PROGRAMME: Master's in Industrial Engineering and Master's in Business Administration

Evaluation of an ERP system implementation in a retail company Consulting

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Master final project

Madrid
May 2023

Executive Summary

This MBA thesis offers a comprehensive analysis of the implementation process of an Enterprise Resource Planning (ERP) system in a retail company. The thesis aims to provide insights for organizations embarking on similar ERP implementation processes and for consulting companies aiming to deliver potential clients an attractive approach for ERP implementations.

The stating point in the analysis of this thesis is to obtain an objective view on the client company characteristics. In addition, in order to understand the company's environment and internal resources and capabilities an external and internal analysis are carried out, finishing by doing the SWOT analysis and the TOWS matrix. In this way, the strategic options that are most relevant to the company are identified, being the implementation of an ERP system the main objective. Once the retail company has identified this need, it is necessary to perform a stakeholder analysis. This allows to consider and tailor each stakeholder's expectations, needs and concerns in the ERP implementation project. Finally, the processes and operations that the company wishes to digitally transform will be classified through a Request for Proposal (RFP).

An in-depth study of the different ERPs, including their key characteristics, possibilities, and competitive advantages, is carried out in order to select the one that has the best fit with the retail company. After the described study, Microsoft Dynamics 365 Finance & Operations is chosen as the ERP solution due to its user-friendly interface, cost-effectiveness, and adaptability to the company's needs.

The next step in the implementation process is the selection of an external implementation company. In this thesis, a proposal from the consulting firm KPMG is taken as a referent point. The proposed approach includes why the client company should choose KPMG as the external implementation company, the methodology it will use for the implementation, the coverage of the RFP requirements with Microsoft's solution, the project timeline, and the financial plan. Moreover, key financial indicators such as ROI (Return on Investment) and NPV (Net Present Value) are evaluated and presented, leading to positive results.

Finally, the risks faced by the client company in undertaking the ERP implementation project are evaluated. Hence, taking into consideration all the advantages and disadvantages, the client company will be able to make the decision to initiate the implementation process of Microsoft's ERP in collaboration with KPMG or continue exploring other opportunities and solutions.

Keywords: Enterprise Resource Planning (ERP), Retail, Digital transformation, Request for Proposal.

Table of contents

Index of Images

Index of Tables

Index of formulas

List of acronyms

(CIO) Chief Information Officer

(CF) Cash Flow

(ERP) Enterprise Resource Planning

(FIFO) First In, First Out

(FV) Future Value

(IT) Information Technology

(KPMG) Klynveld, Peat, Marwick, Goerdeler

(LIFO) Last In, First Out

(MBA) Master's in Business Administration

(MRP) Materials Requirements Planning

(MRP II) Manufacturing Resource Planning

(NPV) Net Present Value

(PDF) Portable Document Format

(PV) Present Value

(RFP) Request for Proposal

(ROI) Return on Investment

(SDGs) Sustainable Development Goals

(SMEs) Small and Medium-sized Enterprises

(TOM) Target Operating Model

(UAT) User Acceptance Testing

1. Introduction

Since the advent of the Internet in 1983, society has been undergoing significant changes in the way of working with the incorporation of new technologies available driving digitalization. The COVID-19 pandemic has also reinforced the digital transformation in companies improving productivity, efficiency and effectiveness. Moreover, companies that implement these technological changes gain competitive advantages over their competitors by making their operations faster and more reliable. Many companies, in order to start this transformation process, need the advice, support and, in some cases, external implementation of a company that is an expert in these matters.

In line with this, the consultancy problem to be covered in this master's thesis will be the evaluation of the implementation of an Enterprise Resource Planning (ERP) system. An ERP is a software of business management that allows control of the company's processes and resources with the aim of ensuring that all the company's data is integrated and synchronized among all departments. Thus, there are consulting firms that accompany organizations interested in the implementation of an ERP throughout the process of requirements gathering, implementation and support to meet the expectations and achieve the goal set at the beginning of the project. In addition, these companies are usually in charge of training the users who, after the implementation, will be in charge of using the tool.

ERPs are used by companies of all sizes highlighting large and medium sized companies as they need to have more control and management over their data. It is also used in a great variety of industries. The most important factors that increase the likelihood of implementing an ERP system at a company are (Huertas, 2017):

- **Complex operations**. Companies with complex operations, such as those with multiple departments or locations, tend to be more likely to benefit from an ERP system to help manage and coordinate all their processes and procedures.
- **Obsolete systems**. Companies that are using obsolete software systems or just using spreadsheets are more likely to implement an ERP system to modernize, streamline their operations (saving time and avoiding errors) and provide better accessibility to the information within the organization. Anyway, ERPs allow integration with the previous tools used by the company.
- **Rapid growth**. Companies that are experiencing strong growth may also be more likely to implement an ERP system to help them scale in an efficient way (Grupo Active, 2017).

- **Regulatory requirements**. Companies in industries with strict regulatory requirements, such as finance or oil and gas companies, may use an ERP system to help them comply with these regulations at every stage of the business in an easier and faster way (Castro, 2021).

Ultimately, the decision to implement an ERP system will depend on a variety of factors specific to each company, including its size, industry, and business objectives. At this project, it has been decided to evaluate the implementation of an ERP in a retail company. This choice is due to the fact that the part of the ERP software that will be mostly evaluated is Finance and Operations and the companies that require its use in a more comprehensive way are the retail companies. ERP modules of Finance and Operations enables companies to increase their financial performance as well as their connected operations. ERP systems are used by retail companies to manage and organize the multiple functions and processes within the organization, such as inventory management, customers and suppliers' management, financial accounting, and supply chain management (Castro, 2020). An ERP system helps to streamline their processes, improving efficiency, and reducing errors.

From a practical perspective, the implementation of an ERP software can bring plentiful benefits to a retail business. It helps to reduce costs and time by automating mechanical tasks and eliminating the need for multiple software systems. Also in many cases, companies that want to implement an ERP usually do everything manually with Excel, which makes the task of entering the data and visualizing it very long and inefficient, so they look for software solutions. An ERP system can also enhance collaboration and communication within the organization by providing a central platform for sharing information and resources, as well as to search records within the system in a quick and clear way. In addition, it can also improve decision-making by providing real-time data and analytics on various aspects of the business. Therefore, the evaluation of the different types of ERPs existing on the market, which satisfy the needs of a specific retail company, will be carried out in this project. On the other hand, the different benefits for the retail company will be evaluated against the costs that will be incurred due to its implementation. After the completion of this thesis, the retail company will be able to see the profitability of the ERP in its system both financially and in the improvement of its internal procedures.

From an academic perspective, the study of the implementation of an ERP system in the context of retail companies can contribute to the overall understanding of the role of technology in business organization and management. Additionally, this thesis can help to inform about the best practices and the identification of challenges and opportunities for improving the effectiveness of consulting firms in responding to an ERP tender from a retail company.

2. Client profile

In a market like todays, where competition is fierce and companies must work as efficiently and accurately as possible, it is important to know the solutions and tools available to them to achieve this. One of the areas in which it is possible to gain a lot of ground in these aspects is the digital transformation. Therefore, it is essential to conduct a thorough analysis of the client company that wants to carry out this digitization process, getting to understand its characteristics to identify the ERP that best suits its needs.

In this section, an explanation of why the retail company came to the decision to implement an ERP system will be provided. In the first place, the company characteristics will be presented, and an external analysis will be carried out defining what the trends are in the client company's environment. Secondly, and internal analysis will be performed screening the resources and capabilities of the retail company.

Once the retail company has been identified and the external and internal analysis has been performed, the SWOT analysis will be conducted, culminating in the use of the TOWS matrix in order to deliver strategic decisions that the company can use to improve as a business.

2.1. Client company characteristics

The company under study will be a Spanish fashion brand with the following characteristics (Client's website)[1]:

- Type of products: clothing and bags
- Operates over 200 stores in over 20 countries worldwide
- Employs around 1.500 individuals
- Headquarters located in the north of Spain with 150 employees
- Revenues of approximately 215 million euros per year

[1] The client's name will not be disclosed for confidentiality reasons.

Image 1. Client's company headquarters. Source: Own elaboration

2.2. Market trends

Currently, the retail sector is considered strategic in Spain as it accounts for 11% of employment nationwide and is made up of a large number of SMEs (De ventas, 2022). Therefore, it is important to take into account the trends in this sector in order to know where it is heading (KPMG España, 2023):

1. **Rising prices in the sector**. The increase in the price of transport, raw materials and energy has forced companies to increase prices to protect their margins.
2. **Location based on geopolitics**. Due to the closure of the Russian market and restrictions on Chinese trade due to its covid policies, operators have been forced to focus on new geographies to maintain their sales.
3. **Sustainability**. Having the goal of achieving carbon neutrality by 2050 in Europe, companies have made a priority to reduce greenhouse gas emissions in order to adapt to new regulations at the European level.
4. **New consumption patterns**. Sustainability, together with consumption models such as second-hand garments or "pay-as-you-go", are giving rise to alternative consumption models in the sector.
5. **Supply chain armoring**. To cover the disruptions that may occur in the supply chain, companies have filled their warehouses with stock, also increased by the slowdown in consumption.
6. **Restructuring of procurement**. Companies have been forced to increase control over their value chain, thus reducing the risk of possible production and procurement disruptions.
7. **New channels to customers**. After the post-pandemic boom in online consumption, there is once again a balance between online and offline sales.

8. **More technology**. Technology continues to be one of the main concerns of managers in order to meet the needs of an increasingly unpredictable customer as it helps to predict demand and get to know customers better.
9. **More debt**. After having been c during 2020, some large companies have once again increased their debt and plan to buy or sell companies, expand their portfolios and diversify their business.
10. **The metaverse**. A concept that until recently seemed like science fiction is beginning to enter the scene. Furthermore, more than half of the large groups in the sector are planning to explore initiatives of this type or have already done so finding new ways to connect with the consumer. (Retail 360, 2022).

2.3. Internal analysis

An internal analysis of the specific retail company will be conducted to gain awareness of what contributes to its long-term survival. Moreover, this analysis will provide a deeper understanding of the client company and will allow the identification of its strengths and weaknesses.

Thus, a resources and capabilities analysis of the retail company will be provided, where resources refer to the assets that the company possesses, and capabilities are the ways in which the company effectively utilizes those assets.

Resources		Capabilities
Branding	Intellectual property	Established brand image due to strong designs and fashion sense
Brick-and-mortar stores, factories, fabrics, shelf-ready clothing	Physical	Adaptability to demand, productivity of plants, inventory management
IT infrastructure and systems	Physical	Effective utilization of technology for business operations
Established supply chain in multiple countries	Physical	Efficient supply chain management and long-term relationship with suppliers over the globe

Resources		Capabilities
Cash flow, balance sheet and financial resources	Financial	Sound financial planning. Ability to grow the company's funds and manage cash flows
Marketing and advertising budget	Financial	Successful and attractive marketing and advertising campaigns
Top management, IT department, employees, suppliers	Human	Well-trained and committed workforce
Customer base and loyalty	Human	Strong customer relationship management

Table 1. Resources and Capabilities. Own elaboration

The retail company has many resources and capabilities that will serve as a competitive advantage over other fashion companies, such as brand awareness among its consumers and their loyalty, the good position of its physical stores and its effective supply chain stablished in twenty countries.

On the other hand, within the capabilities there are the so-called 'Redundant capabilities' which, in the case of this company, refer to the IT infrastructure and systems used to carry out its processes and activities. That is to say that, despite being effective in the past, these software systems have become 'rigidities' that hinder the company's ability to adapt to the current society and changes in the way of working, thus currently becoming a weakness.

2.4. SWOT Analysis and TOWS matrix

The SWOT analysis of the fashion brand will involve assessing the company's Strengths, Weaknesses, Opportunities, and Threats. On the one hand, Strengths and Weaknesses will be taken out of the internal analysis of resources and capabilities and of research of the companies features, focusing on the ones that differ in relative terms compared to its competitors and leaving out areas where the organization is at par with competitors. On the other hand, Opportunities and Threats will be identified from the external analysis to better understand the company's environment.

Strengths:

- Strong brand recognition and reputation
- Global presence with over 150 stores in over 20 countries

- Strong social media presence and marketing campaigns

Weaknesses:

- Limited e-commerce offerings: does not offer all its products on its website
- Limited presence in some countries
- Not having a centralized management of the processes and finances

Opportunities:

- Expansion into new international markets
- Diversify product offerings. Collaborations with other brands or designers
- Increase technology and automation of processes and activities
- Developing a larger online sales platform; user-friendly and appealing

Threats:

- Intense competition in the fashion industry
- Competitor presence in the metaverse (Retail 360, 2022)
- Changes in consumer preferences and tastes
- Impact of e-commerce on traditional brick-and-mortar stores
- Economic downturns, electricity price hikes and consumer spending habits

After doing the SWOT analysis of the organization, various strategic options will be spawned. This will be done by using the TOWS matrix, which is a tool used to generate strategic options by matching internal strengths and weaknesses with external opportunities and threats. Thus, the TOWS matrix can help identify options that the organization can pursue to maximize its strengths, minimize its weaknesses, capitalize on opportunities, and mitigate threats. Therefore, this can lead to a more focused and effective strategic plan.

	Strengths (S)	**Weaknesses (W)**
Opportunities (O)	**SO Strategic options** • Leverage strong brand recognition and global presence to expand into new international markets. • Use strong social media presence to promote new product offerings and collaborations with other brands or designers.	**WO Strategic options** • Develop a centralized management system (ERP) to increase technology and automatization of processes. • Diversify product offerings and develop a larger online sales platform to overcome limited e-commerce offerings-

	Strengths (S)	Weaknesses (W)
Threats (T)	**ST Strategic options** • Use strong brand recognition and reputation to stand out in the face of intense competition in the fashion industry. • Diversify product offerings to adapt to changing consumer preferences and tastes and stand out from the competition. • Mitigate the impact of e-commerce on traditional brick-and-mortar stores by leveraging global presence and reputation to promote in-store experiences such as events.	**WT Strategic options** • Develop an online sales platform to mitigate the impact of e-commerce on traditional brick-and-mortar stores in the face of economic downturns and changing consumer spending habits. • Create a store for the brand in the metaverse to adapt to consumer habits and not be overtaken by the competition. • Expand presence in new international markets to mitigate the impact of economic downturns and changing consumer spending habits.

Table 2. TOWX matrix. Own elaboration

Consequently, the company has multiple strategic options, one of the main ones being the implementation of ERP system. As a matter of fact, the company will put a barrier to threats, turning weaknesses into strengths and maximizing the benefit of opportunities.

The strategy of implementing an ERP software can help the company establish a centralized system that integrates all its business processes and provides real-time information about the business operations. Besides, it can provide the company with insights and data that can help it make informed decisions during economic downturns and changing consumer spending habits, such as analyzing sales trends, and adjusting marketing strategies. Moreover, a good implementation of an ERP would also help the company streamline its e-commerce offerings and manage the entire e-commerce process efficiently. In addition, this transformation can help the company manage its operations across different countries and locations more effectively in an automated way, such as managing multiple currencies, languages, and regulations. Also, an ERP can help the company modernize its production process, making it easier to introduce and manage new product offerings.

2.5. Stakeholders' matrix

The objective of doing a stakeholder analysis is to understand and prioritize the needs and concerns of stakeholders in order to minimize resistance and maximize support for the ERP implementation. In this context, stakeholders will be identified and positioned according to their level of power and interest in the implementation of an ERP software in the fashion company.

- **Management team**. Within the retail company, these are the C-level and the board of directors. They are responsible for the decision to implement the ERP and ensuring its success. They will be concerned with budget, resources, timeline, and return on investment. Therefore, they will be the most powerful stakeholder in the ERP implementation although they will not be as involved during the implementation process as they will delegate control to the CIO and the IT department. For these reasons, they will be in the Keep Satisfied quadrant.
- **CIO and IT Department**. They will be responsible for the technical aspects of the implementation and ensuring the ERP integrates with existing systems. They will need to work closely with other business functions to ensure that the system is properly integrated, and that data is accurately transferred between different modules. The CIO and IT department will play a critical role in managing the change process and ensuring, with the help of the implementation team, that employees are adequately trained and supported throughout the implementation process.
- **Employees**. They will be affected by the change and may need training on how to use the new system. When an ERP implementation takes place in a company, the first to call with questions and complaints to the implementation team are the employees. This is because, in many cases, their daily tasks change after the digital transformation. They will be the stakeholder who should be most interested in the change despite not having much power in the implementation.
- **Customers**. They may be impacted by changes to processes or communication as a result of the ERP implementation. Despite being an important stakeholder in any company, in the case of ERP implementation, they will be the least interested in addition to not having power.
- **Suppliers**. They may be impacted by changes to ordering and payment processes. For example, when it comes to the implementation of the finance modules of an ERP the way invoices are handled can fluctuate and suppliers can be affected in the way they have to send invoices or receive payments. Therefore, they may have a slight power and interest in the change that the retail company will undergo.
- **External Implementation team**. Functional and technical specialists responsible for testing the solution, implementing the ERP software at the retail company and helping with change

management activities. The implementation team will not be internal since the company does not have the necessary knowledge to carry out the digitization by itself, for this reason, the digital transformation should be carried out by an implementation team of a consulting firm or technological provider.

The external implementation team, together with the employees of the retail company, will have the greatest interest in the ERP implementation process. On the other hand, the decision-making power over the modules and their features of the ERP system will belong to the client company, specifically to the CIO and IT department.

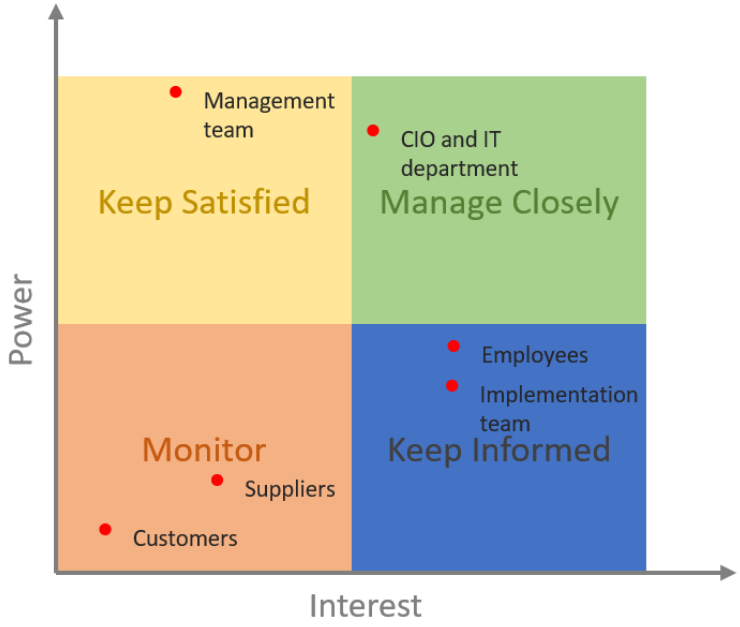

Image 2. Stakeholders' matrix. Own elaboration

By analyzing the interests and power of each stakeholder group, the management team of the retail company in collaboration of the implementation team can develop a stakeholder management plan that addresses their concerns and maximizes their support for the change. Furthermore, it is important to involve key stakeholders in the ERP evaluation processes, including representatives from different departments within the company, to ensure that the chosen ERP system can meet the needs of all stakeholders.

2.5.1. Change management

Taking into consideration the stakeholder matrix, having identified those affected and their positioning, a well-designed change management plan should be carried out.

Effective change management has multiple benefits for the client company reducing the chances of a delayed or failed implementation due to stakeholder's backlash. Some advantages of a well-done change management are the following (Octupus Technologies, SL., 2023):

- Helps to minimize resistance to the ERP implementation by engaging stakeholders, understanding their concerns, and proactively addressing them. By involving stakeholders in the implementation process, their satisfaction will be improved.
- Ensures that end-users understand the benefits of the ERP system and how it can help them do their jobs more efficiently, improving overall productivity.
- Guarantees that different groups of employees receive the appropriate training before, during and after the implementation reducing the learning curve.
- Saves time and money by minimizing errors and problems during ERP implementation.

For these reasons, a communication plan must be developed. That is to say, a clear and direct communication of the changes that the ERP implementation will mean for the employees and how their daily work will be affected must be carried out.

For the implementation to be effective, employees need to be at the point of maximum interest among stakeholders as shown in the stakeholders' matrix. They must be motivated and be clear about the benefits of digitization in the medium and long term. Hence, to get them to this point multiple actions can be carried out within the retail company:

- Offer multimedia content for employees as a quick reference of useful information.
- Executive layer or C-level communications showing support for the tool. For instance, at the company's semi-annual meetings or by uploading a video on the intranet.
- Send periodic emails (usually monthly) communicating the advantages of using the ERP.
- Appoint ambassadors to promote and help raise awareness among users. They should address any resistance to change by identifying the root cause of the resistance and providing support to those who need it.

In other matters, the management team or the IT department should request training sessions by the external implementation team for users of the ERP to learn from the very beginning of the project. In addition to these trainings, periodic trainings can be requested with the most relevant or most repeated queries to support the use of the implemented tool. To ensure that the implementation does not fail, one or more employees should be put in charge of the tool management within the company. These employees must have a clear understanding of the daily use of the ERP so that when the implementation process is completed, the company is as autonomous as possible and does not depend on the consulting firm.

At the same time, robust documentation must be generated including a guide of all the processes carried out in the tool and how it was done. Hence, all users will be able to obtain all the necessary information by accessing at any time.

2.6. Request for proposal (RFP)

The RFP will contain all the necessary requirements that the ERP system should include, laid out in a clear and concise table format. ERP functionalities must support the following Business Areas through different sub-processes within them.

- Product Data Management: managing data related to products in a structured way.
- Product Costing: calculating the costs associated with producing a product.
- Vendor Relationship Management & Sourcing: managing relationships with suppliers and sourcing materials from them.
- Invoicing & Accounts Payable: generating and managing invoices and managing accounts payable.
- Customer Relationship Management: managing relationships with customers and tracking their interactions with the company.
- Billing & Accounts Receivables: generating and managing bills and managing accounts receivable.
- Inventory Management: managing inventory levels, locations, and movements.
- Capital Asset Acquisition and Record Management: acquiring and managing fixed assets maintaining records of fixed assets.
- Corporate Structure, Legal Entity & Chart of Accounts: defining the legal and financial structure of the company and managing the chart of accounts.
- Statutory, Tax & Localization Management: managing compliance with legal and tax requirements.
- Currency & Foreign Exchange Management: managing currency conversions and foreign exchange transactions.
- Bank & Treasury Management: managing bank accounts and treasury operations.
- Outsourcing & Subcontracting: managing relationships with external contractors.
- Reverse Logistics: managing the reverse flow of products and materials.
- Manage Store Logistics and Inventory: managing logistics and inventory at the store level.
- Attribute & Catalog Management: managing product attributes and catalogs.

- Managing Product Lifecycle: managing the entire lifecycle of a product, from conception to retirement.
- Project Supply Chain Management: managing the supply chain for specific projects.
- Product Structure Management: managing the structure of products, including their bills of materials.
- Demand Planning & Forecasts: forecasting demand for products.
- Promotions & Rebate Management: managing promotions and rebates for products.
- Loyalty Management: managing customer loyalty programs.
- Store Operations Management: managing operations at the store level.
- Sales Order / E-Commerce Management: managing sales orders and e-commerce transactions.
- Other requirements listed include Corporate Operations & Affairs, Consolidated Financial Reporting, Audit & Regulatory Compliance, Retail (POS) Sales & Returns, Manage Store Logistics and Inventory and Sales Channel Management among others.

The details of the RFP can be found in Appendix I. In this section, only the top 10 most important and relevant requirements from the RFP will be included to demonstrate how the client company requests them. Subsequently, the consulting firm will present at the Proposed approach section (*Coverage requirements subdivision*) how it will respond to these 10 points.

Business Area	Process Description
Product Data Management	Process for gathering and maintaining costing and finance related field values at the legal entity level
Vendor Relationship Management & Sourcing	Create invoice from Purchase Order or product receipt, and view those invoices
Customer Relationship Management	Process for adding new customer records and managing existing customer records and data through accounts receivable and sales and marketing
Billing & Accounts Receivables	Process flow for creating invoices that do not involve amounts due from the shipment of an Item or Service on a Sales Order. This process utilizes the standard AX Free Text Invoice
Inventory Management	Process for undertaking period end inventory recalculations and closing. Process re-values non-standard cost inventory and closes prior days to prevent receipt transactions

Business Area	Process Description
Product Data Management	Process for gathering and maintaining costing and finance related field values at the legal entity level
Corporate Structure, Legal Entity & Chart of Accounts	Describes the steps required to create a General Ledger Account for use in a single legal entity or one that is shared by all entities across the organization. The process begins with decisions required when the need for a new account has been identified. Follow-on setup activities include the creation of the account, the addition of any foreign language translations and the setup of the needed Account Structure. The last step involves the activation of the account and notifications to the staff
Currency & Foreign Exchange Management	The following process steps are a requirement after Exchange Rates are updated. These processes ensure that Purchase Orders, Sales Orders and General Ledger Balances are in synch with the revised exchange rates
Bank & Treasury Management	Periodic, common business process, generally performed monthly, for the reconciliation of bank accounts based upon the receipt of a Bank Statement
Corporate Operations & Affairs	Steps describe the activities needed to create and process Ledger adjustments such as reversing entries, recurring entries, month-end and / or year-end ledger transactions. Provides for the activities needed to establish and / or retrieve recurring entries, as well the process needed to create journal entries from scratch
Promotions & Rebate Management	Process for performing in-season price adjustments and markdowns across product categories

Table 3. Request For Proposal main requirements. Own elaboration using KPMG info.

3. Solution to be implemented, ERP system

In this section, the solution to be implemented, its origins, and how it has evolved to become what is now known as an ERP system will be explained. Subsequently, the most competitive software available in the market for large companies will be compared, and finally, a decision will be made on which one best suit the needs of the client company.

Ultimately, it will be explained how this solution contributes to sustainable development within companies.

3.1. ERP evolution

ERP systems have come a long way since they first appeared in the late 1960s. Started as MRP (Materials Requirements Planning) to manage inventory and production processes. During the 1980s MRP evolved into MRP II (Manufacturing Resource Planning), which expands to cover more areas of a business, including sales, finance, and human resources. In the 1990s a new name was found for this business management software that involved all business functions. Hence, ERP systems gained widespread popularity and became a standard solution for managing complex business processes. It became more integrated, sophisticated, and customizable in order to meet the specific needs of different industries. (Terabyte, 2019)

In addition to the evolution since 1960, it is especially in the last few years that these software products have made a breakthrough:

- Tailor-made solutions (1990 – 2014)
  - Monolithic and on-premises ERP
  - Independent from other systems, complex and costly programming.
  - Prevents the adoption of new technologies or process optimization.
- Vendor solutions (2014 – 2019)
  - There is one 'app' for the entire client server outdated.
  - Highly customized business services with inconsistencies grouped together.
  - Processes skewed by customizations developed.
  - Customized reporting and costly to maintain.
- Cloud service (2019 – Present)
  - Cloud platform for the Retail sector.
  - Flexible implementation integrated and global services.
  - Improved security and privacy.
  - Sustainability and low-code customization.

The COVID-19 pandemic has accelerated the trend towards remote work which is driving a new wave of ERP innovation focused on cloud-based systems, mobile applications, and collaboration tools to support distributed workforces.

In the following image a summary of the ERP evolution can be observed.

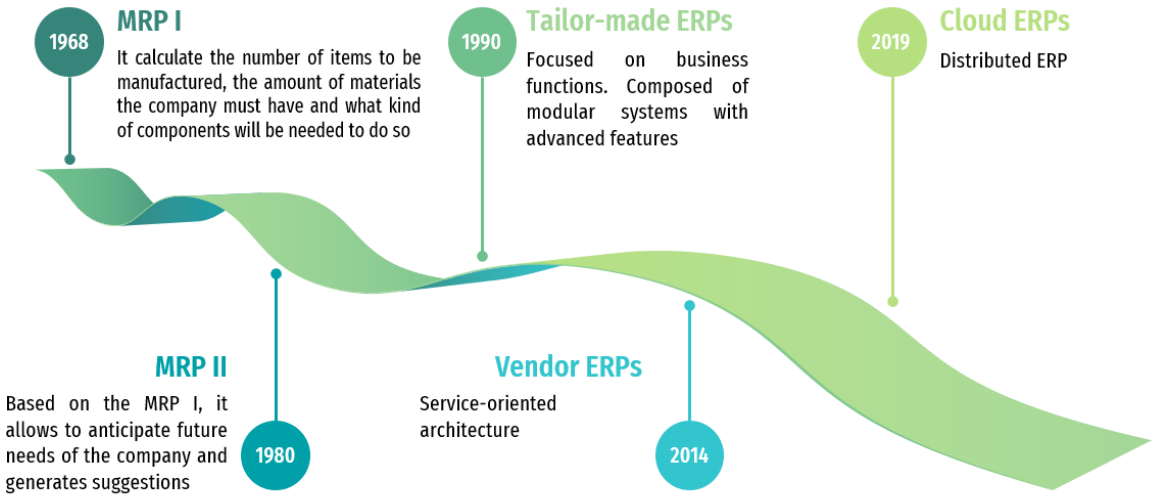

Image 3. ERP evolution. Own elaboration

3.2. Analysis of ERPs alternatives

Choosing an ERP system is a significant decision for any company. It involves researching and comparing different solutions, considering factors such as cost, functionality, scalability, ease of use, customization, and integration capabilities. Therefore, this is what will be done in this section.

There are several ERP systems with financial and operational modules that could meet the needs of the retail company. However, the ERPs that could be the most suitable for the specific company include SAP S/4 HANA, Oracle Fusion Cloud and Microsoft Dynamics 365 Finance and Operations taken into consideration the size and needs of the client and the leader solutions within the market.

To get a first idea of how these solutions are positioned in today's market, an image of the latest version of Gartner's Magic Quadrant for ERPs (published in August 2022) has been obtained.

Image 4. Magic Quadrant for Cloud ERP. Source: Gartner, 2022

3.2.1. SAP S/4 HANA

SAP is a leading ERP vendor, and its S/4HANA solution offers a comprehensive financial module that can handle the complex financial operations of a global enterprise. It is highly scalable and can support multiple currencies and languages, making it a good fit for the client company that operates in many countries (SAP, 2023a).

On the other hand, it is a complex system with a steep learning curve and can be difficult to implement and use for inexperienced teams. It can be tough to implement and maintain and, moreover, integrating non-SAP tools is an arduous task (Software Suggest, 2021). As a result, the implementation time is often long and many SAP projects do not progress in the long term in companies. In addition, SAP S/4 HANA may not be as customizable as some other ERP systems, which makes employees see it as a rigid system that largely conditions the way they work. Due to the time of implementation, difficulty, and great reputation, as it was one of the first ERPs to be launched in the market, it is generally more expensive than other ERP systems, both in terms of initial implementation costs and ongoing maintenance costs (Synoptek, 2019).

3.2.2. Oracle Fusion Cloud ERP

Oracle Fusion Cloud ERP is another option that could meet the needs of the retail company. It is a cloud-based ERP system that offers a comprehensive financial management module, including

features such as accounting, financial reporting, and budgeting. It also supports multiple currencies and can handle complex financial operations for a global enterprise. In addition, it integrates with other Oracle products. (Oracle, 2023b). However, like SAP S/4HANA, it can be expensive to implement and maintain and it is not easily scalable (Synoptek, 2019).

This solution is appropriate for organizations that need a system that supports advanced and complex financial and operational processes and is key for companies that are growing rapidly and need an ERP system that scales with their business (Calette, 2022).

ERP implementation time depends on many factors and is personal to each project, business complexity and solution used, being the average 23.7 months. Oracle is above that average time of implementation and Microsoft and SAP below (ActioBp, 2018).

3.2.3. Microsoft Dynamics 365 Finance and Operations (F&O)

Dynamics 365 Finance and Operations (D365 F&O) is a Microsoft ERP system that provides businesses with a range of financial and operational capabilities, including financial, supply chain, inventory and warehouse management so it would be an appropriate solution for the client company. D365 F&O is suitable for mid-sized to large businesses with a minimum of 100 employees, broad management processes in the area of finance and with operations in many countries (Dynamics 365 Partners, n.d). Microsoft Dynamics 365 is design for companies dealing with End-to-End operations: distribution, retail, production, etc.

Additionally, Microsoft continues with its unstoppable trajectory as an ERP leader at a faster rate than its competitors. Not only because of its price and power, but also because of its alignment with Office 365 and Teams tools, which has meant a huge self-propagation channel and its consolidation as an analytical tool in the era of home office. Hence, one of the main advantages of using D365 F&O is the integration with other Microsoft products, such as Office 365 and Power BI, for streamlined workflow and data analysis. Many companies use Teams as a collaborative tool, Outlook as email and Excel as a spreadsheet (Sanguino, 2019). This widely used and well-known tools are also from Microsoft and D365 F&O can easily integrate with them, allowing for seamless transfer of data between the systems. This can save time and improve accuracy in data entry and analysis, as employees will continue to use tools they are familiar with and, therefore, can help to reduce training costs and improve adoption of the system. Consequently, it is a good fit for companies that are already using Microsoft products.

Some of the other advantages of the Microsoft's ERP is that they are built-in compliance with industry standards and regulations, advanced analytics and reporting capabilities and flexibility to be deployed on-premises, in the cloud, or as a hybrid solution.

On the other hand, while Dynamics 365 can be a more affordable ERP solution compared to some other options, it can still be relatively expensive.

3.3. Final choice and reasons

To summarize all the information provided by the different ERPs that has been evaluated as possible solutions for the fashion company, the following table shows the key concepts that influence the final decision. It has to be taken into consideration that Oracle ERP Cloud is the name that the current Oracle Fusion Cloud ERP was receiving in 2019 which is when the comparison table was made.

Capability	Dynamics 365 Finance and Operations	SAP S/4 HANA	Oracle ERP Cloud
Cost	Lowest cost	Comparatively higher cost	Highest cost amongst the three ERPs
Architecture	Built from ground-up	Built from ground-up	Built by integrating several systems together
Payback period	Shortest	Longest	Comparatively short
Scalability	Easily scalable	Comparatively easy to scale	Not easily scalable
Audience	Medium and large businesses	Medium to large businesses	Medium to large businesses
Ease of use	Exceptionally easy to use; very short learning curve	Complex GUI; steep learning curve	Slightly complex UI; long learning curve
Implementation time	Shortest implementation time	Comparatively short implementation	Longest implementation time due to development of custom modules
Customization	Easy to customize	Comparatively difficult to customize	Easy to customize
Integration	Seamless integration with Microsoft and non-Microsoft products	Offers only native integration	Seamless integration with Oracle and non-Oracle products

Table 4. ERP comparison. Source: Synoptek, 2019

Based on the information provided in the table, it seems that Microsoft Dynamics 365 Finance and Operations is the best fit for the retail organization. This is because Dynamics 365 offers the lowest cost and, therefore, shortest payback period among the three ERPs. In addition, it has a built-from-ground-up architecture, making it easily scalable, easy to use, and easy to customize.

Moreover, Dynamics 365 F&O offers seamless integration with both Microsoft and non-Microsoft products, which is a significant advantage. SAP S/4 HANA, on the other hand, offers only native integration, while Oracle ERP Cloud has been built by integrating several systems together, which may make integration more difficult.

In terms of cost, it is very important to take into consideration that all solutions involve payment for licenses over the years in addition to implementation and maintenance costs. Microsoft's Cloud platform and ecosystem allows avoiding hidden cost increases after the implementation process of the client solution as it happens with other tools. Furthermore, the purchase of Microsoft licenses not only includes the licensing but also includes multiple advantages linked to the platform, such as updates of the product's functionalities on a semi-annual basis simplifying economic and personnel efforts.

On the other hand, the other two ERPs considered also require regular maintenance, updates, and upgrades to ensure optimal performance and stay up-to-date with new features and security patches, but usually these activities are not reflected in the financial plan of the ERP implementation. Thus, resulting in hidden costs that can lead to significant deviations in the project budget and generate financial surprises as they arise.

Overall, Dynamics 365 seems to offer the best balance between cost, scalability, ease of use, customization and integration capabilities, making it a great fit for medium and large businesses like the retail company.

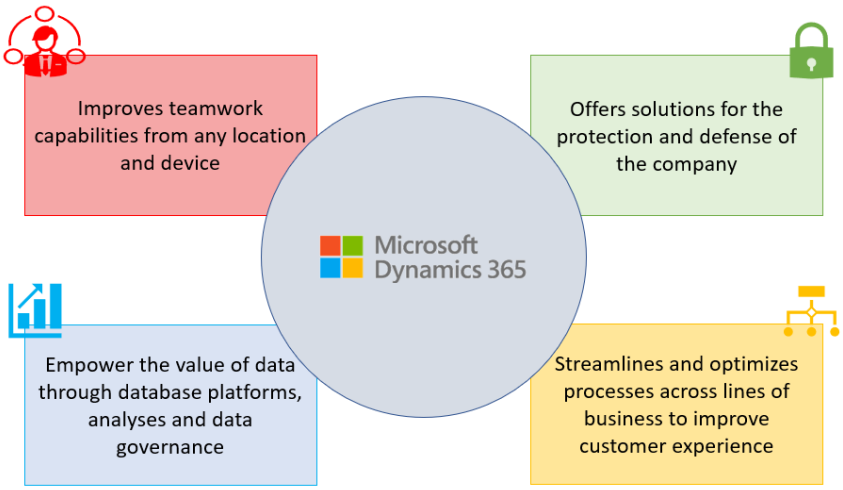

Image 5. Dynamics 365 main functionalities. Own elaboration

3.4. Alignment with the SDGs

The alignment of the implementation of an ERP system in a company with the Sustainable Development Goals (SDGs) involves leveraging technology to optimize organizational processes and contribute to sustainable development. By integrating an ERP system, organizations can achieve greater efficiency in their operations, leading to reduced waste, emissions, and other negative environmental impacts.

For instance, an ERP can streamline supply chain management, allowing organizations to better track and manage their resources and products. Consequently, companies can use it to reduce material waste and minimize transportation-related emissions. It can also optimize production processes, reducing energy consumption and minimizing the use of natural resources (SAP, n.d). ERP systems promotes transparency throughout the supply chain and the different members across it, enabling organizations to make informed decisions that align with sustainable sourcing practices. Hence, companies can use its management and organizational tool to contribute to the following SDGs.

Image 6. SDGs eleven, twelve and thirteen. Source: Naciones Unidas (n/d)

Whereas the relationship between the SDGs eleven, twelve and thirteen and ERPs may not be straightforward, it is clear that the implementation of an ERP system can have an indirect impact on promoting sustainability within organizations.

On the other hand, ERP systems have a direct impact on SDGs eight and nine.

Image 7. SDGs eight and nine. Source: Naciones Unidas, n/d

The alignment with objective eight is because the adoption of ERP software in a company automates the most mechanical processes and activities, so that employees can devote their time to more valuable tasks. Hence, people can do a more decent job, bringing more value to the company and, therefore, feeling more treasured. In addition, the automation of processes and the fact that employees can spend their time on more difficult tasks translates into the company promoting its economic growth.

Finally, the direct alignment with objective nine is due to the fact that ERPs promote innovation within companies as they offer advanced tools and functionalities that allow companies to adopt cutting-edge technologies. In addition, due to the interdepartmental transparency offered by the use of an ERP in a company, collaboration and communication in industrial processes is fostered.

In conclusion, the implementation of an ERP in companies promotes their digitalization, their innovation, their economic growth and the tools and methods they can use to improve the sustainability of the planet.

4. Proposed approach

As a current employee at KPMG in the Technology Enablement department, specifically in the Microsoft solutions area, I will be the representative of the firm for preparing the proposal for the RFP.

Using some of the knowledge acquired during the MBA, the response to the client company will utilize Simon Sinek's Golden Circle method. This approach follows the pattern that successful and inspiring leaders and companies have used. This pattern involves starting with the "Why" of what they do, then explaining "How" they do it, and ending with "What" they do.

Simon Sinek posits that ordinary individuals, when discussing a product or service, frequently commence by elucidating the "What" and proceed outward from the circle, ultimately arriving at the explanation of why they do it, if they ever do explain the why. In contrast, it is explained how the "Why" speaks to people emotions and beliefs, which are often more powerful drivers of behavior than rational thought alone, therefore, it is where one must begin in order to persuade individuals effectively. In this way, a stronger connection is established with the receiver, and it is more likely to create a need.

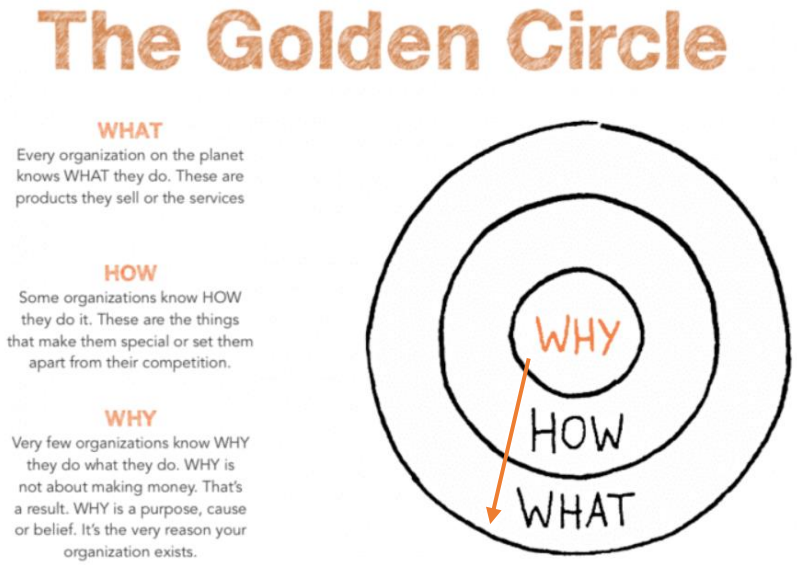

Image 8. The Golden Circle. Source: Chaffey, 2022

Afterwards, KPMG will present the reasons why the client company should choose them as the external implementation team, the implementation methodology they use with the estimated project timeline, the requirements they can cover with their tool and the financial plan.

4.1. Response from KPMG

KPMG believes that technology is the future of business. As a leading consulting firm in technology and digital transformation services, it is committed to help its clients achieve their business goals through advanced and personalized technological solutions.

To help companies achieve their business goals, KPMG proposes the implementation of Microsoft Dynamics 365 Finance & Operations. The team of highly trained experts, including functional and technical profiles, will work closely with the client company to design, implement, and customize the solution according to its unique needs and objectives. The team also holds a collaborative and iterative approach, ensuring that its clients have a voice in every step of the process and receive proper training.

Therefore, KPMG will provide the company with its Microsoft Dynamics 365 Finance & Operations solution; a complete and scalable platform to manage the financial and operational processes.

4.1.1. KPMG strengths

KPMG has extensive experience in the retail sector, having successfully completed numerous projects for leading retailers. The Microsoft team is comprised of fifty-five experts who bring deep knowledge and understanding of the unique challenges and opportunities facing retail businesses today. Therefore, the approach used is tailored to meet the specific needs of each client and work collaboratively to develop and implement customized solutions that drive measurable results. With KPMG, clients can be confident that they are working with a partner who understands the complexities of the retail sector and has the experience and expertise to help them succeed in today's competitive landscape.

Moreover, KPMG being a global enterprise understands the importance of having a global presence, especially for clients operating in multiple regions. With offices located all around the world, KPMG has the capacity to provide all clients with the support they need, no matter where their business takes them. KPMG has established coordinated teams to ensure the successful implementation of the global Dynamics 365 implementation project.

On the other hand, KPMG has been awarded as the best Microsoft partner in Advisory Services in 2021 (KPMG, 2021) and in 2022 (Rinus, 2022). In addition, KPMG has been honored with the prestigious recognition of being named the Microsoft Partner of the Year for 2022 in the category Business Applications, Dynamics 365 Finance (KPMG, 2022). First and foremost, as a Microsoft partner, KPMG has access to the latest technologies, tools, and training that Microsoft offers. This allows the KPMG's technology consulting team to stay on the cutting edge of ERP implementation and ensures delivering

the most innovative solutions to clients. Another advantage that KPMG enjoys as a Microsoft partner is access to Microsoft's vast network of resources and support, this includes technical support, training resources, and access to Microsoft's partner community. Hence, with this level of support, KPMG can provide clients with a higher level of service and support throughout the ERP implementation process.

A significant number of consultants on the KPMG's Microsoft team have obtained certifications in various domains of Microsoft Dynamics 365 Finance and Operations, showcasing their expertise and dedication to delivering exceptional service. The majority of these consultants hold certifications in Dynamics 365 Finance Functional Consultant Associate, Dynamics 365 Supply Chain Management and Manufacturing Functional Consultant Associate, among others. These certifications validate their extensive knowledge and proficiency in implementing, customizing, and harnessing the full potential of the Microsoft ERP solution. The presence of a certified professional team guarantees clients superior guidance, innovative solutions and a customized approach to optimize their finance and operations processes effectively.

4.1.2. Method of Implementation

The methodology that will be used in this project is the one that has been considered most suitable to address the concrete type of implementation and needs of the retail company. This methodology gives companies a direct route to guide clients through the complex process of implementing an ERP system. The goal is to help companies promote lasting improvements and avoid the many obstacles associated with conventional methods of digital transformation. It also helps drive sustainable change, increased performance, and lasting value.

The methodology that will be used consist of several stages, each of which is carefully crafted to ensure that the implementation process is efficient and effective having into consideration the change management in every step. Within each stage there are distinct activities and deliverables that must be accomplished to meet certain objectives.

1. ***Contact Initiation***
   - Objectives: Develop and align key stakeholders around a common vision of the Target Operating Model (TOM) that includes measurable short and long-term success criteria.
   - Change management: Provide clarity to stakeholders on the scope of change and how it impacts behaviors and ways of working, as well as support program configuration for effective execution.
   - Activities:
     - Kick-off session.

- Define the project plan.
- Review of business and technology strategy.
- High-level session to understand the current situation.

- Deliverables:
  - Project plan
  - Stakeholders' matrix
  - Workshop planning
  - Meeting minutes of ambassadors and users.

2. Requirement Gathering

- Objectives: Validate and document the components of TOM, finalize the solution design, and obtain approval to move to the Solution development phase.
- Change management: Communicate the reason for change, involve affected teams in validating process design, and show users how they will be affected.
- Activities:
  - Analysis of processes
  - Agreement on the solution to be built
  - Solution demos
  - Technical solution design
  - Functional solution design: standard roles and profiles
  - Design validation
  - Define the Communication Plan
- Deliverables:
  - Integrated Project Plan
  - Target Operating Model
  - Solution design documents
  - Identification of migration needs and integration strategy
  - Communication plan

3. Solution development

- Objectives: Build and test the technological solution and design each level of TOM, using an iterative testing process that turns the model into reality so that users understand what the change will mean for them.
- Change management: Drive change by allowing affected teams to become familiar with the new tool.
- Activities:

- Configuration of the designed processes in the application
- Creation of developments, interfaces, and reports
- Assignment of standard roles and profiles
- Development of training materials
- Training Strategy and Plan
- Microsoft online learning materials

- Deliverables:
  - Functional and technical documents
  - Test scripts with results from each cycle
  - Configured and tested functional deviations
  - Training plan

4. Production rollout

- Objectives: Deploy the solution and its relevant components.
- Change management: Support the delivery of the technological solution to affected teams by training personnel and following a communication plan that communicates the project status at all times.
- Activities:
  - Train "trainers". These individuals are employees of the client company who will be responsible for conducting trainings for various employees within the company.
  - Execution and validation of User Acceptance Testing (UAT)
  - Transportation of orders
  - Data migration
  - System preparation for production start-up
  - System start-up
  - Definition of the learning program
- Deliverables:
  - UAT scripts
  - Training guide
  - User role and profile matrices
  - Project closure minutes

5. Maintenance

- Objectives: Supplement support for the system start-up, analyze the value obtained during the project, close-out procedures, and transition to managed programs.

- Change management: Manage the transition to the new technological solution and ways of working. Support the post-start-up phase by measuring adoption to assess success.
- Activities:
  - Support for system start-up
  - Incident resolution
  - Knowledge transfer to the maintenance team
- Deliverables:
  - Lists of status of received, resolved, ongoing, and closed incidents
  - Project closure report
  - List of post-start-up requests.

4.1.3. Coverage requirements

In this section, an explanation will be provided on how the Microsoft Dynamics 365 Finance & Operations solution covers the client's requirements (*Request for proposal (RFP) section*).

Requirement: Process Description	Response from the IT provider
Process for gathering and maintaining costing and finance related field values at the legal entity level	This process can be performed in Finance through the Inventory management and Cost accounting modules
Create invoice from Purchase Order or product receipt, and view those invoices	This process can be done through the Accounts payable module from the Purchase orders section. It is possible to generate the invoice and attach it to the supplier
Process for adding new customer records and managing existing customer records and data through accounts receivable and sales and marketing	This process can be done through two modules: Accounts receivable and Sales and marketing. It is possible to create new customers and modify the fields of existing customers
Process flow for creating invoices that do not involve amounts due from the shipment of an Item or Service on a Sales Order. This process utilizes the standard AX Free Text Invoice	This process can be done through the Accounts receivable module. It is possible to send the invoice automatically by mail to the customer
Process for undertaking period end inventory recalculations and closing. Process re-values non-standard cost inventory and closes prior days to prevent receipt transactions	This process is performed through the Inventory management module and triggers an inventory recalculations process. The inventory closing process examines all receipts, issues and invoice postings, and re-values items that use a FIFO, LIFO, Average or Weighted Average costing method

Requirement: Process Description	Response from the IT provider
Describes the steps required to create a General Ledger Account for use in a single legal entity or one that is shared by all entities across the organization. The process begins with decisions required when the need for a new account has been identified. Follow-on setup activities include the creation of the account, the addition of any foreign language translations and the setup of the needed Account Structure. The last step involves the activation of the account and notifications to the staff	From the General Ledger module, it is possible to use the General Ledger Accounts for all legal entities or suspend it for legal entities that are not needed. It can be created as many accounts as necessary and select the desired Account Structure
The following process steps are a requirement after Exchange Rates are updated. These processes ensure that Purchase Orders, Sales Orders and General Ledger Balances are in synch with the revised exchange rates	Currency revaluation can be performed from four different modules: Accounts payable, Accounts receivable, Cash and bank management and General ledger
Periodic, common business process, generally performed monthly, for the reconciliation of bank accounts based upon the receipt of a Bank Statement	Bank reconciliation is done from Cash and bank management module and there is the possibility of importing the bank statement in three different formats: MT940, ISO 20022 and BAI2
Steps describe the activities needed to create and process Ledger adjustments such as reversing entries, recurring entries, month-end and / or year-end ledger transactions. Provides for the activities needed to establish and / or retrieve recurring entries, as well the process needed to create journal entries from scratch	From the General ledger module is it possible to create and edit the Ledger adjustments. The closing tasks of the financial period must be completed each month for the monthly close
Process for performing in-season price adjustments and markdowns across product categories	In-season price adjustments are made through the Commerce workstream. Discounts and promotions can be done with start and expiration date serving for the period needed. Prices adjustment can be done manually when required

Table 5. Coverage requirements. Own elaboration

In addition, KPMG would provide answers to all the requirements of Appendix I. Request for Proposal, explaining how Microsoft Dynamics 365 covers those requirements or if it does not.

4.1.4. Calendar

The timeline for implementing the ERP system and the pre- and post- stages will be carried out following the stages of the methodology. In the following image, the timeframes for each stage can be observed.

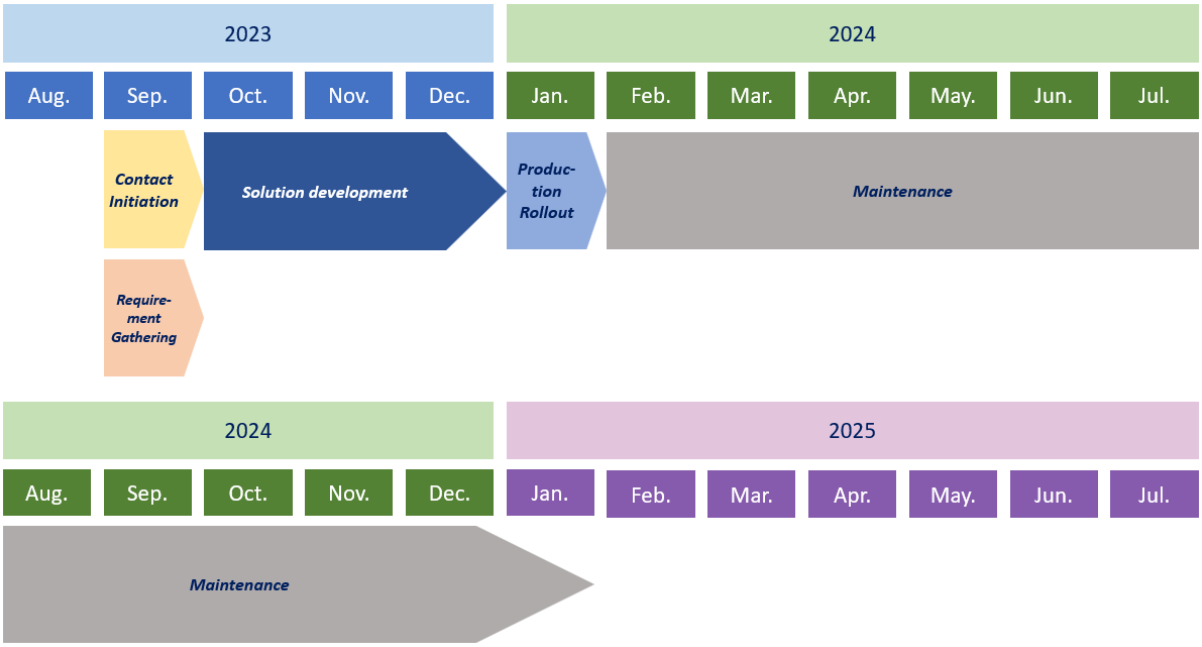

Image 9. Project timeline. Own elaboration

Due to the fact that the retail company ERP implementation is a small-scale project with limited requirements, both the Contact initiation and the Requirement gathering stages will be carried out in parallel over a period of one month. Once a clear solution to implement has been agreed upon by both companies, the Solution Development phase, which will last for three months, will take place. Following the completion of Solution Development, the Production rollout will take place during the subsequent month, where the solution will be deployed.

Finally, it is proposed that KPMG will carry out the maintenance and support tasks for a period of one year. Due to the size of the project, it is recommended to engage an expert in Dynamics 365 Finance & Operations for eight hours per week during the year following the completion of the ERP implementation.

4.1.5. Financial Plan

In this section, KPMG will provide a comprehensive overview of the financial aspects of the proposed ERP implementation, including budgeting, cost estimation and financial projections. Moreover, the Financial Plan serves as a strategic roadmap to guide the retail company in making informed decisions related to financial resources ensuring a successful implementation of the Microsoft ERP system.

KPMG, in collaboration with Microsoft, will form a multidisciplinary work team as the one shown below, highly qualified, with expert profiles and extensive experience in Dynamics 365 projects.

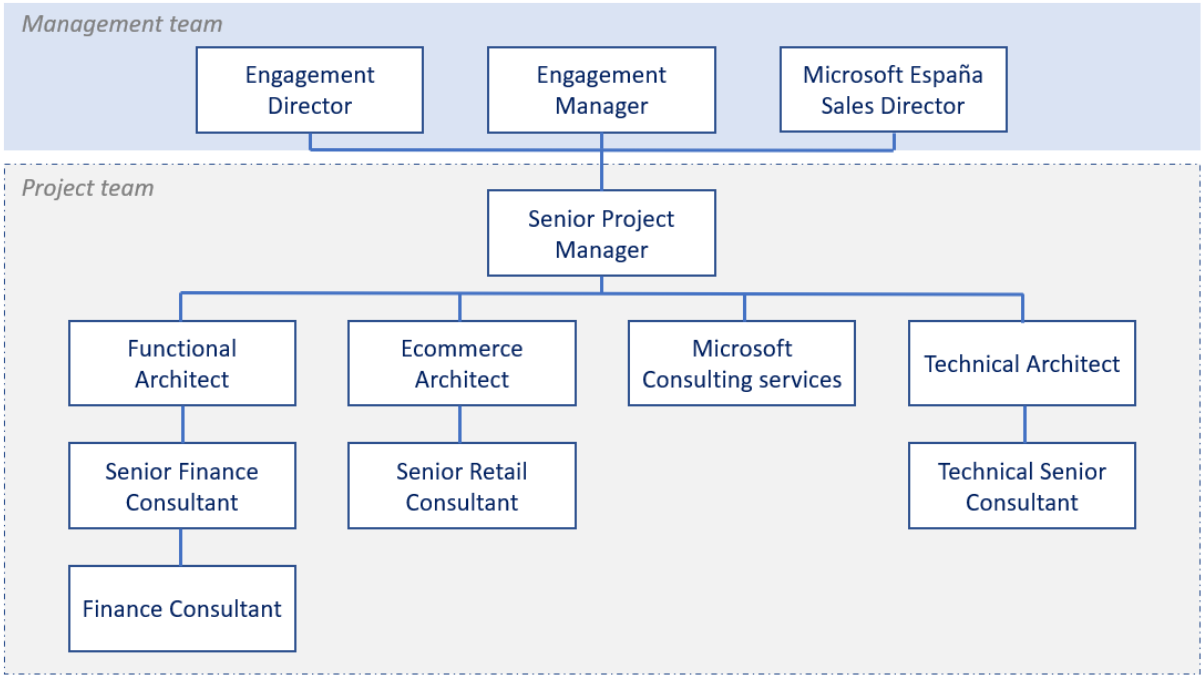

Image 10. KPMG's work team. Own elaboration

As it can be observed, the most comprehensive team will be the Finance branch's one, since the majority of the Dynamics 365 modules to be installed belong to this sector. Thus, knowing that these consultant profiles will be required, the next step is to review the table of their hourly rates and the percentage of the duration of the project that they will dedicate their efforts.

Workforce	Hourly rate	Percentage of time
Engagement Director	171,44 €	5%
Engagement Manager	171,44 €	5%
Senior Project Manager	87,65 €	80%
Architects	87,65 €	20%
Senior Consultants	75,23 €	50%
Consultant	67,12 €	100%

Table 6. Hourly rate and percentage of time per consultant. Own elaboration

In addition to the workforce dedicated to the project and their wages, the different stages mentioned at the Method of Implementation section and the hours needed per stage, in line with the timeline presented in the Calendar section, are the following.

Phase	Base Effort Estimation (h)	
Contact Initiation	80	
Requirement Gathering	80	
Solution development	440	
Production Rollout	160	
Maintenance	384	**This is annualy*

Table 7. Base effort estimation. Own elaboration

As can be observed, additionally to the standard stages required to carry out the implementation project, the annual hours for the maintenance stage have been estimated. It is important to note that the client has the discretion to decide on corrective maintenance. Even though, as mentioned in the Calendar section, KPMG suggests keeping a maintenance and support contract of eight hours a week for one year[2] after the ERP implementation to make corrections in module customizations and solve incidents to ensure the success of the project.

The emphasis on the maintenance recommendation is made because "maintenance and support" is a critical phase of the implementation of an ERP system, it requires dedicated skilled personnel with knowledge of the system and in the project itself. If the client company lacks dedicated personnel for ERP maintenance, it can result in neglect, inadequate updates, and ineffective troubleshooting. Therefore, KPMG considers necessary for the retail company to have a dedicated pool of hours for system maintenance and incident resolution. The maintenance will be carried out by the Finance Consultant as he/she will be the most involved person during the implementation, having dedicated all his/her working time to this project. Additionally, the Finance Consultant is the most cost-effective consultant for the client company.

After one year of maintenance, the client company should be equipped to independently maintain the ERP system successfully by a member(s) of the IT department. Nevertheless, additional hours could be contracted in the following years if necessary.

[2] The estimated annual workweeks to calculate the hours of Maintenance are 48, considering four weeks of the year as employee vacations. Furthermore, in the "Solution development" stage, it has been considered that despite having three months on the calendar, one week (40 hours) will be allocated for Christmas holidays.

In the following image, the breakdown and total price of the implementation and maintenance of the Dynamics 365 Finance and Operations system can be observed.

Resource	Delivery Year	Hours	Mandays	Price / Hour	Total Price
Engagement Director	**2023/24**	38	5	282,44 €	10.732,65 €
Engagement Manager	**2023/24**	38	5	282,44 €	10.732,65 €
Senior Project Manager	**2023/24**	608	76	144,40 €	87.794,40 €
Architects	**2023/24**	456	57	144,40 €	65.845,80 €
Senior Consultants	**2023/24**	1140	143	123,94 €	141.288,63 €
Consultant	**2023/24/25**	1144	143	110,58 €	126.499,64 €
**This estimation is including the Maintenance activities only for the first year*				**Total**	**442.893,77 €**

Table 8. Total price of the implementation and maintenance. Own elaboration

On the other hand, the Microsoft Spain Sales Director, accompanied by a member of Microsoft Consulting Services, will be responsible for communicating the cost of Microsoft licenses after an agreement with the client. Even so, an estimation can be made since the cost of Microsoft Dynamics 365 ERP licenses is 168,5 € per user per month for the first app, being this one Finance, and subsequent Dynamics 365 apps will have a cost of 28,10 € per user per month.

Finance	Primera aplicación de Dynamics 365	Idoneidad subsiguiente[1] Dynamics 365
Finance	168,50 € por usuario/mes	28,10 € por usuario/mes

[1] Subsequent pricing applies only to the individual licensed for the first app. For example, if Person A is licensed for the first app, subsequent pricing wouldn't apply to Person B. Subsequent pricing for tenant-based apps applies to any tenant in your organization. A tenant contains uniquely identified domains, users, security groups, and licenses. Your organization may have multiple tenants, and a single tenant can contain multiple Dynamics 365 (online) environments. To learn about qualifying apps and other discounts, see the Licensing guide or contact us.

Image 11. Dynamics 365 prices. Source: Microsoft, n/d

The "First Dynamics 365 app" that will require a license in this project will be Finance, as most of the modules to be implemented are related to finance management and organization. Additionally, some of the Commerce and Supply Chain modules will also need to be contracted based on the client's requirements, resulting in two "Subsequent qualifying Dynamics 365 apps".

Not all employees in the company will have access to the ERP system and therefore only a few will need the licenses. Therefore, the use of the ERP will be limited to certain departments or functional areas, such as IT, finance, inventory management, and supply chain. These will be the employees working at the headquarters in northern Spain which are 150 users (*Client company characteristics*).

$$Microsoft\ licensing\ fees_{year\ 1} = 150\ users \cdot (168{,}50\ € + 2 \cdot 28{,}10\ €) = 33.705{,}00\ €$$

In the subsequent years after the implementation, the cost of licenses will be constant, assuming that the number of users remains constant as well.

In conclusion, the cost breakdown per year of implementing, maintaining, and licensing Microsoft's ERP system will be a total of 458.906,52 € in the first year, 51.397,26 € in the second year, and 33.705,00 € in the third year. In the years following third one, the cost for the retail company will be practically constant, as this will be the price to pay for the Microsoft licenses.

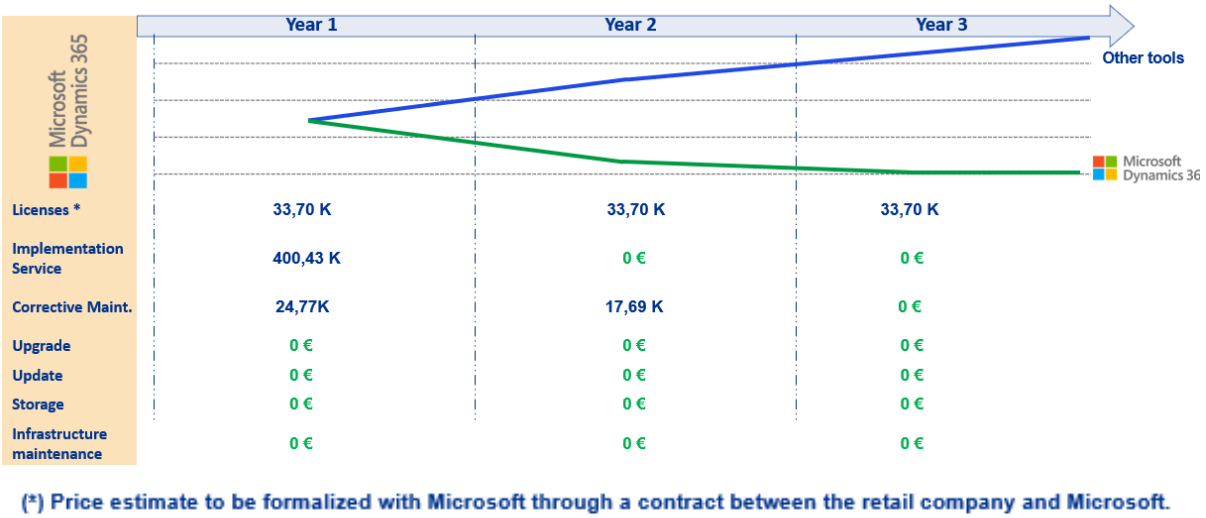

Image 12. Microsoft Dynamics 365 pricing. Own elaboration

In addition to the annual costs associated with the integration of the ERP system into the company, it can be observed how the costs decrease significantly, unlike other solutions that have hidden costs that increase each year, as explained in the previous section *Final choice and reasons*.

4.1.5.1. Return On Investment (ROI)

In order for the retail company to be able to financially evaluate the return on the investment it will make with the implementation of Microsoft's ERP, in relation to the amounts to be invested and the money to be saved, the ROI calculation will be carried out. The investment that the company will need to make in the ERP implementation is aimed at transforming the way the company operates, resulting in time savings as all processes become more efficient and automated within a unified platform. Hence, a calculation of the ROI of the implemented ERP solution will be conducted to evaluate the profitability of the investment.

The basic ERP ROI formula is the following (Beaver, 2022).

$$ROI = \frac{Total\ value\ of\ investment\ -\ Total\ cost\ of\ investment}{Total\ cost\ of\ investment}\ x\ 100$$

Formula 1. Return On Investment

In terms of the Total value of investment, it will be what the retail company will “earn” after the implementation of the ERP. To make an estimate of this generated total value, a deep understanding of the tasks that its employees, who will become users of Dynamics 365, perform is required.

At this type of projects, the company recovers its investment by saving on employee salaries. This does not mean that they will require fewer employees, but rather that the employees who previously spent their time on repetitive or manual tasks will now be able to focus on other more valuable tasks, as the ERP solution centralizes and automates these processes. In addition, the ERP will enable the company to grow without the need to hire additional staff to perform these activities, as the same number of employees, prior to the digital transformation, will be able to handle these tasks even as the company's operations expand.

Prior to the ERP implementation, employees working at the company headquarters manually perform inventory management, sales management, administrative management, and financial management tasks or use more rudimentary methods than the ERP system. These tedious tasks of entering and managing data using multiple software applications and spreadsheets result in employees spending a significant portion of their time on them instead of more valuable tasks for the company.

After the ERP implementation, the way these tasks will be performed will be much faster using the ERP as a tool that centralizes all separate applications and spreadsheets. Additionally, many of these tasks can be automated through ERPs, reducing the time required to almost zero. For example, when an invoice arrives at a company, it involves reviewing and validating it to ensure accuracy, verifying proper authorization, and ensuring payments are made in accordance with established policies and procedures. Without an ERP, companies input all the invoice information manually into their system. However, with the use of an ERP, the PDF of the invoice can be read, the data can be extracted, and entered directly into the system, eliminating this step for the employees.

Therefore, calculations will be made regarding the costs incurred by the retail company due to employees dedicating their time to these mechanical tasks and the error-prone derived of these activities, which will require less time after the implementation of the Dynamics ERP.

To calculate the total employee efforts in a year spent on these management tasks and the time dedicated to correct human errors, the number of employees involved in these tasks, their hourly wages, and the annual hours dedicated to them will be considered.

Firstly, the costs incurred by the company prior to implementation, as shown in the "Actual" column, will be calculated. Additionally, the costs of performing these same tasks in "Year 1," which is the year of implementation and the start of the maintenance stage, will be conducted. Moreover, the total

effort for "Year 2" will be taken into account, as this year will experience the greatest difference in efforts since the ERP will be fully implemented and users will utilize it throughout the year. Furthermore, it will be considered "Year 3" as there will be improvements due to employees becoming more efficient and productive with the use of the ERP. Subsequent to Year 3, it is assumed that the effort will remain constant.

Details	Actual	Year 1	Year 2	Year 3
Effort in inventory management	115.200,00 €	90.000,00 €	66.240,00 €	60.480,00 €
Effort in Sales management	230.400,00 €	180.000,00 €	132.480,00 €	120.960,00 €
Effort in Administration management	345.600,00 €	270.000,00 €	198.720,00 €	181.440,00 €
Effort in Finance management	230.400,00 €	180.000,00 €	132.480,00 €	120.960,00 €
Total effort in 1 year	**921.600,00 €**	**720.000,00 €**	**529.920,00 €**	**483.840,00 €**

Table 9. Actual and post ERP implementation efforts in 1 year. Own elaboration

Therefore, the calculation of the ROI will be considered for a three-year period, as the increase in benefits continues for three years and the expenses will also persist. Furthermore, the calculation of the cumulative ROI will be performed taking into account the present value of future money. This entails adjusting the future benefits and costs to their present value. By considering the time value of money, a more accurate measure of cumulative return and its impact on project profitability is obtained.

Using the data from the table above regarding the total efforts in one year, the expected returns from the ERP will be quantified as the money saved per year, over the first three years since the beginning of the implementation, in relation to the current cost of efforts in one year not having an ERP.

- Returns in Year 1: 201.600,00 €
- Returns in Year 2: 391.680,00 €
- Returns in Year 3: 437.760,00 €

To obtain a good approximation of the Total Value of Investment, the benefits of the three years will be adjusted to the current moment. In order to do this, the Present Value (PV) formula will be used.

$$PV = \frac{Future\ Value}{(1+r)^n}$$

Formula 2. Present Value

A discount rate (r) of 10% will be utilized. This rate is commonly employed as a standard benchmark in financial applications and project evaluations as it reflects a conservative estimate of the minimum expected return or the opportunity cost of not investing the money in an alternative investment that offers a similar or higher return.

As a result, the total value of investment at the current moment will be as follows:

$$\text{Total Value of Investment} = \frac{201.600{,}00}{(1+10\%)} + \frac{391.680{,}00}{(1+10\%)^2} + \frac{437.760{,}00}{(1+10\%)^3} = 835.870{,}77\ €$$

On the other hand, for the calculation of the Total cost of investment, all costs incurred in the first three years will be taken into account, including the costs of implementation, maintenance, and licenses.

- Costs in Year 1: 458.906,52 €
- Costs in Year 2: 51.397,26 €
- Costs in Year 3: 33.705,00 €

Therefore, the total cost of investment at the current moment will be as follows:

$$\text{Total cost of Investment} = \frac{458.906{,}52}{(1+10\%)} + \frac{51.397{,}26}{(1+10\%)^2} + \frac{33.705{,}00}{(1+10\%)^3} = 484.987{,}88\ €$$

Therefore, the total value of investment and the total cost of investment after two years will be 1.595.904,43 € and 484.987,88 € respectively. With these data at hand, the calculation of the return on investment (ROI) will be carried out as follows.

$$ROI = \frac{835.870{,}77\ € - 484.987{,}88\ €}{484.987{,}88\ €} x\ 100 = 72{,}35\ \%$$

Therefore, the ROI for the three-year period is determined to be 72.35% indicating that the investment will generate substantial net returns compared to the total cost incurred. This result suggests that the benefits derived from the ERP system, outweigh the expenses associated with implementation, maintenance, and licenses.

Sensitivity analysis:

The implementation of the ERP does not entail actual monetary revenues for the company; therefore, a sensitivity analysis will be conducted. In this analysis, it will be considered that the client company, after the third year of ERP implementation, no longer regards the annual savings as a return. This is, in the hypothetical case that the company would have normalized the working system and would only consider the expenses incurred annually in Microsoft license payments.

Furthermore, the ROI calculation will be conducted in a more conservative manner, meaning that the cost savings generated from year three onwards will not be considered as income, while the cost incurred in license payments from that year will be taken into consideration.

After year 3, the implementation of the ERP will continue to incur costs for the company as the payment for Microsoft licenses will be required annually as long as the company intends to maintain Dynamics 365 ERP. Hence, it will be taken into consideration in the calculation of the total cost of investment, brought to the present moment, as a perpetuity.

$$PV = \frac{CF}{r}$$

Formula 3. Present Value of a Perpetuity

Where *CF* is the Cash flow per period (in this case, the annual cost of Microsoft licenses).

As the investment in licenses has already been included in the costs for the first two years, for the calculation of the total cost of investment, it will be treated as if the perpetuity starts in year 3. Therefore, the total cost of investment at the current moment will be as follows:

$$\text{Total cost of Investment} = \frac{458.906{,}52}{(1+10\%)} + \frac{51.397{,}26}{(1+10\%)^2} + \frac{33.705{,}00}{10\%} \cdot \frac{1}{(1+10\%)^2}$$

$$= 738.218{,}54\ €$$

As observed, making this estimation by considering the license payments, the total cost of investment increases significantly, although it still remains lower than the savings that the ERP implementation will bring to the company considering only the first three years.

Therefore, in this conservative scenario the ROI will be:

$$ROI = \frac{835.870{,}77\ € - 738.218{,}54\ €}{738.218{,}54\ €} x\ 100 = 13{,}23\ \%$$

Overall, the calculated ROIs (considering and not considering the perpetuity of the licenses) indicate that the implementation of Dynamics 365 Finance & Operations has the potential to contribute significantly to the retail company's profitability and operational efficiency, providing a solid foundation for future growth and success.

Furthermore, this would be what is known as "Hard ROI". Hard ROI pertains to conventional returns that can be readily allocated a quantifiable monetary value, such as increased revenue earned or lowered costs. Additionally, there is the so-called “Soft ROI” which refers to non-quantifiable gains, like an increase in employee satisfaction or enhanced brand reputation among customers. Although these benefits can significantly affect a company's overall performance, their exact financial worth is difficult to quantify but may have a great impact in the return on investment. (Beaver, 2022).

4.1.5.2. Net Present Value (NPV)

In addition to the calculation of the ROI the NPV will be conducted. This analysis will be carried out to clearly assess the excess value generated by the project. Moreover, the NPV analysis will provide a comprehensive evaluation of the project's financial viability and the magnitude of its value creation in a time period of three years providing a more precise understanding of the project's overall financial impact and further support decision-making processes.

To calculate the NPV, the following formula will be utilized:

$$NPV = \sum_{n=0}^{N} \frac{R_n}{(1+r)^n}$$

Formula 4. Net Present Value

Where R_n represents the net cash flow for each year, and *n* denotes the corresponding year during a period of *N*=3 years. Similarly, in the calculation of ROI, a discount rate (*r*) of 10% will be used.

Considering the same revenues and expenses as in the ROI calculation for the first three years after the ERP implementation, the following net cash flows are projected for each year.

- Net cash flow Year 1 = 201.600,00 € - 458.906,52 € = - 257.306,52 €
- Net cash flow Year 2 = 391.680,00 € - 51.397,26 € = 340.282,74 €
- Net cash flow Year 3: 437.760,00 € - 33.705,00 € = 404.055,00 €

Based on this information, the calculations for the Net Present Value will be performed.

$$NPV = \frac{-257.306{,}52}{(1+10\%)^1} + \frac{340.282{,}74}{(1+10\%)^2} + \frac{404.055{,}00}{(1+10\%)^3} = 350.882{,}90\ €$$

Therefore, the present value of future cash inflows and outflows from the investment, at the chosen discount rate, will create value for the organization. It is important to bear in mind that the savings generated by the implementation of the ERP system have been considered as income, although they will not represent actual cash inflows to the company.

5. Client company Risks

The retail company should carefully consider the risks associated with implementing an ERP system and recognize that assessing these risks can bring them significant benefits. While the implementation of an ERP system offers numerous advantages it also presents potential risks and challenges. However, by thoroughly evaluating these risks, the company can proactively plan and implement mitigation strategies to minimize their impact.

Risks faced by the retail company when implementing the ERP solution:

- The chosen external implementation company may disappear if it is a very small company. There is a risk that the consulting firm or technological provider may go out of business or cease operations, leaving the retail company without adequate support for the ERP implementation or maintenance.
- Employees of the retail company may not learn to use the tool efficiently as expected or incomplete utilization of its features and capabilities.
- Employees of the retail company may reject the use of the ERP tool either due to a lack of familiarity with the technology or reluctance to change established work processes among other causes.
- There may not be sufficient support from top management, and at some point, license payments may be discontinued, resulting in the loss of the system.
- ERP implementation is a significant investment for the retail company, and there is a risk of cost overruns, budget constraints, or unexpected expenses arising during the implementation process, which may impact the overall project timeline and success.

It is important for the retail company to identify and mitigate these risks through proper planning, good communication, efficient employee training, engagement from top management and the choice of a reliable external implementation company to ensure a successful ERP implementation. Additionally, by understanding and addressing these risks, the company can effectively navigate the implementation process, ensure a smoother transition, and maximize the benefits of the ERP system, leading to enhanced operational effectiveness and long-term success.

6. Conclusions

In this thesis, the digital transformation of a retail company has been assessed. Various ERPs suitable for companies of its size and characteristics were studied, and ultimately the one that best suited the company's needs was chosen. In this case, the selected ERP system, deemed as the optimal choice for the client company, was Microsoft Dynamics 365. Subsequently, based on the client company's requirements, the proposed approach of the solution was carried out.

This thesis is considered to be a comprehensive and elaborated study that will assist companies with similar needs in choosing the ERP that best suits their requirements. Furthermore, it can also serve as a guide, to an external company, of the essential aspects that should be included in an ERP implementation proposal.

It is concluded that with the implementation of an ERP system, the retail company will be able to satisfy its current need to become digital, streamlining its processes and procedures, in order to competitively keep up with the dynamics of the modern world. Moreover, the ERP will have social implications by fostering employee empowerment, collaboration, and professional growth, reducing the amount of time workers spend on mechanical tasks. Through efficient data management and improved communication channels, the ERP software will facilitate knowledge sharing, cross-functional collaboration, and employee engagement, leading to a more inclusive, supportive and efficient work environment. In addition, the transparency it provides on company information, as well as the time it saves, promotes innovation and economic growth of the company.

The results obtained from the financial indicators are highly positive. This translates into the fact that the savings generated by the implementation of the ERP in the retail company will exceed the expenses, making the company more profitable. Despite being a substantial investment, it will result in significant cost savings each year, surpassing the expenses incurred. Thus, the ERP system will lead to long-term financial benefits, allowing the company to recoup the initial investment and generate substantial savings over time. However, it is important to take into consideration that the data regarding the savings generated by the ERP in the retail company are based on assumptions and estimations that are only applicable to a company with precisely those characteristics. Nevertheless, the excellent financial results obtained are supported by the fact that in 2021 52% of Spanish companies had already adopted an ERP as their management and organizational system. (Deviam, 2022).

Finally, there will always be risks associated with a failed ERP implementation or a failed long-term adoption, so the client company should carefully consider this decision, which requires effort, dedication, and substantial resources.

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Appendix I. Request for Proposal

Business Area	Process Description
Product Data Management	Process for gathering and maintaining costing and finance related field values at the legal entity level
Product Costing	Process for preparing for and conducting an annual cost rollup for BOM and/or formula items and for activating the associated costs
Product Costing	Process for determining what inventory items are included in inventory value reports and what values to display. Inventory value reports include inventory WIP by manufacturing facility and inventory valuation by site
Product Costing	Process for updating the ABC classifications of items whether based on revenue, margin, value, or carrying cost
Vendor Relationship Management & Sourcing	Flow provides for a standalone, Accounts Payable driven process, for adding new Vendor records; process flow does not involve Purchasing personnel nor does it start with the conversion of a Prospect to a Vendor
Invoicing & Accounts Payable	Process that details the steps needed to create and process Prepayment Requests for a Vendor's Purchase Order
Invoicing & Accounts Payable	Create invoice from Purchase Order or product receipt, and view those invoices
Customer Relationship Management	Process for adding new customer records and managing existing customer records and data through accounts receivable and sales and marketing
Billing & Accounts Receivables	Process flow for the invoicing sales / customer orders and the application of any prepayments. Sales orders can be invoiced either one-at-a-time or in batch
Billing & Accounts Receivables	Process flow for creating invoices that do not involve amounts due from the shipment of an Item or Service on a Sales Order. This process utilizes the standard AX Free Text Invoice
Billing & Accounts Receivables	Process flow describes the steps required to setup, generate and post recurring invoice amounts. It begins with setting up Invoice Templates and the Billing Codes, frequency and invoice amount on the customer account. The follow-on steps include the generation and posting of those Invoices
Inventory Management	Process for undertaking period end inventory recalculations and closing. Process re-values non-standard cost inventory, and closes prior days to prevent receipt transactions. The inventory closing process examines all receipts, issues and invoice postings, and re-values items that use a FIFO, LIFO, Average or Weighted Average costing method
Inventory Management	Process for conducting a traditional annual physical inventory count. Includes use of inventory tags / tickets, tag journal, discrepancy corrections and the final inventory updates and financial reconciliation
Capital Asset Acquisition	Process steps that are required to create and acquire a Fixed Asset from a Purchase Order or Purchase Order Invoice. Activities begin with a formal Fixed Asset Acquisition Request followed by its approval. Follow-on steps include the creation, approval and conversion of a Purchase Requisition. Finally, upon receipt of the goods, the fixed asset record is automatically created which needs to followed by Fixed Asset record updates for tracking, insurance and depreciation related purposes
Capital Asset Record Management	Process for revaluing various types of fixed assets; includes . Revaluation changes the value of an asset and can cause either an increase or decrease in the value of an asset. One of the main reasons for the revaluation of an asset is to accurately reflect the fair market price. Flow describes the steps required to write-up, write-down or revalue an asset(s) using revaluation proposals
Corporate Structure, Legal Entity & Chart of Accounts	Describes the steps required to create a General Ledger Account for use in a single legal entity or one that is shared by all entities across the organization. The process begins with decisions required when the need for a new account has been identified. Follow-on setup activities include the creation of the account, the addition of any foreign language translations and the setup of the needed Account Structure. The last step involves the activation of the account and notifications to the staff

Business Area	Process Description
Statutory, Tax & Localization Management	Process describes the activities required to create and maintain sales and / or VAT taxes. The first flow describes the typical process when a Tax Subscription Service is used to update Sales Tax Data. If Tax Data is maintained manually, the balance of the process flow describes those step-by-step activities. These include setting up Tax Authorities or Jurisdictions, and Settlement Periods, as well as setting up the Vendor Account required for the payment of Taxes to a Tax Authority. After that, the flow walks the user through the processes required for creating or updating the needed Tax Codes and Groups, recalculating any un-posted tax liabilities and, finally, the updating of customer address records as appropriate
Currency & Foreign Exchange Management	Process shown below describes the steps required to setup, maintain and use international Exchange Rates. For a small of number of exchange rates, they can be entered and maintained manually. For a large number, exchange rates can be imported and updated automatically. The follow-on process involves a periodic Currency Revaluation that can revalue open Purchase and Sales Orders, and Open General Ledger transactions
Currency & Foreign Exchange Management	The following process steps are a requirement after Exchange Rates are updated. These processes ensure that Purchase Orders, Sales Orders and General Ledger Balances are in synch with the revised exchange rates
Budget Management	Process to create the baseline budget from previous budget entries, posted GL transactions, Demand/Supply forecast, project budgets, fixed assets. In case of zero-based budgeting this process entails the creation of a budget plan from scratch
Budget Management	This process monitor Compliance based on Budget Control Policies
Bank & Treasury Management	Periodic, common business process, generally performed monthly, for the reconciliation of bank accounts based upon the receipt of a Bank Statement
Corporate Operations & Affairs	Steps describe the activities needed to create and process Ledger adjustments such as reversing entries, recurring entries, month-end and / or year-end ledger transactions. Provides for the activities needed to establish and / or retrieve recurring entries, as well the process needed to create journal entries from scratch
Corporate Operations & Affairs	Describes the detailed activities required to perform a period end close. Process begins with Accounts Payable and Receivable sub-ledger reviews and processing. It continues through the finance steps for calculating depreciation, processing allocations, and completing any needed intercompany transactions or General Ledger adjusting entries. Included also are the process steps for currency revaluation, review / update of reserve amounts and bank reconciliation. Finally, the activities for closing the sub-ledgers, generating a Trial Balance and producing the needed financial statements are shown
Corporate Operations & Affairs	Describes all of the activities required for a year-end close, which always follows a normal period end closing. Process steps follow the creation of the Closing Sheet and the transfer of balances to a new fiscal year. The process ends with the production of the Financial Statements, and the processing of Employee W-2s and Vendor 1099s for US business entities
Consolidated Financial Reporting	Process flow describes the online consolidation steps, where a consolidation is performed for all companies within the same database (i.e. instance). A prerequisite is the creation of a Consolidation Company. The online consolidation process shown, combines financial data from lower level subsidiaries and then generates the needed inter-company eliminations. The process ends with a review of the results, and the generation of a single set of corporate financial statements
Consolidated Financial Reporting	Process flow describes the export consolidation steps, where a consolidation is performed for companies in different database instances.
Audit & Regulatory Compliance	Create a case for an auditor to perform an audit on transactions which trigger either from a audit rule or by manual selection
Outsourcing & Subcontracting	Process for the receipt of items, or services, against a Purchase Order (PO) that has been generated from a Production Order. Steps involve the receipt of the item against the PO, and the follow-on activity of completing the Subcontract Production Order, or moving the material to area where next operation on the route is completed
Reverse Logistics	Process for the receipt and processing of returned goods against a Returned Material Authorization (RMA) from a customer

Business Area	Process Description
Reverse Logistics	Process for the receipt and processing of returned goods into the warehouse against E-commerce orders
Inventory Management	Process for creating a cycle counting inventory journal, adding items / lines, investigating reasons for discrepancies and posting final results
Inventory Management	Process for identifying, manaing approval and scraping items that are to be removed from inventory
Inventory Management	Process Industry; Process for examining expired, or nearly expired, batches and the resetting of disposition codes and expiration dates. Includes a process for disposing of expired batches that cannot be used
Manage Store Logistics and Inventory	Process for receiving a store to store transfer at a store location. Includes transfer order search, update and completion. Also shown is the process for managing incorrect quantities received and damaged items
Manage Store Logistics and Inventory	Process for performing annual physical stock counts in the store
Product Data Management	Process for creating a product or product master within product information management and then releasing that item to one or more legal entities
Product Data Management	Process for creating a service product that can be purchased, sold and/or consumed within the enterprise and then releasing that item to one or more legal entities
Product Data Management	Process for creating a product that is not stock balance controlled but can be purchased or sold and then releasing that item to one or more legal entities
Product Data Management	Process for gathering and maintaining inventory, basic warehouse and logistics related field values at the legal entity level
Product Data Management	Process for gathering and maintaining advanced warehousing and transportation related field values at the legal entity level
Product Data Management	Process for defining barcode data structures and updating and generating barcode data for specific products
Product Data Management	Process for creating and maintaining language translations for product names and descriptions
Attribute & Catalog Management	Process for flow creating retail and/or on-line catalogs and aligning catalogs across the retail channels
Managing Product Lifecycle	Process for identifying and managing the status of a product as it moves through the various stages of its lifecycle
Project Supply Chain Management	Flow describes the step-by-step set of activities required to consume inventory, or purchase or sell, items or services for a Project. From a given Project, the user has the ability to create an Inventory Journal to consume available inventory, create a Purchase Requisition or Purchase Order, create a Production Order, or create a Sales Order. By starting with a given Project, the Project ID is automatically cross-referenced to the Inventory Journal Line, Requisition, Purchase or Sales Order
Product Data Management	Process for gathering and maintaining retail sales related field values at the legal entity level
Product Structure Management	Process for the creation and generation of product labels, hang tags and shelf labels for a specific product. Includes any report design for producing the labels directly from the system
Demand Planning & Forecasts	Process for maintaining minimum and/or maximum stock levels by store so that automatic purchases and transfers to store locations can be system calculated
Assortments & Allocations	Process for managing groups of products into on-line and/or brick-and-mortar assortments and aligning each assortment by stores or other organizational hierarchy grouping
Promotions & Rebate Management	Process for performing in-season price adjustments and markdowns across product categories
Managing Product Lifecycle	Process for the retirement of a product with stock on hand, including markdown, clearance, return to warehouse, and return to vendor where applicable
Managing Product Lifecycle	Process for execution of stock recalls from stores to central warehouse. Includes the creation of transfer orders or intercompany orders.
Customer Relationship Management	Process for adding new customer records and managing existing customer records and data through POS
Loyalty Management	Process for enrolling a customer into a loyalty program including issuing a loyalty card to a customer
Promotions & Rebate Management	Process for the configuration of promotions and how the promotion is calculated in POS. Includes creation and management of coupons

Business Area	Process Description
Store Operations Management	Process for opening a store. This includes the opening of a shift, declaration of starting amounts, activating hardware, plus any activities to ensure the POS is ready to make a sale
Store Operations Management	Process for closing a day in a store. Includes closing of shifts, undertaking tender declarations, printing X/Z reports, performing in-store reconciliations
Sales Order / E-Commerce Management	Process for importing incoming customer orders from an on-line marketplace
Sales Order / E-Commerce Management	Process for releasing an e-commerce order for fulfillment. Includes e-commerce priority and fraud analysis for determining order release eligibility
Sales Order / E-Commerce Management	Process for creating customer sales orders at POS including performing customer search, managing delivery schedules, methods, delivery charges and order deposits
Sales Order / E-Commerce Management	Recall a previously created order and pickup / invoice line items while calculating proper amount due from customer
Retail (POS) Sales & Returns	Process for applying product level and total discounts at the POS and managing overrides on discount limits. Includes affiliate, employee and other customer group discounts
Retail (POS) Sales & Returns	Process for cancelling a POS sale transaction with no financial or inventory implication. Specific process for POS sales that have not been paid or inventory issue
Retail (POS) Sales & Returns	Process for the return of item(s) that have been previously purchased. Includes both receipt and blind returns
Retail (POS) Sales & Returns	Process for the return and exchange of an item(s) that have been previously purchased
Manage Store Logistics and Inventory	Process for creating transfer orders for moving stock from one store to another store
Sales Channel Management	Process for creating online channels and defining the required channel settings
Customer Relationship Management	Describes the steps needed to create and manage contacts for customers, vendor and/or prospects
Sales Order / E-Commerce Management	Process for creating a sales order manually, adding the needed lines, verifying the pricing and delivery terms and sending the confirmation to the customer
Sales Order / E-Commerce Management	Process for creating a drop shipment purchase order (i.e. direct shipment) from a sales order line. Also describes the steps for purchase order confirmation and the needed updates on the sales order lines to confirm delivery dates. The process ends with a sales order confirmation being sent to the customer
Vendor Relationship Management & Sourcing	Describes the process steps required to place a vendor's account on hold, or inactivate it all together
Vendor Relationship Management & Sourcing	Complete published vendor questionnaires
Direct Procurement	Flow describes the process for the creation and release of Blanket Purchases Orders from a Purchase Agreement
Direct Procurement	Process for creating a Purchases Order manually, adding the needed lines, verifying the pricing and delivery terms and sending the confirmation to the Vendor
Direct Procurement	Process flow that describes all of the steps needed to create and confirm a Purchase Order by firming one or more MRP generated planned orders
Direct Procurement	This process describes the activities needed for creation of Material purchase order for a product sample
User Features	Update user preferences such as language, number formats, time zones, and other aspects of the user experience
User Features	Process to define new export formats to Microsoft Excel which can be made available to users
User Features	Process to define document templates which allow the merging of data into Microsoft Word documents
Inbound Receipts, Imports & Put-away	Process for receiving a purchase order in the warehouse or headquarter location. Includes purchase order search, update and completion. Also shown is the process for managing incorrect quantities received and damaged items
Inbound Receipts, Imports & Put-away	Processes for correcting quantities on a Purchase Order Receipt. One leg of the process shows the steps required for correction if the Purchase Order Line has been invoiced, while the other describes the correction process for those lines of a PO that have not been invoiced