapt prices, alarm usage messages, and retention campaigns based on actual patterns. Automations work well for recurring communications: maintenance notices, battery consumption, etc.”

- **TT2 - The technological tools we use allow us to anticipate customer needs.(3)**
- **TT3 - We have a trained team to use these technologies effectively. (4)**
- **TT4 - I believe that in my company, technology use is truly connected to the customer experience, rather than being just a technical resource.(3)**

BLOCK 2

- **DI1 - Customer data collection and management is well structured and organized in my company. (4)**



- **DI2 - Data is regularly used to make decisions about customer strategy. (5)**

- **DI3 - There is clear integration between data from different channels (digital and physical) (4)**

- **DI4 - In my company, data quality allows us to identify customer behavior patterns (4)**

“The data quality is good, allowing us to identify patterns such as false alarm frequency, usage, price sensitivity, etc. However, we always find difficulties with the integration and applicability of data among regions.”

BLOCK 3

- **PE1 - My company adapts offers, content, or communications based on customer interests or behaviors (3)**

- **PE2 - Historical data is used to personalize the customer experience (4)**

“Yes, it's the best way to offer a successful experience. We can't be too intrusive because we want customers to feel safe and not observed, and we have to limit interactions with them to only what is necessary.”

- **PE3 - Personalization is present across all channels (3)**



- **PE4 - I perceive that personalization directly influences customer satisfaction (4)**

“Customers who use our services less often sometimes receive useful personalized communications based on their interactions. For us it is necessary to encourage its use”

BLOCK 4

- **CCI1- The customer experience is consistent across all channels (4)**
- **CCI2 - Tools (such as apps, QR codes or order tracking) are used to connect different environments (3)**
- **CCI3 - The customer can start an interaction on one channel and continue it seamlessly on another (3)**
- **CCI4 - I believe this channel coherence contributes to greater trust in the brand (5)**

“Customers realize that we know who they are, what equipment they have, that we go through certain security processes, why incidents occur, etc., it generates a lot of trust and peace of mind.”



BLOCK 5

- **EI1 - Digital tools are well integrated into the marketing or customer experience strategy (4)**

- **EI2 - Technologies are implemented with a clear customer focus. (4)**

- **EI3 - Decisions on the use of digital tools are aligned with loyalty objectives. (4)**

“We create in-house satisfaction models, price segmentations, and personalized communications that are directly geared toward retention”

- **EI4 - Customer data is used ethically and transparently. (5)**

BLOCK 6

- **CL1 - My company's digital actions effectively capture the customer's attention. (3)**

- **CL2 - The experiences offered are aligned with customer interests and needs. (4)**

- **CL3 - The omnichannel experience well executed conveys safety and confidence. (5)**



- **CL4 - The loyalty strategy generates repeated behaviors (repurchase, recommendation, etc.). (5)**

"Satisfied customers stay for many years, purchase additional services or services for second homes, and recommend us to others in their neighborhood."



ANNEX B (ETHICS COMMITTEE REPORT)

Thank you for filling in the Research Ethics Checklist. After reviewing your request, you can proceed with the study as we do not foresee any major ethical concerns with the project.

Project No.: **DDMKT2025-4-295092**

Project Title: **Integration of digital technologies and customer satisfaction: The omnichannel experience between physical and virtual points of sale**

Principal Researcher: **Olympia Cristina Fernández Ameijeiras**

according to the regulations of the Ethics Committee of NOVA IMS and MagIC Research Center this project was considered to meet the requirements of the NOVA IMS Internal Review Board, being considered **APPROVED** on 20/05/2025.

It is the Principal Researcher's responsibility to ensure that all researchers and stakeholders associated with this project are aware of the conditions of approval and which documents have been approved.

The Principal Researcher is required to notify the Ethics Committee, via amendment or progress report, of

- Any significant change to the project and the reason for that change;
- Any unforeseen events or unexpected developments that merit notification;
- The inability of the Principal Researcher to continue in that role or any other change in research personnel involved in the project.

Lisbon, 20/0/2025

NOVA IMS Ethics Committee

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Data with Purpose.

