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AGILE PORTFOLIO MANAGEMENT: A CASE STUDY FROM THE INSURANCE SECTOR

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A Case Study from the Insurance Sector**

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To my dear family and friends for always being there

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*"I wish it need not have happened in my time," said Frodo.
"So do I," said Gandalf, "and so do all who live to see such times. But that is not for them to
decide. All we have to decide is what to do with the time that is given us."*

J.R.R. Tolkien, *The Fellowship of the Ring*

ABSTRACT

Nowadays, the increasing uncertainty and instability brought by new competitors and ways of doing business make it crucial for traditional companies to become more agile and able to act fast on consumer needs and expectations. However, this is traditionally not an easy task for many insurance companies as they typically operate with functional and hierarchical organizations that only enable them to succeed in more stable environments.

On the other hand, many companies are strengthening their planning methodologies by implementing Portfolio Management models. These models enable them to manage their initiatives in a more integrated and efficient manner that is strategically aligned, minimizes complexity, and provides higher flexibility when responding to uncertainty.

In this sense, a case study was developed in Fidelidade, a leading insurance group operating in the Portuguese market, to study how Agile and Portfolio Management practices can be conciliated in the traditional insurance industry.

This case study was divided into three major parts. First, there was a literature review on the best practices of Agile Portfolio Management in the insurance industry. After that, the data collected was used to design a new Agile Portfolio Management model, the ABP - Annual Business Planning. Finally, the model was implemented in Fidelidade and evaluated.

The results collected during the implementation of the model in the insurance company confirmed its success with 96% of the participants feeling satisfied with it. Moreover, a survey confirmed that the ABP fostered a greater strategic alignment (score of 4,2 out of 5), increased the organization's focus (score of 4,2/5), promoted a greater transversal alignment and visibility (score of 4,2/5), and improved the capacity coordination between units (score of 3,9/5).

Keywords: Agile, Portfolio Management, Insurance Industry

RESUMO

Os dias de hoje caracterizam-se por uma crescente incerteza e instabilidade provocada pelo contínuo surgimento de novos concorrentes e formas de fazer negócio. Assim, é essencial que empresas tradicionais se tornem cada vez mais ágeis e capazes de agir rapidamente às necessidades e expectativas dos seus consumidores. No entanto, esta não costuma ser uma tarefa fácil para muitas seguradoras que tradicionalmente possuem organizações funcionais e hierárquicas que apenas lhes permitem ter sucesso em ambientes mais estáveis.

Por outro lado, muitas empresas têm vindo a fortalecer as suas metodologias de planeamento ao implementarem modelos de Gestão de Portfólios. Estes modelos permitem a gestão de iniciativas de uma maneira mais integrada e eficiente, que assegura o alinhamento estratégico, minimiza a complexidade e garante uma maior flexibilidade.

Neste sentido, foi desenvolvido um estudo de caso na Fidelidade, um grupo segurador líder no mercado português, para investigar de que forma as práticas Agile e de Gestão de Portfólio podem ser conciliadas no setor segurador.

Este estudo de caso foi dividido em três etapas principais. Primeiramente, realizou-se uma revisão de literatura sobre as melhores práticas de Gestão de Portfólios Agile no setor segurador. Em seguida, os dados recolhidos foram utilizados para desenhar o novo modelo de Gestão de Portfólios Agile. Por fim, o modelo foi implementado na Fidelidade e avaliado.

Os resultados recolhidos durante a implementação do modelo na empresa seguradora confirmaram o seu sucesso, com 96% dos participantes a sentirem-se satisfeitos com o mesmo. Mais ainda, um inquérito confirmou que o ABP promoveu um maior alinhamento estratégico (pontuação de 4,2 em 5), aumentou o foco da organização (pontuação de 4,2/5), fomentou um maior alinhamento e visibilidade transversal (pontuação de 4,2/5), e melhorou a capacidade de coordenação entre as áreas da organização (pontuação de 3,9/5).

Palavras chave: Agile, Gestão de Portfólios, Indústria Seguradora

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INTRODUCTION

This dissertation is a case study that proposes a new agile portfolio management model for insurance companies, the ABP - Annual Business Planning. This model is then implemented and evaluated in Fidelidade, a leading insurance group operating in the Portuguese market.

This chapter begins by providing a brief background on the topics covered and describing the motivation behind this case study. After that, the case study's primary objective, research question, and research methodology are described. Finally, the structure of this dissertation is presented.

1.1 Context and motivation

Nowadays, new competitors and ways of doing business continue to arise in nearly all industries due to megatrends such as demographics, digitalization, connectivity, business model innovation, trade liberalization, or global competition (Salih and Alnaji, 2014). This uncertainty and instability make it crucial for traditional companies to become increasingly more agile and able to act fast on consumer needs and expectations (Sampath and Krishnamoorthy, 2017). However, being agile and adapting to change is traditionally not an easy task for many insurance companies as they typically operate with functional and hierarchical organizations that only enable them to succeed in more stable environments (Lorenz et al., 2020).

Therefore, many financial institutions, such as banks and insurers, are seeking to increasingly transform towards Agile and its principles. These institutions strive to become more effective, faster, and leaner in their critical processes by minimizing handovers and maximizing speed and effectiveness. Moreover, adopting Agile also simplifies their governance and increases operational efficiency through its flat organizational models, where the traditional

functional and siloed units are mixed up in cross-functional divisions and self-managing teams (Lorenz et al., 2020).

Another common factor in many financial companies is that they typically develop multiple and complex strategic initiatives at the same time. These initiatives seek to increase the company's capabilities in achieving its strategic business objectives and usually cascade into several strongly correlated projects that are developed by numerous development teams in short development cycles (Yang et al., 2021).

In this context, many insurers adopt Portfolio Management models that enable them to manage their initiatives in a more integrated and efficient manner that is strategically aligned, minimizes complexity, and provides higher flexibility when responding to uncertainty (Miterev et al., 2020). As a result, Portfolio Management emerges as a successful approach to managing strategic initiatives in the form of projects or programs that are selected, prioritized, balanced, and aligned to the latest business needs (Ichsan and Sadeli, 2020; ISO, 2015; PMI, 2017).

In this dissertation, a new agile portfolio management model was designed, the ABP - Annual Business Planning. The ABP is a portfolio management model suitable for insurance companies that follows the portfolio management standards (ISO TC/258 - ISO 21504:2015 and PMI's *The Standard for Portfolio Management – Fourth Edition (2017)*) and the agile principles.

This agile portfolio management model was then implemented and evaluated in Fidelidade, a leading insurance group operating in the Portuguese market. Fidelidade possessed several transversal initiatives that were being developed simultaneously and needed better alignment and coordination. Moreover, the group was also undergoing an Agile transformation and intended to become a more effective, faster, and leaner organization.

Therefore, Fidelidade decided to implement the ABP to foster a greater strategic alignment of all initiatives, increase the organization's focus, promote a transversal alignment and visibility on all units' activities, and improve the capacity coordination between the units involved in transversal initiatives.

1.2 Research question and main objectives

Since the existing literature offered limited guidance on the combination of these two themes, Agile and Portfolio Management, and their application is almost unheard of in the insurance sector, the main research question of this case study was:

Research question: What could be an agile portfolio management model aligned with the standard practices and suitable for an insurance company?

This research question should be answered by accomplishing the following three objectives:

Objective 1: Study the existing literature to collect the best practices for applying Agile Portfolio Management in the insurance industry.

Objective 2: Design an agile portfolio management model aligned with the standard practices and suitable for an insurance company.

Objective 3: Implement and evaluate that model in the real-life context of an insurance company.

1.3 Research methodology

The research methodology was based on the "research onion" from Mark Saunders, Philip Lewis, and Adrian Thornhill (Saunders et al., 2018). There are six layers in the "research onion": philosophy, approach to theory development, methodological choice, research strategy, time horizon, and techniques and procedures.

After realizing the HARP questionnaire (Heightening your Awareness of your Research Philosophy), the researcher found that his views were predominantly similar to the pragmatism philosophy. This research philosophy is suitable for a case study research strategy and supports this dissertation's clear intention to influence organizational practice and not focus only on constructing theories and concepts.

The approach to theory development used was abduction, which is generally underpinned by the pragmatism philosophy. Abduction combines deduction and induction with an approach that moves from data-to-theory and theory-to-data back and forth.

In this research project, the abduction process was made across three main phases. First, there was a collection of data from the literature review. Then, this data was used in the induction of a theory, which was the design of a new agile portfolio management model. Finally, some additional data was collected through the implementation and evaluation of the model. The combination of the three phases of the process enabled answering the research question.

This research was done with a partially integrated mixed methods research approach that used qualitative methods first and then applied both qualitative and quantitative methods simultaneously.

As this research project was developed in a real-life setting and used both quantitative and qualitative methods, the case study was the chosen strategy.

The approach taken in this research project was a rigorously defined and structured one that is commonly used in orthodox case studies. In this sense, the research design can be divided into three major phases. In the first phase, the literature was reviewed and the research question was defined. After that, the second phase was dedicated to developing a new agile portfolio management model. Finally, following an initial diagnostic of the company's current strategic planning processes, the model was implemented and evaluated through a survey and quantitative and qualitative analyses (Figure 1.1).

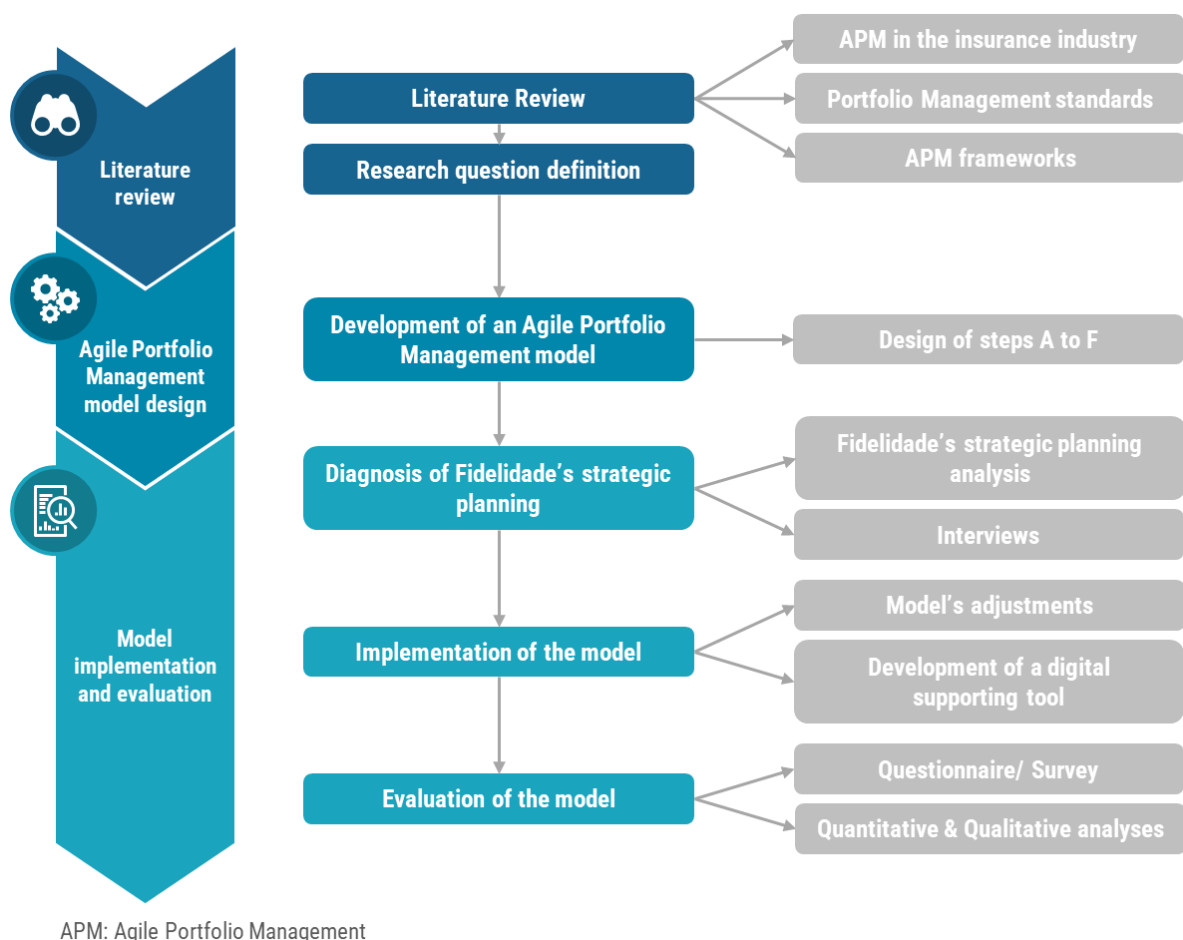


Figure 1.1 - Orthodox case study research design

Finally, this research project was a cross-sectional study and used, as main techniques and procedures, semi-structured interviews in the diagnosis and a survey to evaluate the model.

1.4 Dissertation structure

This dissertation is divided into six chapters:

Chapter 1 - Introduction: This chapter intends to contextualize the work developed, explaining the motivation, the primary objectives, and the research methodology of the case study. In addition, the structure of this dissertation is also presented.

Chapter 2 - An Overview of Agile Portfolio Management in the Insurance Industry: This chapter constitutes the State of the Art, which is the basis of this dissertation. It starts by providing an overview of the global insurance sector where this case study fits in (Section 2.1). After that, there is a literature review on the best practices of applying Agile Portfolio Management in the insurance industry. This literature review was divided into four parts:

- Section 2.2 studies the application of Agile and Portfolio Management in the insurance and banking industry;
- Section 2.3 analyzes the existing Portfolio Management main standards;
- Section 2.4 analyzes the existing literature on Agile Portfolio Management; and
- Section 2.5 compares and discusses the main results of the literature review and defines the research question.

Chapter 3 - Research Methodology: This chapter describes the research methodology chosen to answer the research question and explains why the case study was considered the most suitable research strategy.

Chapter 4 - Design of an Agile Portfolio Management Model: This chapter details the new agile portfolio management model that was developed, the Annual Business Planning or ABP.

Chapter 5 - Model Implementation and Evaluation: This chapter describes the implementation and evaluation of the ABP model in Fidelidade.

Chapter 6 - Conclusion: This chapter concludes the case study and is divided into two parts. First, the research question of this dissertation is answered. Finally, the second part briefly describes the main limitations of this study and the most significant future developments.

AN OVERVIEW OF AGILE PORTFOLIO MANAGEMENT IN THE INSURANCE INDUSTRY

This chapter will review the existing literature and collect the best practices for applying Agile Portfolio Management in the insurance industry. In this sense, the chapter will be divided into two major parts.

First, it is essential to provide an overview of the global insurance sector where this case study fits in. Therefore, a short overview will be given divided into three major topics (section 2.1). First, there is a brief analysis of the three insurance coverage types (Life, Property & Casualty, and Health insurance) during the last years. Secondly, there is an overview of the current picture of the major insurance distribution channels. Finally, there is a brief discussion of the major impacts the COVID-19 pandemic is causing in the insurance business worldwide.

After this overview on the main tendencies of the insurance industry across the globe, this chapter will then provide a literature review on the best practices of applying Agile Portfolio Management in the insurance industry (section 2.2 to 2.5).

In this sense, this literature review will start by studying the application of Agile and Portfolio Management in the insurance and banking industry specifically (section 2.2).

However, since this initial review offers limited guidance, this section will then also analyze the existing Portfolio Management main standards (section 2.3) and the existing literature on Agile Portfolio Management (section 2.4).

Finally, there is a brief comparative analysis and discussion of the main results found in this literature review, as well as the definition of the primary research question (section 2.5).

2.1 Overview of the insurance industry

During the last decade, the global insurance industry has witnessed steady and significant growth over the years. According to McKinsey & Company's report *Global Insurance Pools statistics and trends: An overview of life, P&C, and health insurance* (Binder et al., 2021), the total insurance premiums increased 48% in the last decade, from a total of €3,4 trillion in 2010 to almost €5 trillion in 2019 (2019 is currently the most consistently reported year). Furthermore, between 2018 and 2019, there was a CAGR (Compound Annual Growth Rate) of 4.9%, a slight increase from the 4.4% CAGR between 2010 and 2018 (Figure 2.1). On the regional level, North America and the developing Asia Pacific (APAC) were the major contributors to this growth, accounting for almost 60% of the growth in total insurance premiums from 2010 to 2019 (Binder et al., 2021).

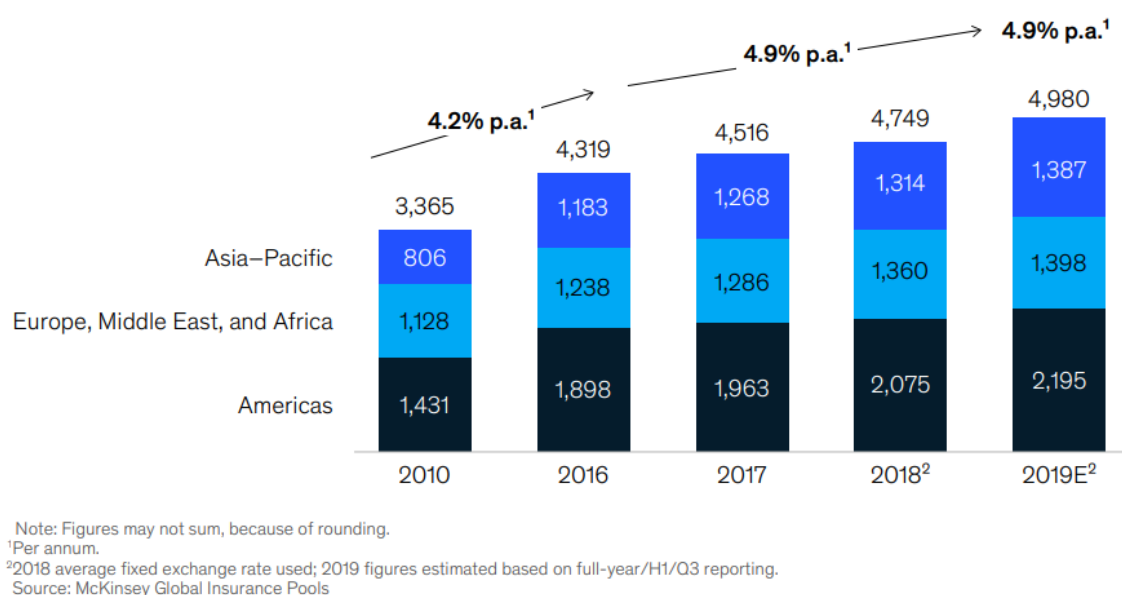
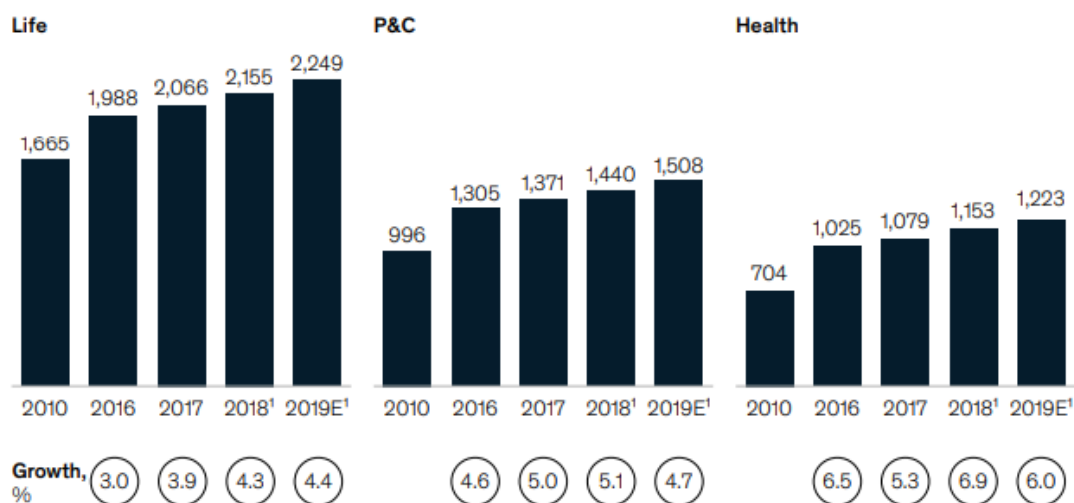


Figure 2.1 - Total insurance premiums during the last decade, € billion

2.1.1 Growth by coverage type

2.1.1.1 Life insurance

Life insurance was the leading insurance coverage with 45% of global premiums in 2019 and a growth of 4.4% from 2018 to 2019 (Figure 2.2). This growth was particularly significant in the developing APAC.



¹2018 average fixed exchange rate used; 2019 figures estimated based on full-year/H1/Q3 reporting.
Source: McKinsey Global Insurance Pools

Figure 2.2 - Total insurance premiums by segment, € billion

All life product lines showed gains from 2018 to 2019. However, annuity products were the leading product accounting for more than 30% of life insurance products. Annuities were followed by group products, endowment, unit-linked, and term life products, which were at the bottom of the product mix (Figure 2.3).

Life insurance profitability has mainly decreased in most regions. This is leading some insurers to refocus their investments in less capital-intensive products (but less profitable as well), such as unit-linked (Binder et al., 2021).

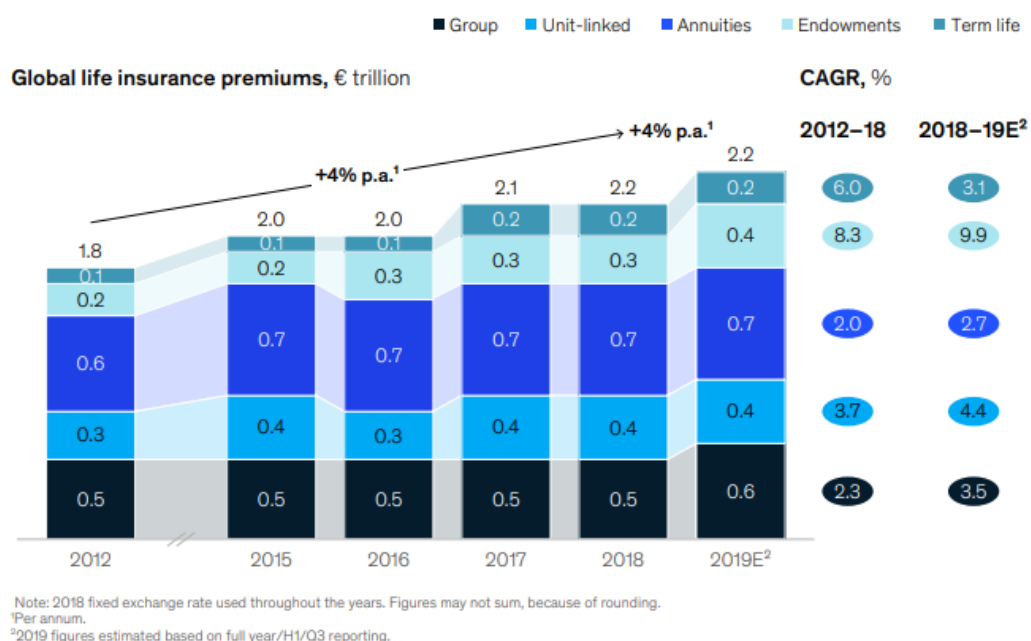


Figure 2.3 - Growth by life product line

2.1.1.2 Property-and-casualty (P&C) insurance

Property-and-casualty (P&C) insurance accounted for 31% of global premiums, showing a growth of 4.7% from 2018 to 2019 (Figure 2.2). More mature markets, such as Western Europe, North America, and developed APAC, contributed most (61%) for this P&C premium growth. However, emerging markets such as Latin America, Africa, and developing APAC showed the fastest growth rates in the same time frame of 2018-2019.

Despite a slowdown in the CAGR from 2018 to 2019, motor insurance still accounted as the P&C product line with a larger market share (45%) (Figure 2.4).

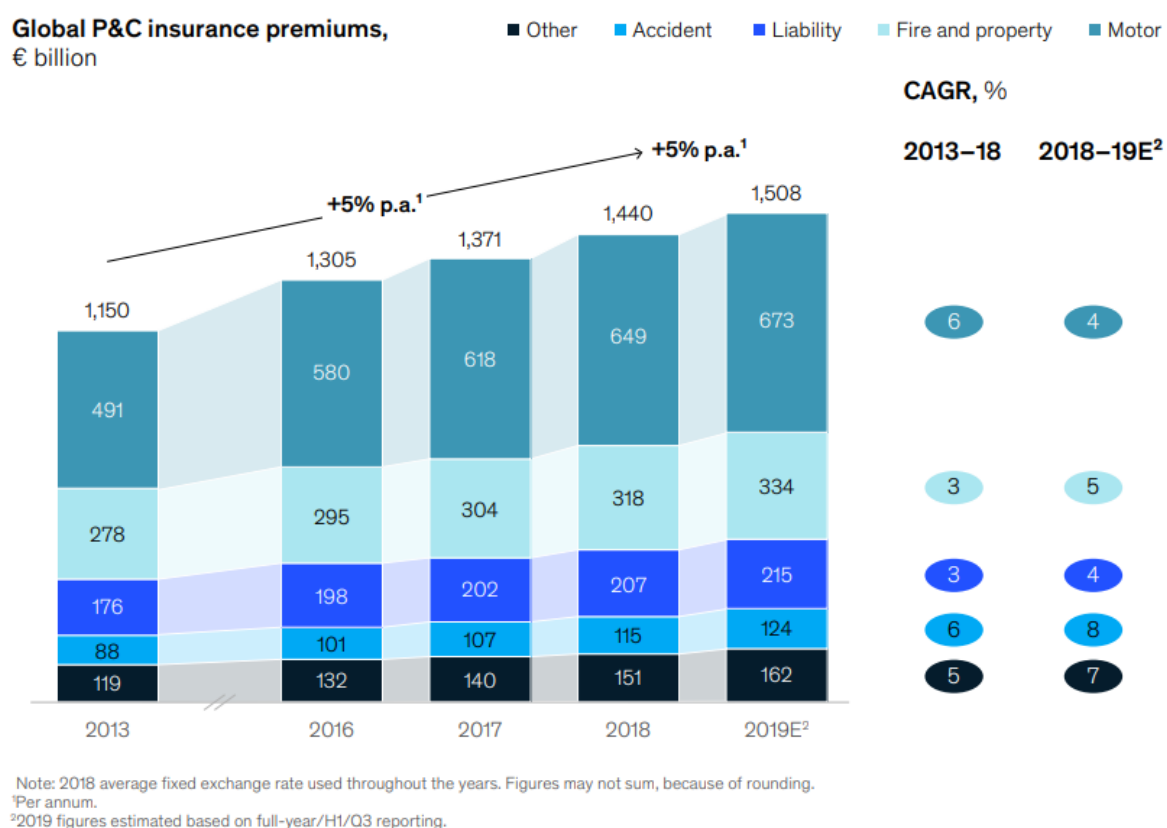


Figure 2.4 - Growth by P&C product line

Profitability in P&C insurance has been improving since 2017, a year marked by several natural catastrophes worldwide (Binder et al., 2021).

2.1.1.3 Health insurance

Health insurance accounted for about 25% of global insurance premiums in 2019 and was the fastest-growing segment. Regions such as the developing APAC and North America - the world's largest private health market - contributed to most of the total growth in health insurance premiums. In addition, both personal and commercial health insurance lines continued to grow in the last decade (Figure 2.5).

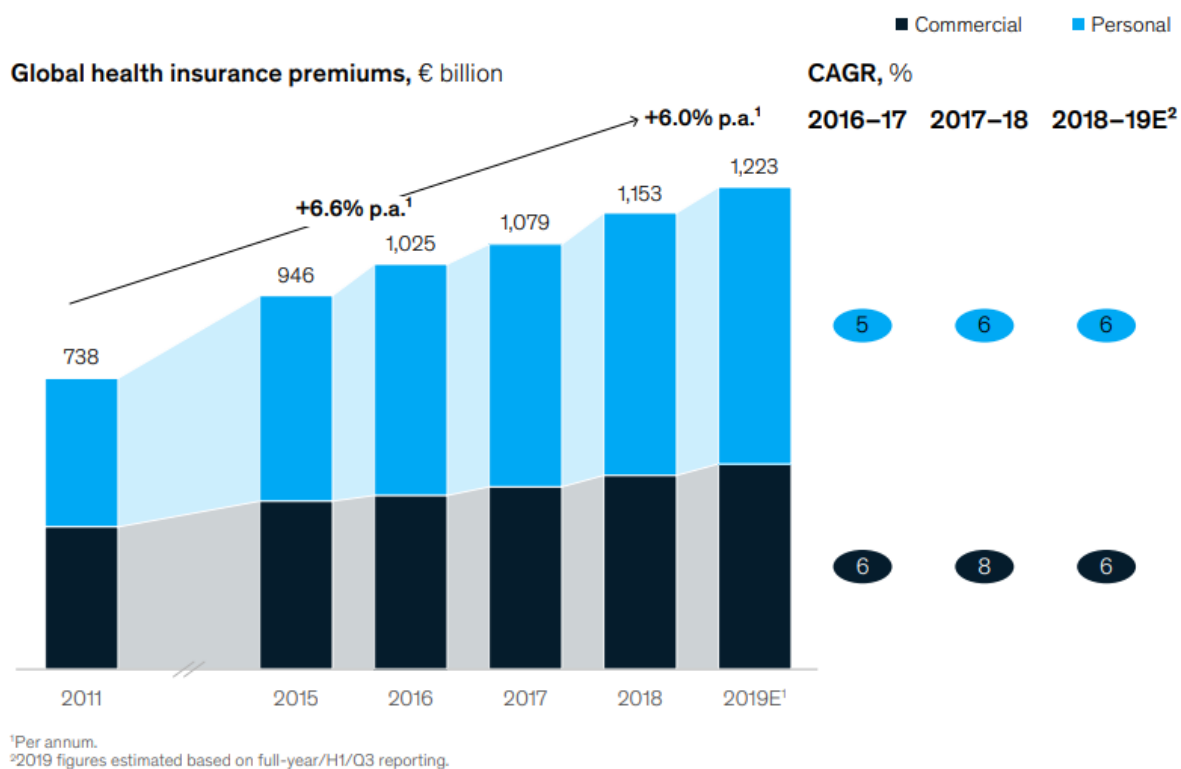


Figure 2.5 - Growth by Health product line

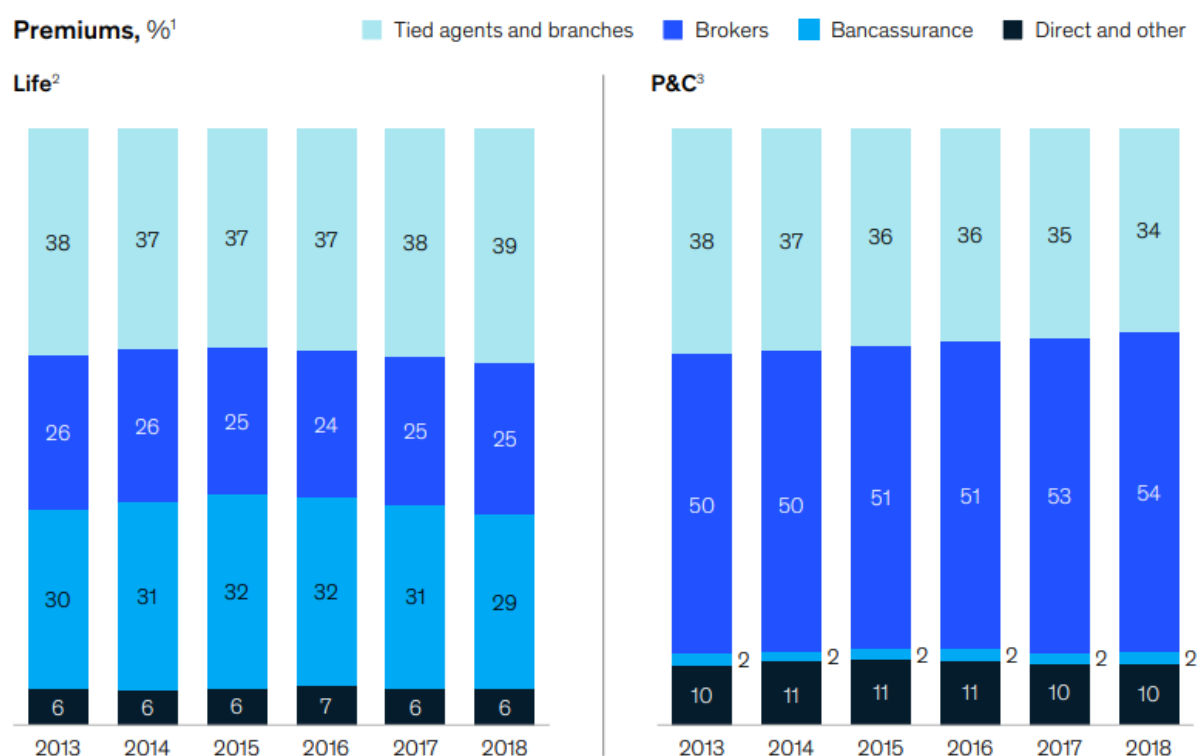
In general, all the economic indicators - such as the average combined ratio, the net claims ratio, and the expense ratio - have remained stable and positive across all regions (Binder et al., 2021).

2.1.2 Current distribution changes

Despite solid growth in the recent years of the direct sales channel, the insurance industry is still primarily dominated by the in-person sales force of agents and brokers (Figure 2.6).

This tendency is especially notorious in life insurance, where tied agents and branches along with bancassurance have the most significant share, whereas the direct channels remain very limited.

In P&C, the direct channel has a slightly bigger penetration. However, most of the sales are dominated by brokers - at the expense of agents and branches that have been experiencing a decline in recent years (Binder et al., 2021).



¹Figures may not sum to 100%, because of rounding.

²For Germany, annual premium equivalent (instead of gross direct domestic written premiums) distribution mix considered.

³For Chile, China, Hungary, Poland, and South Korea, nonlife (instead of P&C) distribution mix considered.

Figure 2.6 - From 2013 to 2018, agents and banks led global life insurance distribution

2.1.3 COVID-19 impact on the insurance business

The impact of COVID-19 will likely be more significant in the life insurance line of business, with the industry being expected to recover to 2019 levels only by 2022 or 2023. This slower recovery is mainly explained by the industry's savings-oriented product mix and the challenges in underwriting and distribution induced by the constant lockdowns and commercial restrictions (Binder et al., 2021).

The P&C line of business has increased profitability mainly due to the claims decline induced by the lockdowns and the consequent loss of mobility. However, the pandemic is also expected to have a near-term global negative impact on P&C premiums. The economic crisis and rising unemployment will likely translate into a shift toward purely mandatory insurance products and a decreased coverage in existing products. Also, the downside of the lockdowns and consequent loss of mobility is that it will cause a drop in new car sales and fleet sizes, reducing motor insurance premiums.

Meanwhile, the health line of business has also seen a claims reduction due to the closure of hospitals and clinics to non-urgent or no COVID-19 health procedures. However, this claims

reduction will likely be compensated in the post-COVID world, as people start to feel safer and more confident in going to the hospitals and rescheduling all their postponed procedures. In fact, the post-pandemic loss ratios will likely be larger than the pre-pandemic figures as people's health conditions deteriorate during the pandemic. Moreover, many people's diseases have passed unnoticed without attending routine doctor appointments and are now worse and more difficult (and expensive) to treat.

Finally, the COVID-19 crisis and consequent lockdowns also had a tremendous negative impact on sales through physical channels, such as agents and brokers. In contrast, the direct and digital channels were significantly less affected. Therefore, it can be said that both the insurance industry and its clients will start embracing digitalization much more and propelling their shift towards direct and online channels.

2.2 Best practices of Agile Portfolio Management in the insurance industry

After this overview on the main tendencies of the insurance industry across the globe, this chapter will now focus on investigating the best practices on the application of Portfolio Management and Agile in the insurance industry.

Since the existing literature on applying these two themes in the insurance industry was almost inexistent, the banking industry was also analyzed as both sectors possess similar characteristics. In order to execute this review, several queries were made on the Scopus database, as illustrated in Table 2.1:

Table 2.1 - Scopus search queries

No.	Theme	Query	No. results	Documents selected
1	2017-2021 Insurance Ind. AND Portfolio Mngmt.	ALL ("insurance industry" AND "portfolio management" AND (programs OR programme OR projects)) AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017)) AND (LIMIT-TO (LANGUAGE, "English"))	30	None

Table 2.1 - Scopus search queries (cont.)

No.	Theme	Query	No. re-sults	Documents selected
2	2017-2021 Banking Ind. AND Portfolio Mngmt.	ALL ("banking industry" AND "portfolio management" AND (program OR programme OR project)) AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017)) AND (LIMIT-TO (LANGUAGE, "English"))	97	(Ichsan and Sadeli, 2020), (Ayu et al., 2020), (Yang et al., 2021), (Halim et al., 2020), (Samanlioglu and Ayağ, 2020)
3	2017-2021 Insurance Ind. AND Agile	ALL ("insurance industry" AND (agile OR "business agility") AND (portfolio OR project OR program OR programme)) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON"))	38	(Carew and Glynn, 2017), (de Waal, 2018), (Atkinson et al., 2020)
4	2017-2021 Banking Ind. AND Agile	ALL ("banking industry" AND (agile OR "business agility") AND (portfolio OR project OR program OR programme)) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON"))	84	(Lindskog and Magnusson, 2021), (Sundaram et al., 2020), (S.H. Appelbaum et al., 2017), (Fink et al., 2018), (Tornjanski et al., 2017), (Sampath and Krishnamoorthy, 2017), (Ahmadzadeh et al., 2020)

Table 2.1 - Scopus search queries (cont.)

No.	Theme	Query	No. re-sults	Documents selected
5	Insurance Ind. AND Agile AND Portfolio Mngmt.	ALL ("insurance industry" AND (agile OR "business agility") AND "portfolio management")	6	None
6	Banking Ind. AND Agile AND Portfolio Mngmt.	ALL ("banking industry" AND (agile OR "business agility") AND "portfolio management")	18	(Yang et al., 2021)

The first two queries aimed at analyzing the existing literature of Portfolio Management in both the insurance and banking industry in the last five years (2017-2021). A total of 127 documents were found (30+97), but only five related to the banking industry were suitable for this paper. The others had access limitations or did not relate to Portfolio Management or Banking/ Insurance industry.

The third and fourth queries were similar to the first ones but aimed at analyzing the existing literature on Agile and business agility in the same industries. From a total of 122 documents (38+84), ten were found suitable for this paper.

Finally, the fifth and sixth queries combined the Portfolio Management and Agile themes in the insurance and banking industry. That is, the queries intended to find any existing literature that combined the application of Portfolio Management and Agile in the insurance or banking industry. However, from the 24 documents found (6+18), none was suitable as they did not relate to both themes simultaneously.

Therefore, from all the 273 papers analyzed, only 15 were selected for this literature review.

The study of these 15 articles will be divided into two parts. First, there is an analysis of Portfolio Management and then a study of Agile concepts in the Insurance and Banking Industry.

2.2.1 Portfolio Management in the Insurance and Banking Industry

There are two types of activities in organizations: those that run the business and those that change the business. The "run" activities are the operations that realize business benefits, also known as business as usual, and the "change" activities are the projects that increase the company's capabilities to achieve its strategic business objectives (Ayu et al., 2020). These "change" projects are also known as strategic initiatives, and they are commonly grouped in programs managed through Portfolio Management (PM) processes.

A robust and well-based Portfolio Management process is crucial, especially in financial companies that usually possess multiple programs consisting of several projects with strong inter-project correlation, numerous project development teams, and short development cycles (Yang et al., 2021). Therefore, many insurance firms have the increasing need to manage these programs in a more integrated and efficient manner, which assures all programs' strategic orientation, minimizes complexity, and provides higher flexibility in responding to uncertainty (Miterev et al., 2020).

For instance, in the article *Fostering Project Delivery Capabilities in Indonesian Commercial Banks*, Ichsan and Sadeli highlighted the influence of having strong Portfolio Management capabilities to successfully complete strategic initiatives in the form of projects or programs that are selected, prioritized, balanced, and aligned to the latest business needs.

Portfolio Management processes can also have high levels of flexibility, enabling financial companies to quickly and effectively respond to their dynamic market environments. For example, in PM processes, projects or programs that are already ongoing can be re-prioritized, reconfigured, balanced, or even discontinued to align with the organization's current priorities and optimize the impact of such projects (Ichsan and Sadeli, 2020).

Prioritization is a critical aspect of a Portfolio Management process. Halim et al., in their paper *Enterprise Information Technology Strategic Plan (EITSP) delivers Indonesian Bank Performance* emphasized the importance of prioritization as a crucial part of the demand management cycle. Prioritizing consists of understanding which programs or projects will most benefit the organization and should be implemented first. There are four main project elements for prioritization: financial value, risk, strategic alignment, and feasibility (considering the existing capabilities of the organization) (Halim et al., 2020). Analyzing these four key elements (and possibly others more specific to the organization) is not always as straightforward as one could expect for many reasons, namely due to the lack of robust quantitative data. However, some methodologies such as Multiple Criteria Decision Making (MCDM) and Analytic Hierarchy

Process (AHP) are often well used in prioritizing, as they may evaluate projects with both quantitative and qualitative data (Romano, 2013; Samanlioglu and Ayağ, 2020). In sum, prioritization has a strong impact in implementing strategic initiatives, as selecting the right project/program in the very beginning is crucial for optimizing the bank or insurer's final performance (Ichsan and Sadeli, 2020).

Today, as digital technologies continue to emerge and the need for digitalization and automation grows, the demand for Information Technology (IT) support and resources is also increasing. Therefore, a PM process should carefully address the dynamic balance between the IT demand and the IT supply capacity to maximize the organizations' performance. In order to do so, essential factors such as having a Corporate Strategic Plan, an IT Portfolio Management (ITPM), a Business IT Stakeholder Management (BISE), and an IT Governance & Transparency framework (ITGOV) have been proved to deliver financial performance in the form of Return on Assets (RoA) and optimize the balance between business IT demand and IT support capacity (Halim et al., 2020).

Coordinating multiple projects and programs can be challenging. In their paper, Yang et al. (Yang et al., 2021) described the batch approach as one of the most valuable methods to enhance the coordination of multi-project management. They also emphasized the idea of Agile as an iterative approach that enables customers' rapid involvement and continuous feedback, optimizing the development and effectiveness of the project (Yang et al., 2021).

The existing literature on the application of Agile in the insurance and banking industry will be analyzed hereafter.

2.2.2 Agile in the Insurance and Banking Industry

Being agile and adapting to change is traditionally not an easy task for many insurance companies, as they usually operate through functional and hierarchical models that enable them to succeed only in more relatively stable environments (Lorenz et al., 2020).

However, stability is becoming a thing of the past, even in old and traditional industries such as the insurance industry. In fact, nowadays, being agile and able to act fast on consumer needs and expectations is becoming more critical and challenging. All of this raises the question of whether the traditional and old operating models can fulfill the increasing needs of speed, effectiveness, and optimization that insurers have (Salih and Alnaji, 2014).

In today's society, new competitors and new ways of doing business continue to arise mainly due to megatrends such as demographics, digitalization, connectivity, business model innovation, trade liberalization, and global competition. The military often uses an acronym to

describe environments with volatility, uncertainty, complexity, and ambiguity: VUCA. In the business world, VUCA stands for an environment where no company manages to beat its market competitors consistently and where traditional strategic planning and execution models are found inadequate (Sampath and Krishnamoorthy, 2017).

In this context, being Agile and transforming to its principles emerges as a faster, more effective, and leaner solution by minimizing handovers and maximizing speed and effectiveness in critical processes such as launching new products or updating new pricing models. Adopting Agile also simplifies governance and increases operational efficiency through its flat organizational models, where the traditionally functional and siloed units are mixed up in cross-functional divisions and self-managing teams (Lorenz et al., 2020).

Being Agile also implies having strategic agility, which is becoming an emergent area of research in the agility domain. Strategic agility is the ability of an organization to continuously adapt to changing circumstances and adjust its strategic direction to create new products and services, new business models, and innovative ways to create value (Sampath and Krishnamoorthy, 2017).

Another critical factor at the core of strategic and organizational agility is the concept of organizational ambidexterity. Ambidextrous organizations are those that successfully manage to work and innovate for the future but do not forget to optimize the present. Ambidexterity is about exploring new and innovative business fields as well as exploiting the existing ones, is having agility and changeability without losing stability and structure. Only ambidextrous organizations manage to respond, adapt and thrive in changing environments. However, for companies adopting Agile methods, ambidexterity can sometimes be seen as a contradiction and cause paradoxical tensions between the flexibility needed for Agile methods and the inevitable business and corporate need for predictability and long-term planning.

Nevertheless, agile methodologies already possess ambidextrous strategies. For example, one of the prerequisites to enhancing flexibility and creativity (exploration) is that the teams must be stable and autonomous in controlling, planning, and solving their own work (exploitation). Another good example of agile ambidexterity is the definition of the iteration cycle, as it must be long enough to enable meaningful work and stability but short enough not to lose speed and sensitivity to change (Lindskog and Magnusson, 2021).

While strategic agility is crucial to be innovative and prepare for the future, banks and insurers also need to be agile and lean in their operations. Solid operational models enable enterprise agility as companies increasingly possess the capacity and capabilities to support various progressively customized products and services effectively, meet all stakeholders'

expectations, and maximize value and customer satisfaction. However, accomplishing all of this can be more arduous in large enterprises than on small and medium enterprises (Steven H. Appelbaum et al., 2017). In this context, Tornjanski et al. established three fundamental requirements for operations management in banking (Tornjanski et al., 2017):

- Acknowledge operations as a primary strategic element, shifting the operating model from a traditional "back-office" to a "strategic" one;
- Approach operations in an integrated perspective, identifying primary output needs and leveraging resources and capabilities; and
- Ensure that strategies are ambidextrous and have a clear long-term vision and a robust short-term implementation capacity, focusing on quality management and operational excellence.

Having explained the importance of agility in financial companies, the question that imposes is how can a financial company become agile? What is the most successful path to becoming Agile? Hereafter, a review will be done on the main enablers of building an agile organization, particularly the importance of culture and people in this journey.

The commitment to agile implies a change in all levels of the organization, namely strategy, structures, capabilities, employees, and leadership. The status quo imposed by traditional organizational structures, functions, and practices such as planning and budgeting must be challenged and rethought (S.H. Appelbaum et al., 2017).

In their paper *Is strategic agility the new Holy Grail?*, Sampath and Krishnamoorthy describe five key elements to build a strategically agile organization (Sampath and Krishnamoorthy, 2017):

- Providing clear and unifying organizational direction;
- Building learning organizations;
- Capitalizing on human capital;
- Creating strong organizational culture; and
- Building effective top management teams.

These elements should also share the same three practices:

- Customer orientation;
- Mastering change and uncertainty; and
- Leveraging human capital and leadership.

In addition, Ahmadzadeh et al. found that the organizational structure is one of the most influencing enablers of organizational agility. They also observed that by increasing the ability

of the organization in enterprise resources planning (ERP), the organizational agility also increases (Ahmadzadeh et al., 2020).

Salih and Alnaji (Salih and Alnaji, 2014) studied the impact of strategic thinking and strategic agility on the strategic performance of insurance companies. They found that strategic performance is affected and depends on both strategic thinking and strategic agility. In addition, strategic agility is also affected by strategic thinking and, therefore, the strongest relationship between the three was in the sequence:

Strategic Thinking -> Strategic Agility -> Strategic Performance

This sequence is the strongest path that maximizes strategic performance in insurance companies. Strategic thinking comes as a key methodology, based on foresight, intuition, and financial techniques, that promotes strategic agility and delivers strategic performance (Salih and Alnaji, 2014).

On the other hand, Atkinson et al. (Atkinson et al., 2020) performed a test in the insurance industry to analyze the relationship between organizational agility and three meta-capabilities: competitive intelligence, strategic flexibility, and organizational innovation. They found that competitive intelligence and strategic flexibility support organizational agility, but surprisingly organizational innovation does not. They also found that the most robust path to achieve organizational agility was the following:

Competitive Intelligence -> Strategic Flexibility -> Organizational Agility

The authors stated that the inexistence of a correlation between organizational innovation and organizational agility might be due to the sample used in the test. Therefore, further studies on this matter would be recommendable (Atkinson et al., 2020).

In addition, the authors also added that the importance of having competitive intelligence and strategic flexibility depends directly on the intensity of the competition. That is, when the competition is high, insurance companies need to act faster and be able to identify and implement necessary changes quickly to optimize performance and beat the competition (Atkinson et al., 2020).

One of the fundamental aspects regarding strategy and agility is that strategy can only produce conditions favorable to agility, but not agility itself. It is the *people* who become agile by changing their mindset and ways of working (Atkinson et al., 2020). Therefore, agility needs to be rooted in a company's culture, and the presence of a robust Human Resources (HR) strategy is fundamental to unlocking organizational agility in any company, including insurers.

According to Cameron and Quinn (Cameron and Quinn, 2011), there are four types of organizational culture (Table 2.2):

Table 2.2 - Types of organizational cultures according

	Focus	Values...
Adhocracy	External	Innovation
Market	External	Competitiveness
Clan	Internal	Collaboration
Hierarchy	Internal	Order and Stability

All organizations have a mix of these culture types that must fit with the existing entity and culture. Studies suggest that all culture types can positively correlate with agility, except the market culture. Typically, well-balanced companies must have a clan culture in their internal management through solid and collaborative teams but have a hierarchical culture and stability when defining their long-term vision and strategy (Atkinson et al., 2020; Cameron and Quinn, 2011).

As imagined, becoming agile is a formidable challenge because it depends greatly on the organization's culture and mindset. Unfortunately, many companies undergoing agile transformations get stuck at this point because changing organizational cultures is a long and arduous endeavor (Sampath and Krishnamoorthy, 2017). For instance, many companies have difficulties implementing Scrum as they do not have stability embedded in their culture, and the project teams get consistently bombarded with ad-hoc requests from other stakeholders. This decreases teams' productivity and effectiveness, making the company slower in responding to change. Another challenge in changing culture resides in the organizations' leadership. Many leaders tend to adhere to a non-agile management mindset that does not promote agile values such as servant leadership, autonomy, and self-organizing flexibility (Carew and Glynn, 2017).

In conclusion, moving to agile needs to be a top-down and bottom-up effort, permeating all levels of the organization and ensuring that everyone embraces and is resilient enough to tackle this long and arduous effort that impacts people's culture and mindset (Carew and Glynn, 2017).

2.3 Portfolio Management Standards

This section aims to analyze Portfolio Management through two of its most significant standards: PMI's book *The Standard for Portfolio Management – Fourth Edition (2017)* and ISO

standard ISO TC/258 - ISO 21504:2015. These standards are universal and valuable when applying Portfolio Management in any sector, including insurance.

The Project Management Institute (PMI) is the world's leading authority on project management and offers globally recognized standards, certifications, and online courses, among other things ("PMI," 2021). PMI's standards and certifications are adopted worldwide but have a more significant influence in North America.

The International Organization for Standardization (ISO) is an independent, non-governmental international organization with a membership of 166 national standards bodies ("ISO," 2021). ISO's headquarters are in Geneva, Switzerland, and its work and standards have a significant influence worldwide, particularly in European countries.

This section will describe their standard best practices for portfolio management. Firstly, a brief explanation will be provided of what is a Portfolio and what is Portfolio Management. After that, there is a summary review on Portfolio Strategic Management and Portfolio Capacity and Capability Management, which are the most relevant portfolio management topics for this paper.

2.3.1 Portfolio and Portfolio Management concepts

PMI's book *The Standard for Portfolio Management – Fourth Edition (2017)* and ISO's standard describe a portfolio as a collection of portfolio components (projects, programs, subsidiary portfolios, or operations) managed together to achieve strategic objectives (ISO, 2015; PMI, 2017).

Portfolio components should be quantifiable. That is, they can be identified, categorized, evaluated, prioritized, and authorized. In addition, the portfolio components do not need to be interdependent. They can be independent and with related or unrelated objectives (PMI, 2017). However, portfolio components compete for a share (or all) of a set of limited resources. Consequently, organizations need to analyze their unique environment and circumstances to optimize and balance the various portfolio components (ISO, 2015; PMI, 2017).

Another essential characteristic of a portfolio is that it is not time-bounded. In other words, unlike programs and projects, which have a limited duration, portfolios can achieve greater longevity as new components enter the portfolio and current ones are completed. A portfolio can be closed for several reasons, such as the portfolio is no longer required, the intended objectives have been accomplished, or the portfolio's components have been de-commissioned or transferred to another portfolio (ISO, 2015; PMI, 2017).

Finally, a portfolio should be at any given moment a reflection of an organization's intent, direction, and progress. In other words, a portfolio should be closely aligned with one or more organizational strategies and objectives. Otherwise, the organization should reasonably question why the portfolio is active and take corrective action to either realign the portfolio or decommission it (ISO, 2015; PMI, 2017).

According to *The Standard for Portfolio Management – Fourth Edition* (PMI, 2017), "portfolio management is the centralized management of one or more portfolios to achieve strategic objectives" by applying portfolio management principles. Also, portfolio management can be viewed as a "dynamic activity through which an organization invests its resources to achieve its strategic objectives by identifying, categorizing, evaluating, selecting, prioritizing, integrating, monitoring, optimizing, balancing, authorizing, transitioning, controlling, and terminating portfolio components."

ISO's standard (ISO, 2015) gives a similar definition for Portfolio Management: "Portfolio management should include a set of interrelated organizational processes and methods by which an organization allocates resources to achieve its strategic objectives." In addition, Portfolio Management aims to align the portfolio objectives with the organization's strategic objectives, stakeholder priorities, and values such as ethical or sustainable practices. Portfolio Management can be described as a continuous decision-making process where all the portfolio components are subject to periodic reviews to ensure alignment with the organization's strategy. These periodic reviews aim in responding to change brought by new opportunities or threats and can have two primary functions (ISO, 2015):

- *Generate new portfolio components*, that are evaluated, selected, prioritized, and authorized; or
- *Impact ongoing portfolio components*, that can be modified, accelerated, postponed, or terminated.

Portfolio management presents a structured and organized approach to achieve specific strategic results. These strategic results are the outcome of the organizational strategies and objectives that aim to establish and guide an organization's decisions, direction, purpose, and resource allocations to achieve targeted values. Therefore, the primary purpose of Portfolio Management is to create strong links between strategic planning and strategic business execution. By doing this, organizations can achieve greater organizational performance while improving resource utilization, exploiting new opportunities, and minimizing threats. In other

words, organizations become able to “do the right projects at the right time and in the right way” (ISO, 2015; PMI, 2017).

An organizational strategy is the primary input of any Portfolio Management process as it is used to identify, document, and evaluate any opportunities, threats, weaknesses, and strengths. The selected opportunities and threats can be further analyzed and supported in business cases that will justify one or more new portfolio components being initiated. Finally, the outputs of the portfolio components should deliver outcomes that will realize benefits for the organization and enable it to fulfill the strategic objectives that were initially planned (Figure 2.7) (ISO, 2015).

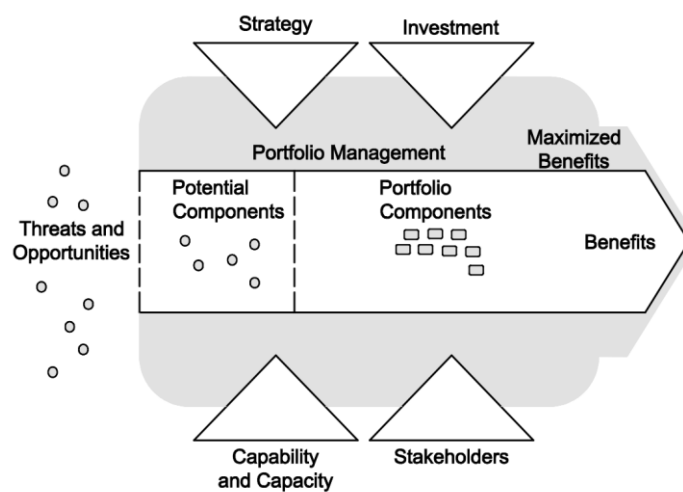


Figure 2.7 - Portfolio Management process overview within the organizational governance

As Figure 2.7 illustrates, a Portfolio Management process should enable an organization to (ISO, 2015):

- Optimize organizational capability and capacity;
- Ensure investment in portfolio components is aligned with the organization's strategy;
- Maximize benefits from investment;
- Identify and manage stakeholders' expectations;
- Provide visibility of portfolio component activity and status.

Finally, according to the PMI's standard, the following principles are core in a Portfolio Management process (PMI, 2017):

- Strive to achieve excellence in strategic execution;
- Enhance transparency, responsibility, accountability, sustainability, and fairness;
- Balance portfolio value against overall risks;
- Ensure that investments in portfolio components are aligned with the organization's strategy;

- Obtain and maintain the sponsorship and engagement of senior management and key stakeholders;
- Exercise active and decisive leadership for the optimization of resource utilization;
- Foster a culture that embraces change and risk; and
- Navigate complexity to enable successful outcomes.

2.3.2 Portfolio Strategic Management

Portfolio strategic management is an essential part of portfolio management. It aligns the organization's strategic management with portfolio management, enabling the actions of an organization to be closely aligned and consistent with the expectations of all the stakeholders. In other words, Portfolio Strategic Management is the practice that guarantees the correct match between the overall strategy and the programs/projects being undertaken in such a way that maximizes their value (ISO, 2015; PMI, 2017).

Portfolio Strategic Management should be treated as a two-way process, as it focuses not only on the continual monitoring of strategy and investment decisions at the executive level but also on providing feedback on the impact and viability of such strategic decisions and potential outcomes. In addition to this, a portfolio manager should also maintain a long-term vision that allows for the execution of sound practices of decision making, risk management, and value management, among other organizational considerations (PMI, 2017).

2.3.2.1 Portfolio Strategic Planning

Portfolio strategic planning consists of developing the portfolio strategic plan and aligning the strategic management of the portfolio with the organizational strategy and objectives (ISO, 2015; PMI, 2017).

Among other things, the portfolio strategic plan contains the critical components of the portfolio and is used to align the organization's vision, mission, and objectives with the portfolio components and intended outcomes. In other words, a portfolio strategic plan details how the organization intends to execute specific strategic initiatives that will enable the achievement of those goals and objectives (ISO, 2015; PMI, 2017). In addition, the portfolio strategic plan should also include the target metrics and performance indicators, allowing for controlling and monitoring the portfolio components' progress and strategic alignment (ISO, 2015; PMI, 2017).

Another critical factor to consider when designing the organization's different portfolio strategic plans is that realizing all the portfolio's outcomes should lead to accomplishing all of

the organization's strategic goals and benefits - and only the organization's strategic goals. In fact, portfolio initiatives that are not linked to realizing any specific strategic goal should be terminated (PMI, 2017).

The key inputs to develop the portfolio strategic plan are the organizational strategy, mission, vision, goals, and objectives, which will cascade down to the strategic initiatives (PMI, 2017).

2.3.2.2 From Strategic Vision, Mission, Goals, and Objectives to Strategic Initiatives

Vision and mission are statements of the organization's ambition. They should be single thoughts that can be easily understood and describe an organization's primary purpose and ultimate goal. The strategic vision statement describes what the company aspires to be, i.e., where the organization sees itself in 5 or more years. Whereas the strategic mission describes what the organization will do to achieve the vision, i.e., it defines the organization's present state and its approach for the next couple of years (PMI, 2017).

Goals are broad statements of what the organization should achieve, so they are linked to both the vision and the mission. Typically, goals are more qualitative statements rather than quantifiable targets, and they should always be understandable, suitable, acceptable, and flexible (PMI, 2017). Common examples of strategic goals are, among others:

- Grow market share;
- Improve customer satisfaction; or
- Improve profitability.

Objectives are more specific statements that address the primary challenges and drivers of the organization's strategy. They can be split into several categories, such as market position, customer satisfaction, profitability, and innovation. Strategic objectives should be quantifiable and validated using the following criteria (PMI, 2017):

- Is the objective feasible and achievable?
- Is the objective measurable and verifiable?
- Is the objective adaptable and flexible?
- Is the objective consistent with the rest of the strategic plan?

The SMART method is another typical and broadly used framework to develop effective and measurable objectives. SMART is an acronym for Specific, Measurable, Assignable, Realistic, and Time-related, which are the five main characteristics an objective should possess (Bjerke and Renger, 2017).

A typical example of a strategic objective produced according to the SMART approach could be *"increasing customer satisfaction by 20% in the western European market within the next 18 months"*.

Finally, strategic initiatives are the endeavors by which the organization plans to execute its strategy. These strategic initiatives are aggregated in portfolios of programs and projects that will move the organization to the envisioned future state. Typically, strategic initiatives are a combination of one or more of the following (PMI, 2017):

- New products or services,
- New business models,
- New capabilities,
- New markets and channels,
- New value creation opportunities, and
- Breakthrough platforms.

2.3.2.3 Portfolio Optimization

Portfolio optimization is the continuous practice by which an organization balances and optimizes its benefits, risks, and resources. It is a critical part of any effective organization as it ensures that supply (e.g., financial, human, and asset resources) is aligned with demand (e.g., projects, operations, and maintenance) (ISO, 2015; PMI, 2017).

Portfolio optimization should be a broad practice that sees across all the portfolio components. Its main ambition is to highlight all the dependencies and bottlenecks to promote synergies and leverage points and identify the most optimal bundling of projects (ISO, 2015; PMI, 2017).

However, some typical challenges frequently arise in portfolio optimization, such as (PMI, 2017):

- Misalignment between portfolios resources and objectives and strategies;
- Lack of access to quality data;
- Maxed out resources due to too much time wasted on too many low-value projects;
- Lack of agility in adapting to market changes; and
- Managing the cyclic impact of reprioritization or optimization.

Some remarks regarding portfolio optimization include (ISO, 2015; PMI, 2017):

- **Selecting and prioritizing the right components:** every component will likely have a different level of urgency and importance for achieving the organizational goals. Acknowledging and analyzing that is critical to select the higher-priority

components first and the lower after. As not all items can be quantified, management must be able to also use their insights into selecting and prioritizing;

- **Forecasting project portfolio costs:** tracking and monitoring all the costs is critical for the success of the portfolio and the organization. The portfolio managers should continuously monitor if the overall cost-benefit ratio keeps positive and take immediate action otherwise;
- **Keep executives and key stakeholders accountable:** As executives are most likely the ones who make business decisions, they must have continuous visibility on the portfolio components' status to make the best decisions for the organization.

2.3.2.4 Managing Strategic Alignment

Strategic alignment management is how managers accept and act on relevant strategic changes that impact the portfolio. Changes in strategy can be a regular occurrence, and they should be embraced naturally. Therefore, aligning organizational strategy and the portfolio outcomes and expected benefits should be a continuous endeavor (Figure 2.8) (ISO, 2015; PMI, 2017).

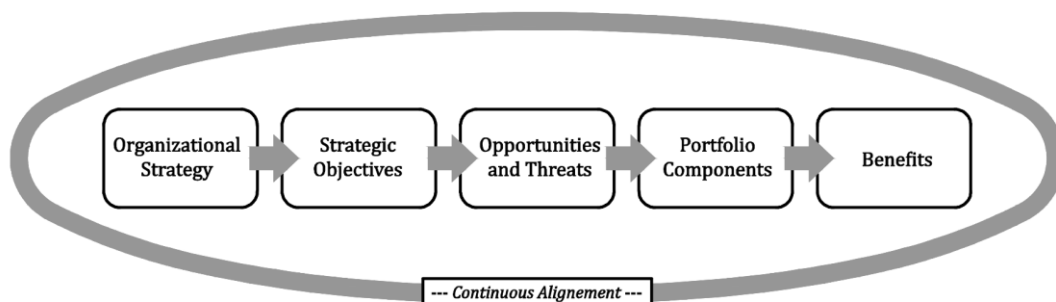


Figure 2.8 - Organizational strategy and portfolio benefits: continuous alignment

When strategic changes occur, managers should analyze the current activities and work being undertaken and identify the gap between the current and future states. After that, they determine what components should continue, change or close and which new components should be added (ISO, 2015; PMI, 2017).

2.3.3 Portfolio Capacity and Capability Management

The main goal of portfolio capacity and capability management is to align the capacity and capability demand with the organization's available resources to ensure the most successful and optimized execution of the portfolio (ISO, 2015; PMI, 2017). One of the main things that is important to understand correctly is the distinction between capacity and capability management, as both terms are relatively connected but refer to different things.

Capacity management is the process that identifies the types of resources needed and how many and when they are needed (PMI, 2017).

On the other hand, capability management is mainly responsible for addressing the main attributes, competencies, and skills of the available capacity to best support and fit with the portfolio's demand (PMI, 2017).

Therefore, capacity and capability management aims to determine the optimal balance between what the organization can potentially do, or its capability, and what the organization can do now, or its capacity, always maximizing resource utilization and minimizing conflicts for the portfolio execution (PMI, 2017).

In this context, capacity is the organization's ability to meet resource demand in a way that successfully executes the planned portfolio initiatives. These resource's demand can usually occur across four different manners (PMI, 2017):

- Human resources;
- Financial resources;
- Assets (physical assets such as office space, machinery, factory sites, etc.); and
- Intellectual capital (patents, copyrights, etc.)

Capacity management covers the following four elements (PMI, 2017):

- **Capacity planning:** consists of comprehending resource demand by analyzing portfolio's programs and projects and measuring them against the organization's available capacity of resources, guaranteeing that all portfolios can be successfully executed.
- **Supply and demand management:** this element entails two parts, the supply and demand analysis, and the supply and demand allocations.
 - The **supply and demand analysis** consists of comprehending the available capacity and capability (human, financial, assets, and intellectual capital) to best select, fund, and execute the portfolio's programs and projects.
 - The **supply and demand allocations** aim to balance supply against demand and occur when there is a prioritized list of all the portfolios components, the decision criteria, and the capacity and capability analysis. The resource allocations should strive to minimize both capacity underutilization and overutilization. Doing so is a complex and iterative process that significantly depends on the organization's structure. For example, in projectized organizations, which usually have resources dedicated entirely to project work, the process is much more straightforward than in functional and matrix organizations, where the labor resources are utilized for both project and operational work. Another factor that makes the allocation

process more complex is the bottleneck resources, which are those resources that are requested for many projects and exist in short supply.

- **Supply and demand optimization:** this element consists of continuously measuring and monitoring the resources to take immediate course corrections and adjustments during the portfolio execution. It should strive for an optimal balance between supply and demand and ensure that the expected portfolio value is maintained and maximized.
- **Reporting and analytics:** consists in identifying and analyzing data to support the portfolio decision making

To sum up, both ISO and PMI standards offer universal and valuable insights that can be used in any organization from any sector that wants to implement a portfolio management process. As for the insurance industry that this paper focuses on, there are plenty of successful examples of applying these standards.

2.4 Agile Portfolio Management

Agile has become an increasingly popular methodology and philosophy in several industries in the last years, namely the insurance one. It evolved from a new methodology of project management that was mainly popular in Information Technologies (IT) for software development to an all-new broader organizational philosophy that can completely reshape the way organizations structure and organize themselves.

In Annex A there is an introduction on Agile and its main characteristics. Namely, the annex includes the Agile Manifesto and its principles, the Agile roles and main ceremonies according to the Scrum methodology, and the most commonly used Agile methodologies.

In this section, the subject of Agile Portfolio Management is approached by briefly reviewing the most popular frameworks for scaling Agile, namely SAFe (Scaled Agile Framework), LeSS (Large-Scale Scrum), and DAD (Disciplined Agile Delivery). Following that, there is a deep-dive on Horlach et al. design goals and principles for Agile Portfolio Management (Horlach et al., 2019).

2.4.1 Agile Scaling Frameworks

The most common Agile Scaling Frameworks are SAFe (Scaled Agile Framework), LeSS (Large-Scale Scrum), and DA (Disciplined Agile). Hereafter, a brief explanation of all three will be given.

2.4.1.1 SAFe - Scaled Agile Framework

The Scaled Agile Framework (SAFe) was created in 2011 by Dean Leffingwell to scale agile in large enterprises. SAFe is a knowledge base of integrated competencies, principles, and practices for achieving business agility using Lean, Agile, and DevOps ("SAFe," 2021).

Business agility is critical to compete and thrive in the digital age. It consists of quickly developing innovative and digitally-enabled solutions that respond to market changes and emerging opportunities. In addition, business agility needs to be transversal to an entire organization and involve everyone from business to technology and support ("SAFe," 2021).

Lean is the set of fundamental conceptions and activities that can be applied to generate "value" and reduce "waste." Value is "something that, from the customer's perspective, is worth paying for" (LeMahieu et al., 2017). On the other hand, waste is conceptualized as "any activity that absorbs resources but creates no value" (Womack and Jones, 1997), meaning that waste and value are opposite to each other.

At its core, SAFe has four central values: alignment, built-in quality, transparency, and program execution. In addition, SAFe describes seven core competencies that are the basis for its implementation ("SAFe," 2021):

- **Agile Product Delivery:** Build high-performance teams-of-teams that use customer-centricity and design thinking to provide a continuous flow of valuable products using Release on Demand and DevOps;
- **Continuous Learning Culture:** Become a learning organization committed to improvement and innovation that continually increases knowledge, competence, and performance;
- **Enterprise Solution Delivery:** Build and sustain the world's most significant software applications, cyber-physical solutions, and networks;
- **Lean-Agile Leadership:** Advance and apply Lean-Agile leadership skills that drive and sustain organizational change by empowering individuals and teams to reach their highest potential;
- **Lean Portfolio Management:** Execute portfolio vision and strategy formulation, chartering portfolios, creating the Vision, Lean budgets and Guardrails, as well as portfolio prioritization and roadmapping;
- **Organizational Agility:** Align strategy and execution by applying Lean and systems thinking approaches to strategy and investment funding, Agile portfolio operations, and governance;
- **Team and Technical Agility:** Drive Agile team behaviors as well as robust technical practices such as Agile testing, Test-Driven Development (TDD), Built-in Quality, and more.

These seven competencies derive in three dimensions each, contributing to a total of twenty-one dimensions that enable business agility (Figure 2.9) ("SAFe," 2021).

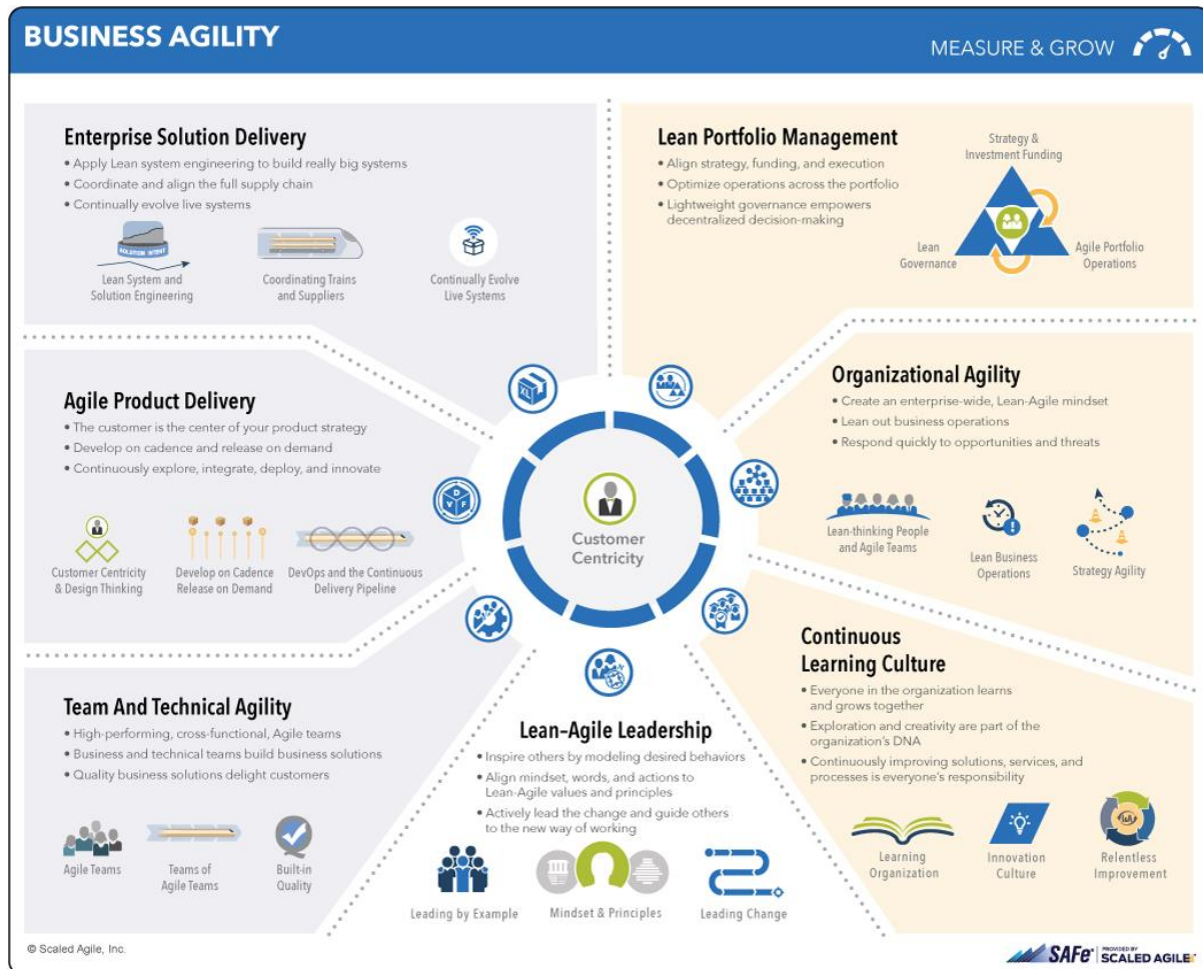


Figure 2.9 - SAFe's seven core competencies overview

As a result, SAFe has four different configurations depending on the level of implementation. They are, from the smallest to the largest: Essential SAFe, Large Solution SAFe, Portfolio SAFe, and Full SAFe. The most relevant configuration to consider for this paper is the Portfolio SAFe, which will be briefly analyzed.

SAFe considers that the existing traditional approaches to portfolio management do not cope with the increasing impact of digital disruption. Today, portfolio management practices need to deal with the higher degree of uncertainty organizations face and the need to deliver innovative solutions faster.

Portfolio SAFe is the minor configuration that can be used to achieve Business Agility. It is greatly dependent on the Lean Portfolio Management competency, which aims in aligning strategy with execution through three different dimensions ("SAFe," 2021):

- **Strategy and investment funding:** ensuring that all the portfolios are strategically aligned and funded to develop and sustain the solutions identified to meet the business targets;
- **Lean governance:** managing expenses, compliance, and audit;
- **Agile portfolio operations:** coordinating and supporting a decentralized program execution, fostering operational excellence.

A SAFe portfolio identifies and manages the development value streams, ensuring that their execution is aligned with the organization's strategy. A development value stream is an end-to-end provider of one or more solutions that the organization needs to accomplish its strategic mission. All value streams operate under common governance and have specific Lean Budgets ("SAFe," 2021).

The Portfolio SAFe configuration has five highlights ("SAFe," 2021):

- **Development Value Streams:** Every value stream must fund the people and resources necessary to build solutions that deliver value to the internal or external customer (Figure 2.10);
- **Lean Budgets:** It is an alternative to traditional budgeting and project cost accounting methods. Lean Budgets fund value streams instead of projects, allowing for fast and empowered decision-making, with appropriate financial control and accountability through guardrails (Figure 2.10);

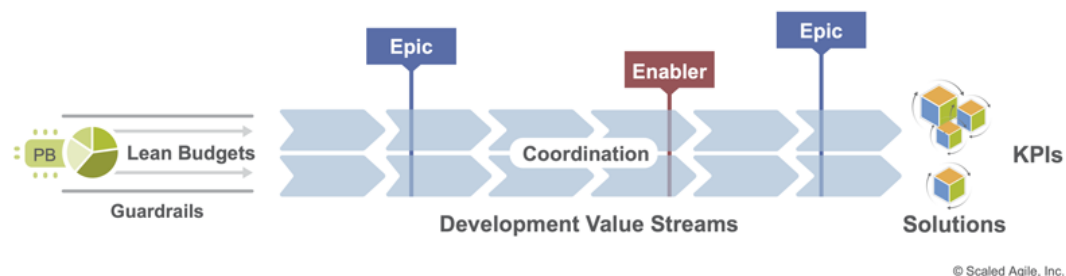
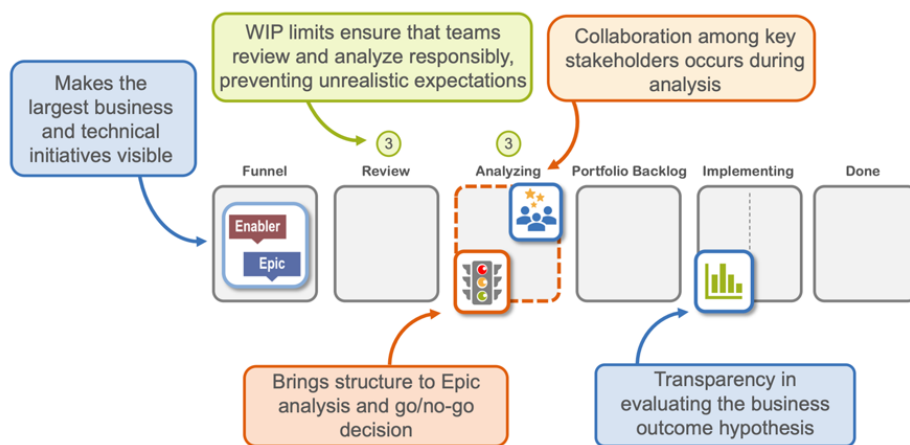


Figure 2.10 - Development value streams in a SAFe Portfolio

- **Portfolio Kanban:** The portfolio Kanban system makes the work visible by visualizing and managing the flow of Portfolio epics from ideation until completion. It uses Work-in-Progress (WIP) limits to guarantee that demand is matched to the actual capacity of value streams (Figure 2.11);



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Figure 2.11 - Benefits and structure of the portfolio Kanban system

- **Portfolio Vision:** The portfolio Vision describes the future state of a portfolio's Value Streams and solutions. It describes how they will cooperate to achieve the portfolio's objectives and the broader strategic vision of the organization;
- **Portfolio Canvas:** It is based on the Business Model Canvas and provides essential inputs for the Portfolio Vision, Portfolio Backlog, and Lean Budgets

A SAFe portfolio has three prominent roles in achieving significant levels of accountability and governance ("SAFe," 2021):

- **Lean Portfolio Management (LPM):** The individuals with the highest level of decision-making and financial accountability for a SAFe portfolio;
- **Epic Owners:** Responsible for coordinating the portfolio Epics through the portfolio Kanban system;
- **Enterprise Architect:** Individual who works across value streams to help provide the strategic technical direction to optimize portfolio outcomes.

A SAFe portfolio has three events that support the alignment between strategy and execution ("SAFe," 2021):

- **Portfolio Sync:** This event aims to provide visibility into the portfolio progression towards its strategic objectives. It may include reviewing value streams and program execution;
- **Participatory Budgeting:** This event consists in dimensioning the investments in value streams and supports the approval process of epics in the portfolio Kanban;
- **Strategic Portfolio Review:** This event aims to enable LPM to: create alignment and investment guidance to inform quick, high quality, and decentralized decisions; adapt to respond to new and changing needs or opportunities effectively.

The strategic intent of the portfolio solutions is best described by the following artifacts ("SAFe," 2021):

- **Strategic Themes:** Provide specific, itemized business objectives that link the portfolio to the evolving enterprise business strategy;
- **Guardrails:** Describe the portfolio's practices and policies for lean budgeting, spending, and governance;
- **Business Epics:** Captures and reflect the new business capabilities that the value streams must provide;
- **Enabler Epics:** Reflect the operational capabilities, such as architectural, technological, or business process initiatives, that are necessary to enable new features and capabilities;

Multiple companies have adopted SAFe in the last years, especially in the software-intensive industry. In an article about the major benefits and challenges of adopting SAFe, Putta et al. identified as benefits: the transparency, alignment, productivity, predictability, and time to market; and as challenges: change to resistance, challenges with the first program increment planning and moving away from agile (Putta et al., 2018)

2.4.1.2 Large-Scale Scrum (LeSS)

Craig Larman and Bas Vodde developed LeSS (Large-Scale Scrum) to respond to an increasing need to apply Scrum to large, multi-site product development. Therefore, they created LeSS a framework to apply the principles and elements of Scrum in a large-scale context and in a simple way. LeSS is Scrum (Larman and Vodde, 2016a):

- **...applied to many teams:** cross-functional, multidisciplinary, full-skilled feature teams of three to nine people focused on learning and with all the capabilities necessary for the full development;
- **...working together:** the teams work together because they aspire to deliver one common shippable product at the end of a typical Sprint;
- **...on one product:** a comprehensive, complete end-to-end customer-centric solution that real customers use, and not a component, platform, or layer.

Learning and applying LeSS to an organization is, as in Scrum, an imperative and iterative process. There are not a set of "best practices" to apply LeSS, as practices are situational and calling them "best" may turn them into fixed rituals that do not promote learning, questioning, and continuous improvement. Therefore, instead of best practices, in LeSS, there are a set of Experiments, Guides, Rules, and Principles that can be analyzed with an empirical and challenging mindset (Larman and Vodde, 2016a).

In LeSS, ten principles should be the basis for understanding how to apply it in each specific context (Larman and Vodde, 2016a) (Figure 2.12):

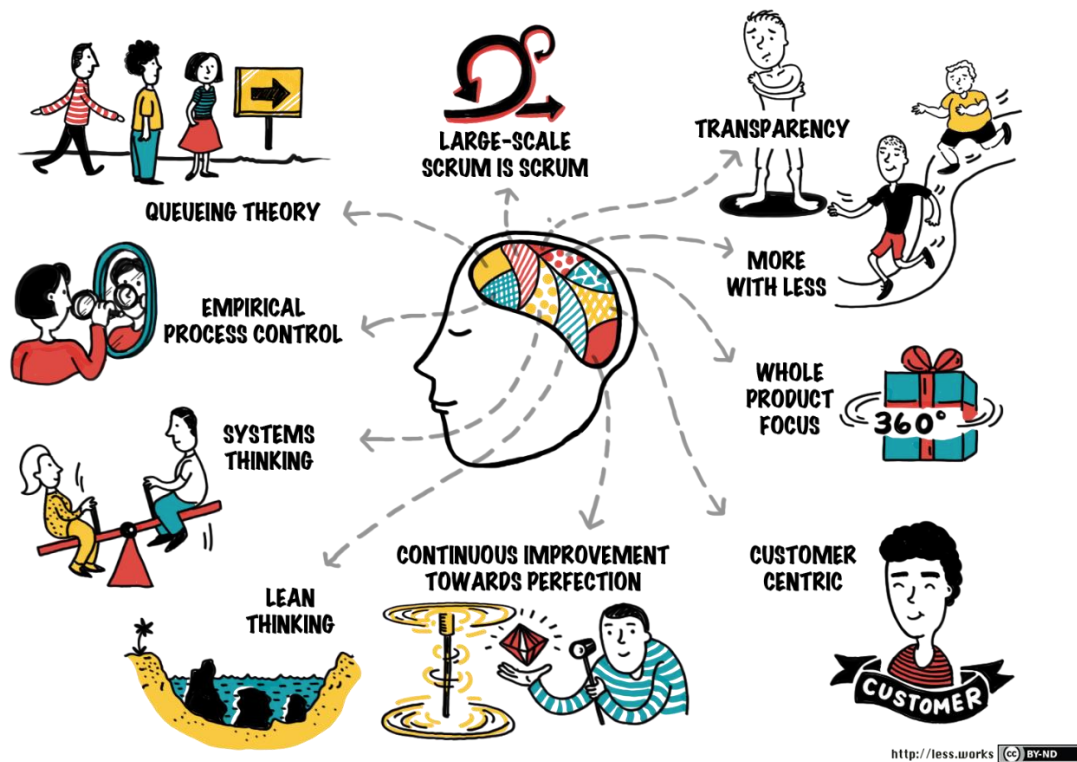


Figure 2.12 - Ten principles of LeSS

- **Large-Scale Scrum is Scrum:** LeSS is not a new or improved version of Scrum. Instead, LeSS aspires in assessing how to apply the principles, elements, rules, and purpose of Scrum in a large-scale-context, in the simplest way;
- **Transparency:** based on tangible definitions of "done" items, short cycles, working together, standard definitions, and elimination of any fear in the workplace;
- **More with less:** LeSS wants less roles to have more responsible teams, less artifacts to diminish the distance between teams and customers and have more customer-centered teams and products, less processes to have more team ownership and learning. LeSS wants more with less;
- **Whole-product focus:** LeSS only has one Product Backlog, one Product Owner, one shippable product, and one Sprint, no matter the number of teams. This is to guarantee the product is cohesive and functional to the client, instead of impractical and in separated parts;
- **Customer-centric:** the focus is on the clients. Understanding and solving their real problems, identifying where they see waste and payable value, reducing their wait time, increasing feedback loops with them. Everyone should understand and know how their work benefits and relates to the client;

- **Continuous improvement towards perfection:** LeSS describes perfection as "Creating and delivering a product almost all the time, at almost no cost, with no defects, that delights customers, improves the environment, and makes lives better. Do endless humble and radical improvement experiments toward that goal.";
- **Lean thinking:** create an organization with managers-as-teachers that apply and teach lean thinking by managing to improve, promoting stop-and-fix, and practicing Go See. Have as pillars the respect for people and the continuous improvement and challenging mindset;
- **Systems thinking:** focus on seeing, understanding, and optimizing the whole system instead of parts. Avoid local sub-optimizations of individuals or individual teams that customers do not value, as locally optimizing a part almost always sub-optimizes the whole;
- **Empirical process control:** continually inspect and adapt the product and the processes looking for appropriate improvement opportunities. Prefer the empirical learning and improvement, rather than strictly following best practices that ignore context and diminish people's sense of engagement and ownership;
- **Queuing theory:** understand how queuing systems behave in the R&D area and enhance the management of queue sizes, WIP limits, variability, and multitasking.

There are two frameworks in LeSS: LeSS for 2-8 teams, and LeSS Huge for more than eight teams. However, these two frameworks share some common elements such as (Larman and Vodde, 2016a):

- one Product Owner and one Product Backlog;
- one common Sprint across all teams; and
- one shippable product increment.

As the LeSS frameworks are not entirely connected to this paper's Portfolio Management domain, they will not be reviewed. Instead, LeSS is more connected with the product development domain, particularly when requiring more than one team working on a single product. LeSS gives two frameworks for these situations that help those teams do a cohesive and functional product that is greatly valuable to the client.

Nevertheless, many of the principles and overall mindset that LeSS has are highly valuable for designing a Portfolio Management process.

2.4.1.3 Disciplined Agile (DA)

Disciplined Agile (DA) has been successfully applied in several industries, including the insurance industry. DA is not a framework. Instead, it is a "tool kit" composed of several Agile, Lean and traditional strategies that guide organizations and teams into their best ways of

working (WoW) (PMI Disciplined Agile, 2021a). As in LeSS, DA does not prescribe a set of "best practices." Instead, it teaches and trains how to choose and evolve a purpose-driven WoW that is best suited to the organization's context (PMI Disciplined Agile, 2021b).

In this sense, DA shows how multiple business functions such as Portfolio Management, Finance, Software Development, IT Operations, Enterprise Architecture, among others, work together (PMI Disciplined Agile, 2021b). In this paper, a more in-depth review will be made on how DA describes Portfolio Management and the major topics it should address.

The Disciplined Agile Portfolio Management describes how an organization can identify, prioritize, organize and govern its various initiatives in an effective and streamlined way that maximizes value creation.

To start, DA describes a set of philosophies that represent the core of the mindset behind effective Portfolio Management. They are as follow (PMI Disciplined Agile, 2021c):

1. Value first, cost second
2. Minimize the cost of delay
3. Invest in streamlining value creation
4. Prefer stable teams over project teams
5. Align teams to value streams
6. Govern by risk, not by artifacts
7. Rolling wave over annual planning
8. Prefer small initiatives over large initiatives
9. Invest in quality

These philosophies are critical and contribute to a more effective Portfolio Management process. In particular, the importance of having stable teams over project teams has been proved to be critical as having long-lived stable teams, whose team members' capabilities and membership evolves over time, has significant advantages over short-lived project teams. Furthermore, these advantages are also maximized if the teams are aligned with value streams or lines of business (LoBs). This stable relationship between the team developers and the business owners increases mutual trust and knowledge from both sides, enhancing effectiveness (PMI Disciplined Agile, 2021c).

The philosophy "Rolling wave over annual planning" is also quite relevant for Portfolio Management. This philosophy entails the importance of not having an extended plan (often up to 18 months) that is not agile and quickly gets obsolete. Instead, DA states that only initiatives no longer than six months out should have a more detailed plan, while the others beyond six months should be described at a more high level. In addition, there should be a preference for small initiatives over large ones. Larger initiatives should be avoided as they have a higher

risk of failure, are more challenging to plan and execute, have less frequent delivery of value, and have more investment in work in process (WIP) (PMI Disciplined Agile, 2021c).

Portfolio Management is a critical and transversal function, and it connects with several other parts of the organization. DA calls these other parts *process blades* (PMI Disciplined Agile, 2021d). Figure 2.13 illustrates the high-level workflow between Portfolio Management and the several process blades, depicting the primary information flows - feedback loops are assumed and not presented in the Figure.



Figure 2.13 - The external workflow of portfolio management

These activities are often highly related to each other, and it is expected that some of them might be fulfilled by a single team. For instance, portfolio management and governance are often executed by the same group of people in some organizations (PMI Disciplined Agile, 2021d). In addition, the Figure only focuses on showing the connections between the process blades and portfolio management, but the process blades are obviously also connected to each other. For example, strategy is intrinsically connected with product development, enterprise architecture, or finance, and the teams should also have a high focus on continuous improvement.

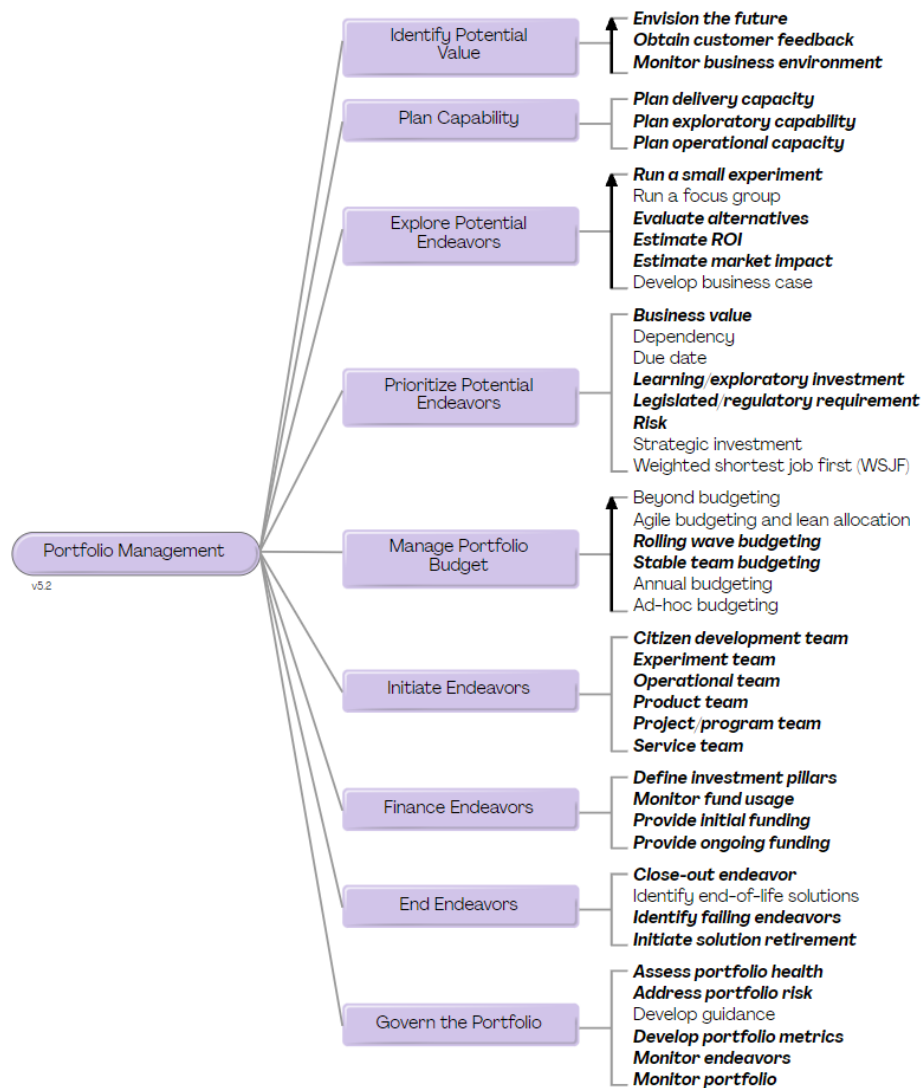


Figure 2.14 - The portfolio management process diagram

Figure 2.14 displays the several potential activities that can be associated with DA Portfolio Management.

All of these activities are critical and can be approached in several manners. For example, some organizations may perform these activities in a more centralized way, and others may disperse them through different teams and units across the organization.

One characteristic of DA that is also common with the other Agile scaling frameworks is its approach to portfolio budgeting. DA moves way from the traditional, inaccurate, and risky annual budgeting that most companies apply and suggests a rolling wave approach to budget planning that evolves as companies' needs and means evolve. Additionally, DA proposes a budget that funds stable teams and value chains instead of time-bound projects (PMI Disciplined Agile, 2021e).

As most companies do not have unlimited budgets, DA also highlights the importance of prioritizing when selecting potential endeavors. However, prioritization is a complex process, and several factors can influence it. Therefore, there is no single approach for prioritizing that will work in all situations (PMI Disciplined Agile, 2021e).

2.4.2 Design Goals and Principles for Agile Portfolio Management

In their paper *Agile Portfolio Management: Design Goals And Principles*, Horlach et al. approach the need to achieve agility with portfolio management. They derive four design goals for an effective agile portfolio management process and six design principles on how to achieve those goals (Horlach et al., 2019). This approach was included in this literature review since it can be applied in several areas but is more prominent in service industries such as insurance.

Horlach et al. state that the existing approaches to coordinate several agile teams and projects via a portfolio (e.g., SAFe or LeSS) provide relatively rigid frameworks as one size fits all solutions. However, not only might this not be the case for every organization but also the authors consider that the existing frameworks disregard some critical aspects such as the agility's systemic and proactive nature or the intertwining of business and IT logic for project development. Therefore, their paper aims to answer the question: "Which principles do apply for an effective portfolio management system to achieve agility?"

The four design goals are requirements for having an agile portfolio management. However, they do not exclude other traditional portfolio management goals such as optimal resource allocation, solving resource interdependencies and conflicts, or ensuring compliance.

The first design goal (DG1) is having a **portfolio management process based on customer value**. This goal is achieved through two dimensions:

1. A value fit between need, idea, and portfolio demand; and
2. A value fit between the portfolio decision and the required service/ product.

Achieving this design goal requires having purposeful portfolio decisions based on a deep knowledge of the customer value and integrating that knowledge when developing services or products. Many companies do this by, for example, integrating customer journey experts or data analysts in their project/product teams.

Since customer value is a volatile concept that can change rapidly, agility and speed in responding to change are essential in a portfolio management process. Therefore, the second design goal (DG2) is having a **time-efficient portfolio elicitation and management process**. This goal derives into two sub-goals:

1. Realizing portfolio items in adequate time; and
2. Refining portfolio items in adequate time.

Meeting this goal implies that the traditional annual long portfolio management processes no longer apply, and they should be replaced by shorter cadences such as quarterly business reviews or cycles.

In this changing and unpredictable environment, it is critical for every portfolio management process to continuously manage and rebalance its resources and capabilities. Thus, the third design goal (**DG3**) is having an **efficient setup of allocation processes** with a:

1. Flexible and adaptable resource allocation; and a
2. Flexible and adaptable budget allocation.

Flexibility implies the scalability of capabilities, and organizations need to ensure that they are set up in a way that enhances resource flexibility. In addition, budget allocation also needs to be faster and more adaptive to handle the flexibility that portfolio management processes need.

As digitalization continues to increase and digital services continue to proliferate, there is an increasing need to have an even deeper understanding between IT and business. Therefore, the fourth and last design goal (**DG4**) of an agile portfolio management process is having a **continuous alignment between business and IT**. Two fundamental practices should be in place to achieve this goal:

1. Shared awareness of services' interdependencies; and
2. Continuous shared commitment and contribution to the capabilities of the organization.

These two practices are fundamental for establishing new mindsets, processes, and structures that enhance problem-solving and reduce the lack of collaboration and understanding between business and IT.

After these four design goals, Horlach et al. describe six design principles (DP) as the underlying logic of an effective agile portfolio management process. They are the following:

- **DP1: Have a customer solution-driven portfolio management.** This design principle is related to the first design goal (DG1) and illustrates the need for portfolio management to continuously deliver customer value while having unpredictability and limited information.
- **DP2: Have a decentralized, multi-level and cross-functional portfolio governance body.** Agile portfolio management cannot be a traditional top-down process with a dedicated corporate portfolio team separated for business and IT. As any decision must know the local context, recurring and time-critical decisions must be

decentralized and managed by the teams at the operational level. Instead, the corporate level should focus on making high-impact, long-lasting and critical decisions. This high decentralization makes it essential to guarantee information sharing and continuous alignment between all hierarchical levels.

- **DP3: Have an aligned autonomous portfolio decision-making.** The selection and prioritization of topics within the solutions should be made autonomously by the teams to enable a speed reaction to customer needs. However, teams must be aligned with the upper central enterprise vision and strategic plan. To ensure "aligned autonomy," many organizations measure their teams via bottom-up and self-defined objectives and key results (OKRs). With OKRs, each team establishes quantifiable key results that are aligned and contribute to an identified objective derived from the enterprise vision. In addition, multiple teams contributing to the same solutions are grouped under the same *Purpose* to optimize the whole solution instead of local enhancements and align all actions to a common direction. Moreover, the Purpose demonstrates that each team member's work has an impactful contribution to the organization, strengthening the commitment to the team and the company as a whole.
- **DP4: Develop synchronized short portfolio cycles.** With the decentralization of decision-making, synchronization is helpful to minimize uncertainty and ensure a flexible resource (re)allocation to solutions. Therefore, the organization-wide enterprise planning and monitoring cycles should occur in a cadenced and synchronized way. In this sense, many companies opt for short quarterly synchronization cycles that minimize decision-making waiting times and leave time for teams to work in peace in their streams.
- **DP5: Align portfolio management with other strategic management processes.** Aligning portfolio management with other organizational strategic processes is vital not to inhibit speed and flexibility. Core strategic processes such as budget, strategic planning, and investment may slow down the organization due to their complexity. Therefore, these processes should undergo a transformation towards agility themselves. As mentioned already in SAFe and DA, budgeting processes are changing their nature by having faster, simpler, and more efficient allocation processes. For instance, budgeting teams instead of individual projects is a good strategy that enhances teams' autonomy and flexibility in managing their own budget.
- **DP6: Integrate innovation management capabilities in the portfolios.** Actively enforce all teams in being innovative and having their "ear to the customer." Having good customer data allows for a fact-based decision on pursuing the innovation or not. This eventually will lead the organization to deliver more valuable and

innovative solutions to its clients. Many companies have allowed teams to dedicate a share of their work time to their own ideas and are gaining more and better results. As these ideas may be valuable for the whole organization and business success, it is essential to establish insights exchange between teams and portfolios.

2.5 Comparative Analysis and Research Question definition

This section will conclude this literature review by delivering a short recap and comparative analysis of the different theoretical topics addressed. Based on that, the main research question for this dissertation will be drawn.

This literature review can be divided into two major parts. First, there was a review of the existing literature on applying Agile and Portfolio Management in the insurance and banking industry (section 2.2). Since this existing literature offered limited guidance and was majorly focused on banking instead of the insurance industry, a second part was developed to study Portfolio Management and Agile topics more broadly and not only focusing on the two financial industries (sections 2.3 and 2.4).

Regarding the application of Portfolio Management (PM) in the insurance and banking industries, it was found that having a robust PM process in place is of most importance to maximize an insurer's performance. In this sense, PM strongly supports an insurance company in defining, selecting, and monitoring its strategic initiatives in an organized and efficient manner.

Prioritization and adaptability were also described as significant attributes of PM systems. PM frameworks can embody robust prioritization methodologies that evaluate all initiatives qualitatively and quantitatively, ensuring that the best ones are chosen right from the beginning. In addition, PM processes have cyclic revisions that enable a cadenced refocus and (re)selection of the most impactful strategic initiatives. These priority reviews enable the organization to rapidly respond to changing conditions and guarantee that everybody keeps following the same strategic direction.

Regarding the application of Agile in the insurance and banking industries, one of the main analyzed topics was the concept of ambidexterity. Ambidexterity is the cause of failure for many companies transforming to Agile as they cannot manage changeability and agility without losing stability and structure. However, embracing agility should not bring this kind of

paradoxical tensions, as the Agile methodologies are in their essence ambidextrous. Nevertheless, no single solution works for every insurer or bank. Therefore, the challenge is in correctly understanding each organization and discovering the correct way to transform to Agile without causing this kind of paradoxical tensions.

In addition to ambidexterity, many other fundamental aspects of achieving agility in the insurance industry were described. However, changing people's mindset and culture can probably be named as the most challenging aspect of agile transformations. It is a long and arduous endeavor that can only be accomplished in a top-down and bottom-up effort that reaches all levels of the organization.

After this review on the insurance and banking industries, a broader analysis was developed on the Portfolio Management standards and Agile Portfolio Management frameworks.

The standards analyzed (ISO TC/258 - ISO 21504:2015 and PMI's *The Standard for Portfolio Management – Fourth Edition (2017)*) are adopted globally by many organizations from all industries and provide a solid basis to any company wanting to establish a portfolio management process. However, they do not detail particular solutions as they aim to be applied universally in any organization. Instead, they provide a more high-level approach to several vital topics of Portfolio Management such as portfolio strategic planning and alignment, portfolio optimization and prioritization, capacity and capability management, among others.

Several Agile scaling frameworks such as SAFe, LeSS, and DA were also analyzed. These frameworks aim to provide methods and structures for organization-wide agile transformations and do not solely approach the intended topic of Agile Portfolio Management. However, all three offer interesting insights for developing a portfolio management process with agile principles. For instance, they all describe Lean and the optimization of customer value as one of the fundamentals for any successful company. Agile portfolio management processes need to consider this and not suffocate the organizations with overly bureaucratic processes that decrease teams' autonomy, slow the organization, and bring no considerable added value for the customer. In this sense, SAFe, for instance, provides a framework where high-performance teams-of-teams are created in a customer-centered manner that maximizes and optimizes the value streams of solutions provided to the clients. In addition, these value streams have increased autonomy as they are funded holistically and not through traditional budgeting and project cost accounting methods.

Finally, Horlach et al.'s paper *Agile Portfolio Management: Design Goals And Principles* was also reviewed. In contrast with the previously mentioned frameworks, these design goals and principles are specific to Agile Portfolio Management and offer some remarkable insights. However, many of these insights are also shared by the other frameworks. For example, they all share key concepts like customer centricity, budgeting teams instead of projects, and strongly aligning IT and business development.

Nevertheless, Horlach et al. provide some unique insights for achieving agility in portfolio management. For instance, they describe OKRs (Objectives and Key Results) and Purposes as two valuable artifacts for an agile portfolio management process. OKRs help an organization achieve the problematic "aligned autonomy" by empowering teams to set their own Key Results that will enable the organization to achieve an overarching Objective derived from its strategy. In addition, Purposes are a helpful way of aligning different teams contributing to the same solution. They also strengthen the commitment of each team member by demonstrating the individual impactful contribution that each one has to the organization.

In conclusion, several insights and best practices were collected with this literature review. However, there was no clear and direct answer for the main objective of this dissertation, which is developing an agile portfolio management process suitable for an insurance company. Therefore, the main research question that imposes is:

- *What could be an agile portfolio management model aligned with the standard practices and suitable for an insurance company?*

In other words, this research question seeks to understand what would be a portfolio management model suitable for insurance companies that follows the portfolio management standards (ISO TC/258 - ISO 21504:2015 and PMI's *The Standard for Portfolio Management – Fourth Edition (2017)*) and the agile principles.

Following this State of the Art, this dissertation will seek to answer this research question by designing a new agile portfolio management model, the ABP - Annual Business Planning. This model will then be implemented and evaluated in Fidelidade, a leading insurance group operating in the Portuguese market.

RESEARCH METHODOLOGY

In order to answer the previously mentioned research question, a case study was performed in the biggest insurance group operating in Portugal, Fidelidade. This chapter will describe the research methodology chosen to answer the research question and explain why the case study was considered the most suitable research strategy for addressing the problem.

The development of the research methodology was based on the "research onion" from Mark Saunders, Philip Lewis, and Adrian Thornhill (Figure 3.1) (Saunders et al., 2018). This research onion is commonly used in business and management research studies. It has several layers that describe the several choices a researcher must make when choosing his or her research design. There are six layers in the "research onion": philosophy, approach to theory development, methodological choice, research strategy, time horizon, and techniques and procedures. This research methodology will follow these six layers from outside into the center.

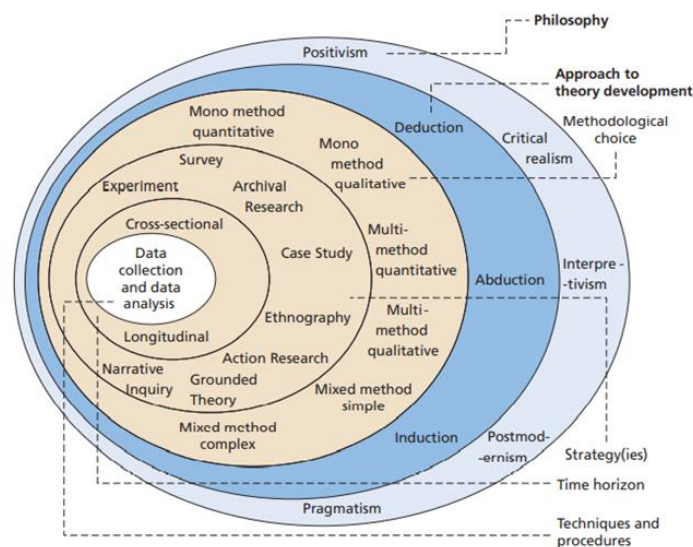


Figure 3.1 - Saunders's "research onion"

3.1 Research philosophies: pragmatism

The research philosophy entails the set of beliefs and assumptions that the author has on developing knowledge. These assumptions can be about the realities the researcher encounters in his or her research (ontological assumptions), about human knowledge (epistemological assumptions), and about the influence that the researcher values have on the research process (axiological assumptions) (Saunders et al., 2018).

With that being said, the first layer of the "research onion" presents the five main philosophical currents in business and management: positivism, critical realism, interpretivism, postmodernism, and pragmatism. Each of these philosophies has a specific approach to the ontological, epistemological and axiological assumptions that the researcher takes.

In order to gain more confidence in understanding which philosophy best suits the author's style, the HARP questionnaire (Heightening your Awareness of your Research Philosophy) was taken. This questionnaire is a reflexive tool designed by Bristow and Saunders that helps researchers explore their research philosophies and indicates where their views are similar or different from the five major philosophical traditions (Saunders et al., 2018).

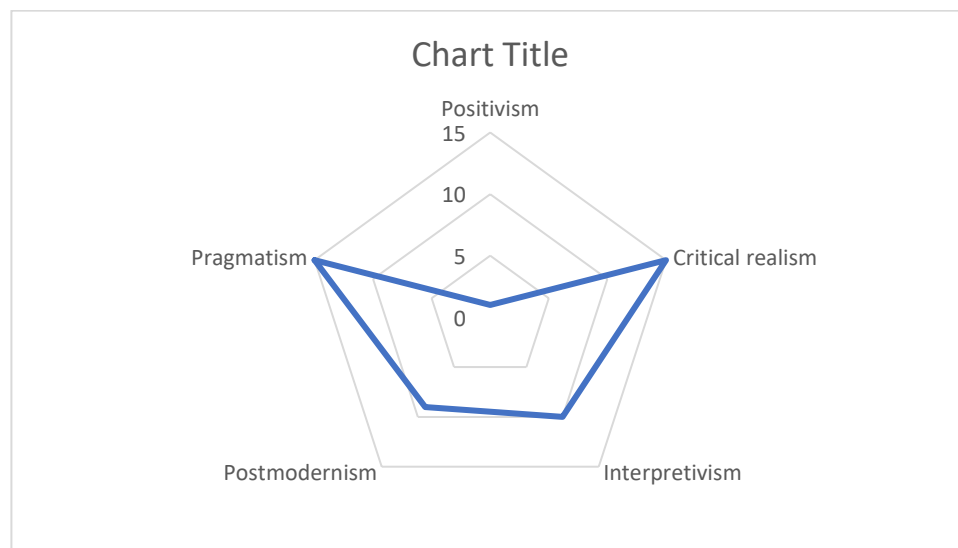


Figure 3.2 - Radar graph on the author's HARP scores

As shown in Figure 3.2, the author is not inclined to a positivist philosophy and finds his views more similar to the philosophies of pragmatism and critical realism. These philosophies are suitable for a case study research strategy, particularly, critical realism usually underpins the chosen orthodox case study methodology, which will be described after. Moreover, being pragmatic implies valuing concepts and theories only when they support action, which is most

important when developing a case study in a company that expects to gain some practical added value with the research process. In other words, pragmatists seek to guarantee that the research actually makes a difference to organizational practice and does not focus only on constructing theories and concepts. Therefore, this research methodology is characterized by having both a subjective and objective approach that focuses on answering the research question and contributing practical solutions that will inform future practice.

In addition, despite having a lower score on the HARP questionnaire, the author also believes that interpretivism is a relevant theory when developing a case study. Interpretivists strive to gain a solid (and perhaps subjective) knowledge of the unique and complex reality in which the research is being developed, which is very important when developing a case study in a company. In this case, the author sought to fully understand Fidelidade and all its processes, structure, and culture when developing his research.

To conclude, this research is predominantly influenced by the pragmatism philosophy since there was a clear intention throughout the research process to influence organizational practice and not focus only on constructing theories and concepts. However, the author recognizes that his views are also similar to the previously described critical realism and interpretivism philosophies.

3.2 Approaches to theory development: abduction

There are three main approaches to theory development: deduction, induction, and abduction (Saunders et al., 2018).

Deduction follows a theory-to-data approach that is typically very structured, quantifiable (measurable), and universal (instead of context-specific). Deductive approaches derive conclusions from a set of theory-derived premises, being the conclusion true when all the premises are true.

On the other hand, induction follows a data-to-theory approach that is usually more open and less rigid, qualitative, and context-specific (small samples over large). Furthermore, in inductive reasoning, there is a "gap" in the logical process between the conclusion and the premises that causes the conclusion to be "judged" based on the observations made.

Finally, abduction combines deduction and induction with an approach that moves from data-to-theory and theory-to-data back and forth. Abduction is generally underpinned by the previously mentioned philosophies of critical realism and pragmatism and was the chosen approach for this research methodology.

Abduction was considered a suitable approach because it is typically used in the research of topics where there is a wealth of information in one context but far less in another specific one, enabling the researcher to modify an existing theory. As the literature review demonstrates, this is the scenario of this dissertation's fields of research. The literature review found that there is currently some knowledge and information in applying Agile Portfolio Management broadly, but there is not much literature regarding the specific context of the insurance sector.

Generally, in abduction approaches, data is used to create or modify an existing theory that is then tested, typically through additional data collection. The approach taken in this research project was relatively similar, and the abduction process was made across three main phases. First, there was a collection of data from the literature review. Then, this data was used in the induction of a theory, which was the design of a new agile portfolio management model. Finally, some additional data was collected through the implementation and evaluation of the model. The combination of the three phases of the process enabled answering the research question (Figure 3.3).

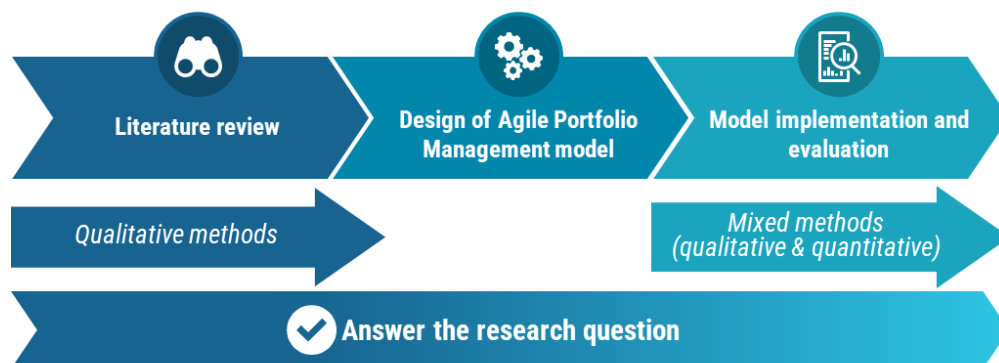


Figure 3.3 - Three phases of the research process

3.3 Methodological choice: mixed methods

Choosing the correct methodology is critical as it will influence the entire research design and, consequently, how the research question is answered. There are three major types of methodologies for the research design: quantitative, qualitative, or mixed (Saunders et al., 2018). This research was done with a partially integrated mixed methods research approach that used qualitative methods first and then applied both qualitative and quantitative methods concurrently.

This choice is coherent with the chosen philosophies as mixed methods are often associated with pragmatism and critical realism. However, choosing a pragmatist approach did not

necessarily mean that this research must use mixed methods. Instead, it means that the choice of the research design was majorly influenced by the research question nature, the research context, and the research consequences for the literature and the company. In other words, the methods and means used were those that best enable reliable and relevant data to be collected to address the research problem.

As Figure 3.3 demonstrates, the first phase of this research had both an exploratory and descriptive purpose. By performing a literature review, it was possible to explore and collect relevant data on the main theories of this research project.

Following this initial exploratory phase, the new agile portfolio management model was designed in the second phase.

The third phase of the research project occurred after the model's design with its implementation and evaluation. The immediate implementation of the model was highly beneficial to test and validate the initial theory in a real business environment. The validation of the model was made by collecting data using qualitative and quantitative methods simultaneously.

Throughout the process implementation in the insurance company, several qualitative data was collected mainly through the company stakeholders' constant feedback. Moreover, a questionnaire was developed to promote this feedback collection and evaluate the process. This questionnaire used a concurrent embedded design as it included both quantitative and qualitative (open answer) questions. In addition to this questionnaire, several quantitative and qualitative analyses were made on the process results, as detailed later in this dissertation.

3.4 Research Strategy: Case Study

The research strategy is the link between the philosophy and the chosen methods to collect and analyze data. It is the plan that will lead the researcher in answering the research question. There are several research strategies to choose from, and they range from more quantitative research designs (experiments and surveys) to quantitative and/or qualitative research designs (documentary research and case study) and qualitative research designs (action research, grounded theory, among others) (Saunders et al., 2018).

As this research project was developed in a real-life setting (the insurance group Fidelidade) and used both quantitative and qualitative methods, the case study was the chosen strategy. A case study strategy is suitable to generate insights from the in-depth study of a phenomenon in its real-life context, leading to valuable and empirical descriptions that will enable the development of new theory (Saunders et al., 2018). That was the primary goal of

this research project: to study agile portfolio management in the insurance sector in the real context of an insurer, thereby contributing to developing a new theory that will support future practice.

The approach taken in this research project was a rigorously defined and structured one that is commonly used in orthodox case studies. Critical realism philosophical assumptions typically underpin this type of case study as it has a rational approach where first the literature is reviewed, then the research question is defined, after that the research project is designed and prepared, and, finally, the data is collected and analyzed (Saunders et al., 2018).

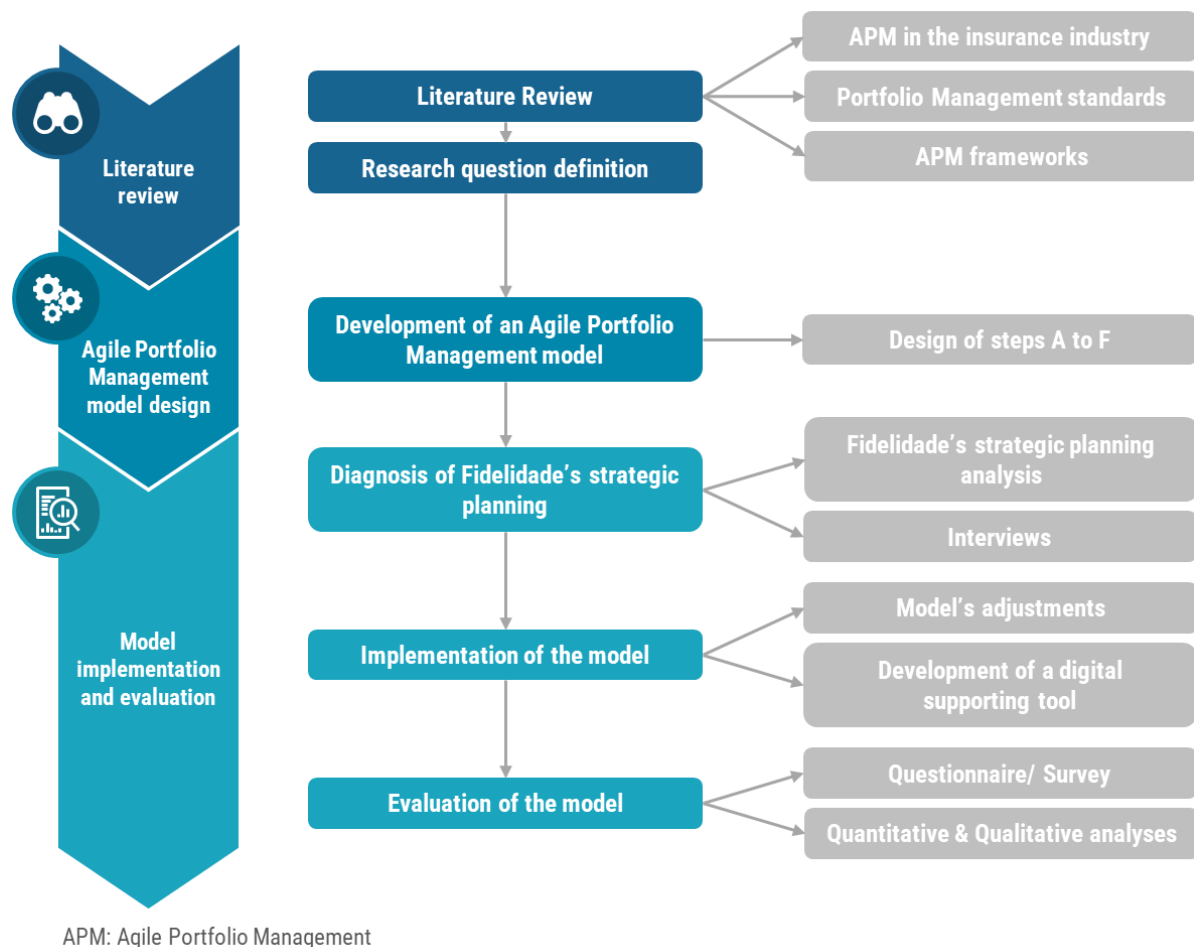


Figure 3.4 - Orthodox case study research design

As Figure 3.4 demonstrates, a similar approach was taken in this research project, and there were three primary phases in the research design. In the first phase, the literature was reviewed and the research question was defined. After that, the second phase was dedicated to developing a new agile portfolio management model. Finally, following an initial diagnostic of the company's current strategic planning processes, the model was implemented and evaluated through a survey and quantitative and qualitative analyses.

This research design is typical in case studies as this strategy usually uses a mixed methods research design that commonly includes interviews, surveys, and other qualitative or quantitative methods. Moreover, using a survey in the third phase is highly appropriate as it is generally used in deductive approaches and can be included as part of a case study research design.

In his book *Case Study Research and Applications: Design and Methods* (Yin, 2017), Yin distinguishes four types of case studies according to two dimensions:

- Single case *vs.* multiple cases;
- Holistic case *vs.* embedded case

In this case study, there is a single case: the insurance group Fidelidade. As the research question is focused on the insurance industry, Fidelidade constitutes a typical and, therefore, suitable case to answer the research question and achieve the goals of this research project. Furthermore, as this research is concerned with Fidelidade as a whole and not with just a particular part of the group, the case is holistic.

3.5 Time horizon: cross-sectional study

This study was conducted for approximately one year, from the beginning of 2021 to 2022. Therefore, it is a cross-sectional study that aims to study agile portfolio management at this particular time. However, the literature review analyzed several studies from the last years and studied the development of these themes over time.

3.6 Techniques and procedures: semi-structured interviews and questionnaires

Two main techniques were used in this research project: interviews in the diagnostic stage and a questionnaire in the model's evaluation stage.

a) Semi-structured interviews

The interviews were conducted with several relevant stakeholders of Fidelidade and aimed to better understand the company across several themes, particularly those related to strategic planning and portfolio management. The type of interview selected was the semi-structured interview. This type of interview does not have a rigid set of questions that must be asked exhaustively and in the same way to every interviewee. Instead, semi-structured

interviews start with a set of predetermined themes (and possibly some key questions related to these themes) that will guide the interview more openly.

This kind of interview was chosen because there was an emergent and exploratory intention to guide the interview more according to the type of answers received from the interviewees. Therefore, the order by which the different themes were approached varied depending on the conversation's flow and what each participant said. In addition, new themes might have also emerged during the interview from the interviewees' interpretations on other topics.

In order to enhance the interviews' credibility, the list of themes and key questions was shared with the participants before the interviews took place. This allowed the interviewees to better prepare for the interview, thus promoting the validity and reliability of the information collected. In addition, the list of persons selected for the interviews included people from all backgrounds of Fidelidade, from business units to commercial and support units, to ensure the data collected would give a transversal and reliable view of the company.

b) Questionnaire

After implementing the process, a questionnaire was sent via email to each one of Fidelidade's executives to ask for their feedback and measure their satisfaction with the process. Since, in a questionnaire, each person is asked the same set of questions, it constitutes an efficient and reliable way of collecting responses from a large group of people prior to quantitative analysis of the answers.

In this case, the questionnaire sent was a self-completed questionnaire (also referred to as a survey) that was completed individually by each one of the respondents. The questionnaire included a combination of open and closed questions.

The open questions allowed the respondents to give their own answers and enabled richer and more interpretive responses to some critical questions.

The closed questions were a quicker and easier way of collecting answers as they required minimal to no writing from the respondents. In addition, closed question answers are more comparable as they have been predetermined. This questionnaire included several types of closed questions, such as:

- *Ranking questions*, where the respondent is asked to place the answers in rank order. These questions are helpful to find out the relative importance that the respondent gives to a set of topics;
- *Rating questions*, where the respondent gives his or her opinion on how strongly he or she agrees or disagrees with a particular statement. Typically, these questions used the Likert scale with five ratings (Strongly agree, Agree, Neither agree nor disagree/not sure, Disagree, Strongly disagree).

DESIGN OF AGILE PORTFOLIO MANAGEMENT MODEL

As mentioned in the research methodology, after conducting a literature review it is now time to proceed with the second phase of the research design - the development of a new Agile Portfolio Management model that follows the portfolio management standards and would be suitable for an insurance company.

Therefore, based on the previous literature review, this section will now detail the new agile portfolio management model that was developed, the Annual Business Planning or ABP. The design of the ABP is divided into three key blocks (Figure 4.1).

The first block provides the main goals and a major overview of the model. Then, in the second block, there is a brief explanation regarding the organizational perimeter, namely the created clusters. Finally, the third block details the model across its major steps and forums.

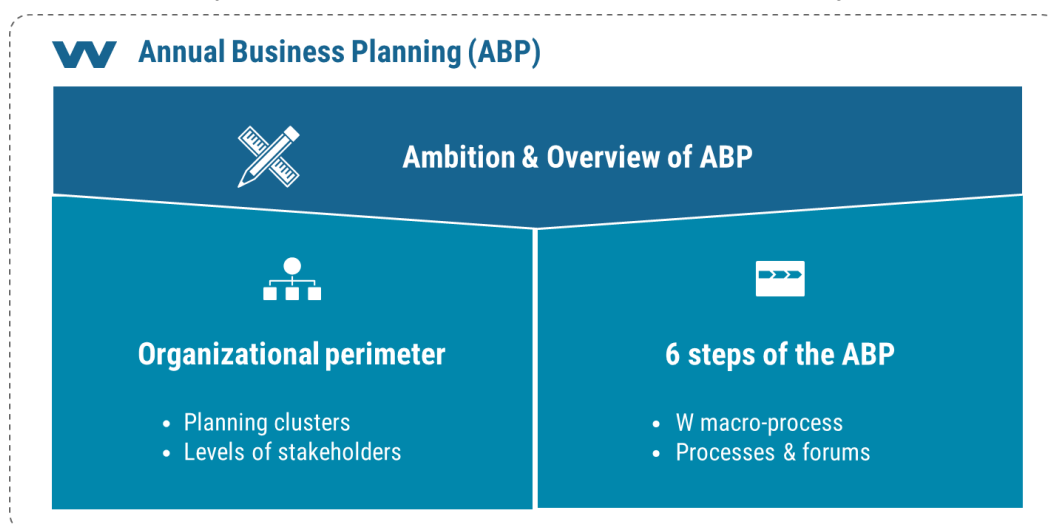


Figure 4.1 - Three key blocks in the design of the ABP model

4.1 Ambition & Overview of ABP

Typically, a company can divide its planning processes across a value chain with three major phases: strategic reflection, annual business planning, and execution and monitoring. As the name suggests, the ABP model is inserted in the middle stage and has six main goals (Figure 4.2).



Figure 4.2 - Six main goals for the design of the Annual Business Planning

These six goals represent the ambition put in the development of this model and are consistent with the best practices identified in the literature review for an agile portfolio management process, namely the ISO and PMI Portfolio Management standards.

These goals are divided across six themes and aim mainly at ensuring the activities' alignment and adherence to strategy, being focused when selecting activities, fostering transversal visibility between units, strengthening the activity planning by ensuring consistent capacity coordination, aligning the budget process with the selected initiatives, and allowing for frequently re-selection/re-prioritization of initiatives by updating the plan periodically in Quarterly Business Reviews (QBRs, that are part of the execution and monitoring phase).

For the design of this model, the team decided to adopt the W approach for strategic planning that was found mainly in "grey literature" (Kachaner et al., 2016) (Figure 4.3).

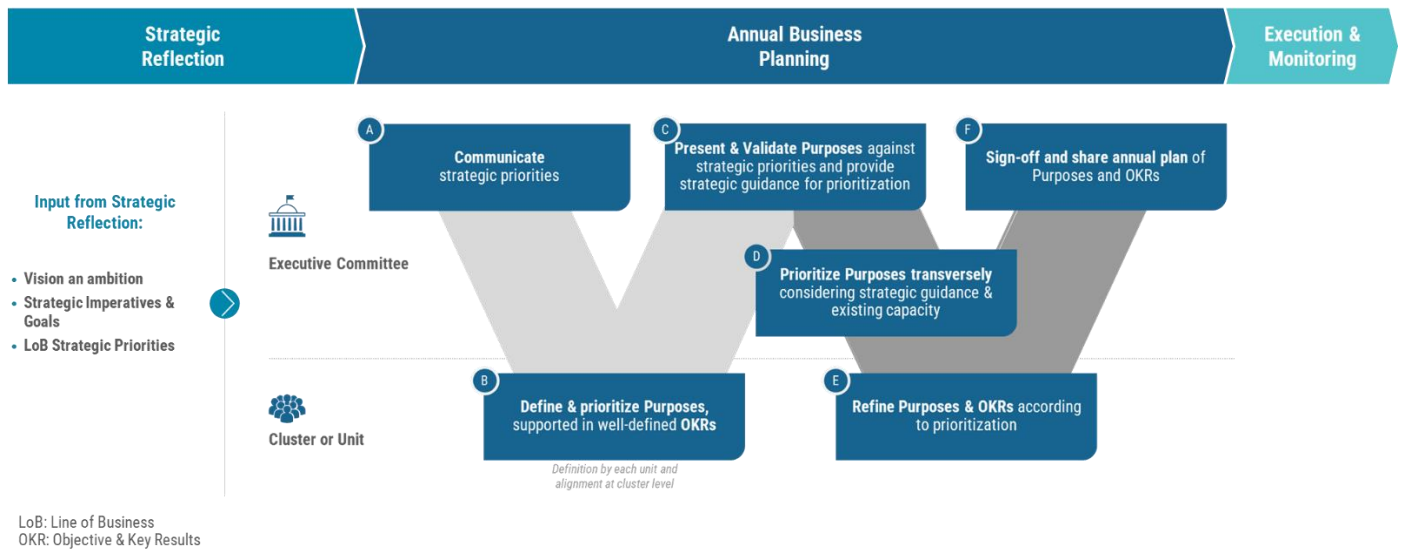


Figure 4.3 - Overview of the model developed with a W-shaped approach

This W-shaped approach was considered suitable as it involves different levels of the organization and allows for a top-down and bottom-up alignment between the board (Executive Committee) and the several units or clusters of units underneath.

The model has as primary input the strategy of the company. The strategic priorities originated in the strategic reflection are the fundamental basis guiding all decisions taken throughout the process.

The model is sequential and has six major steps, from A to F.

Step A initiates the process and communicates the output of the strategic reflection to all the organization.

After that, in step B, each unit digests the strategic priorities and defines its Purposes and OKRs (Objectives and Key Results) for the following year. As detailed afterward, some units are grouped in clusters and align their Purposes and OKRs with their cluster partners.

After defining all Purposes and OKRs in step B, step C initiates. In this step, each unit presents its Purposes and OKRs to the entire organization, promoting transversal visibility and alignment across the company. In addition, in this step, the Executive Committee of the company (ExCo) analyzes all the Purposes that were defined and prioritizes some of them, providing strategic guidance for the demand management exercise that will occur afterward.

In step D, the ExCo and the four main support units that typically face more demand in an insurance company - IT, Marketing, Actuary, and Analytics - prioritize the Purposes according to their available resources' capacity.

In step E, each unit adjusts its Purposes and OKRs according to the output from the strategic prioritization (step C) and demand management exercise (step D).

Lastly, Step F concludes the ABP process by sharing the final annual plan of Purposes and OKRs with the entire organization.

Finally, this annual plan originated in the ABP will then be executed and monitored throughout the year in the third planning stage (execution and monitoring phase).

4.2 Organizational perimeter

The ABP will engage different sets of stakeholders along the process, capturing a holistic and integrated view of the organization. As Figure 4.4 demonstrates, four levels of stakeholders can be identified with different roles along the process. In addition, a planning team is also responsible for orchestrating the entire process and assuring its quality.

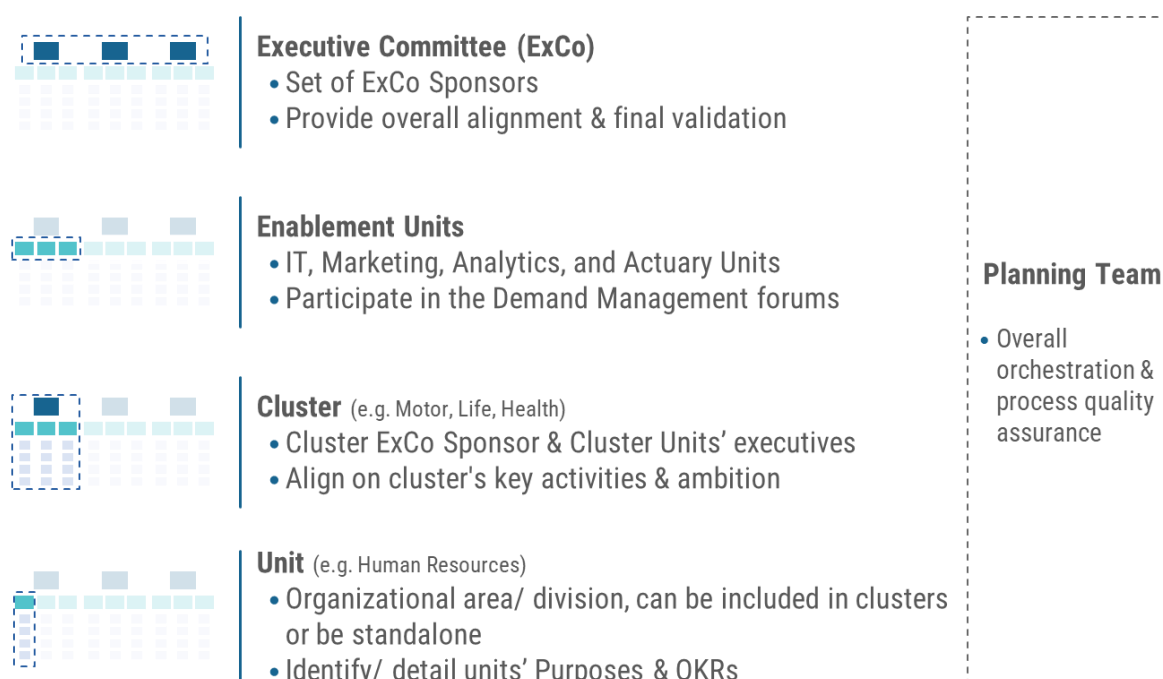


Figure 4.4 - Levels of stakeholders in the ABP

The first level belongs to the members of the Executive Committee of the insurance company. They are a critical part of the process as they provide overall alignment and validate the decisions being made.

The four main support units - IT, Marketing, Analytics, and Actuary - are represented in the second stakeholder level. These enablement units are the ones that typically face more

demand in an insurance company and will allocate their resources to the selected purposes during the demand management sessions in step D.

In order to facilitate the planning process and promote a greater alignment between units, nine clusters were created. These clusters join sets of units that have similar goals and share synergies (Figure 4.5).

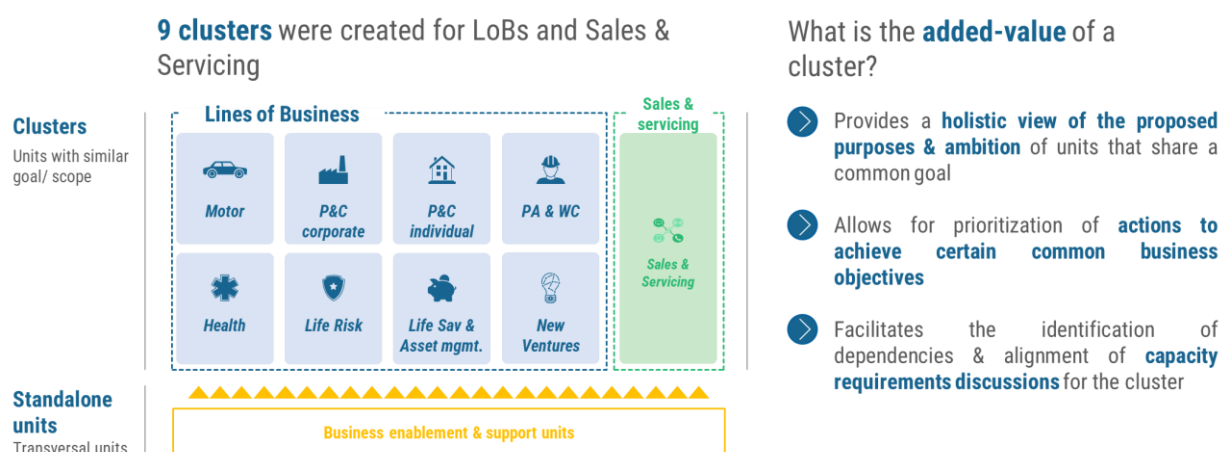


Figure 4.5 - Clusters' structure

From the nine clusters, eight gather units sharing the same insurance line of business (LoB), and one (Sales & Servicing) reunites the commercial and marketing units. The LoB clusters are:

- **Motor**, reuniting all units related to mobility, such as the car insurance business unit;
- **P&C Corporate**, reuniting all units related with the P&C (Property and Casualty) LoB, excluding Motor, for the corporate market segment - large companies and SMEs (Small and Medium-sized Enterprises);
- **P&C Individual**, reuniting all units related with the P&C LoB, excluding Motor, for the individual market segment (standard clients);
- **PA & WC**, reuniting all units related with the PA & WC (Personal Accidents and Workers Compensation) LoB;
- **Health**, reuniting all units related with the Health LoB;
- **Life Risk**, reuniting all units related with the Life Risk LoB;
- **Life Savings & Asset Management**, reuniting all units related with the Life Savings LoB and the units responsible for managing the investments' portfolio of the company;
- **New Ventures**, reuniting all units responsible for developing innovative and disruptive solutions for the company's business.

Besides these cluster units more related to the company's business activity, a typical insurer also possesses several other units that do not participate directly but support that business activity (Figure 4.5). These supporting units are transversal and were left outside the cluster structure as they are not specific to any LoB. Instead, they were gathered in another group called "Standalone units." This group contains units such as IT, actuary, accounting, human resources, among many others.

Figure 4.6 demonstrates the type of activities expected to be performed by the LoB Cluster Units, the Sales & Servicing Cluster Units, and the Standalone Units.

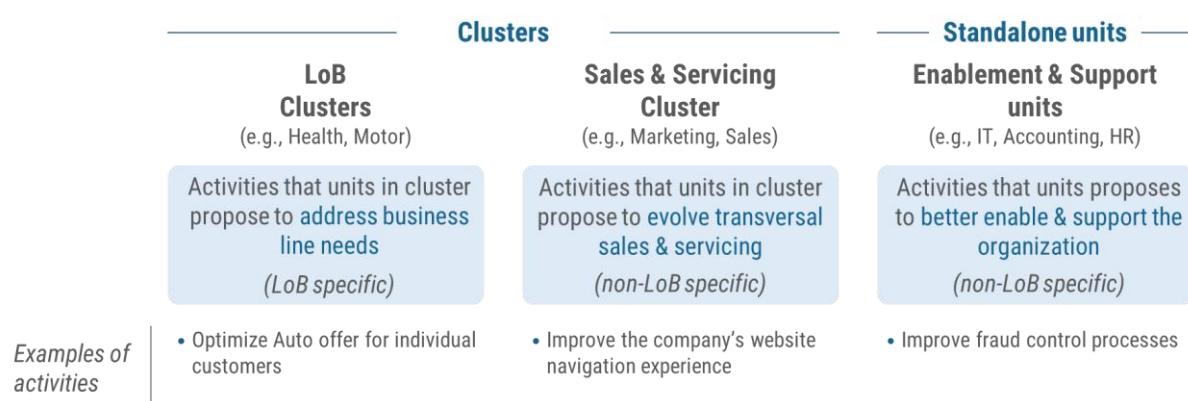


Figure 4.6 - Cluster (LoB and Sales & Servicing) and Standalone Units activities

As it will be more detailed afterward, adopting this kind of clusters structure brings many benefits to the ABP model. Namely, clusters enable a holistic view and joint alignment on the main activities and objectives of each LoB, allow for the prioritization of those activities in function of the value they bring for business, and facilitate the identification of capacity requirements/dependencies between the cluster units.

4.3 The six steps of the ABP model

This sub-section will detail the Annual Business Planning model across its six stages. For each step, there is an explanation of the primary goal of that stage, the key stakeholders that attend it, the main inputs and outputs, and the duration. As explained before, the ABP has six steps, from A to F, in a W shape.

4.3.1 Step A - Communicate strategic priorities

Step A is intended to kick off the ABP process. This step aims to provide the major objectives and strategic guidelines that will support the identification of purposes and OKRs by each unit (and cluster, in step B)

This step has as main stakeholders the Executive Committee (ExCo), all the Executives of the insurance company, and the Planning Team. Its primary input is the strategic reflection exercise. The main outputs are the ABP launch presentation, the business objectives, and the strategic guidelines.

Finally, this step takes approximately one week to be prepared and has five sessions on its agenda, as displayed in Figure 4.7:

Step A Communicate strategic priorities		
Goal Kick-off the ABP process, providing key business objectives & strategic guidelines to support identification of purposes and ambition by units/ clusters		
Stakeholders • ExCo • All Units (Executives) • Planning Team		
Input • Strategic reflection exercise		
Output • ABP launch presentation • Business objectives • Strategic guidelines		
Duration • 1 week for preparation • 5 sessions (as detailed in agenda; 1 full day)		
Agenda	Led by	Description
Performance review	Planning Team	• Review year-to-date financial performance and projections until end-of-year, comparing with budget
Strategic plan status	CEO	• Provide an update on strategic plan & key business objectives of current business plan
Local competitive landscape & trends	Planning Team	• Share key highlights from local competitive landscape (incl. market shares, competitive moves, etc.) & key trends
Strategic guidelines update	ExCo	• Share the macro areas of focus & strategic guidelines for the year to come
Kick off process	Planning Team	• Kick-off and explain the ABP process and timeline

Figure 4.7 - Step A of the ABP process

These five sessions are attended by all company's Executives and provide a solid basis for the start of the process. The first session is a Performance Review led by the Planning Team, where the financial performance of the company is analyzed and compared with what was projected in the annual budget. Then, the second session is led by the company's Chief Executive Officer (CEO) that provides an update on the group's strategic plan and the major targets intended for the upcoming year. The output of these first two sessions is displayed on the first bullet of Figure 4.8:

1. Business objectives & historical info crucial to set the ambition for coming year



Historical information
(per LoB)

e.g. Loss ratio, Market share, Channel mix, Macro-economic trends



Business objectives N+1

e.g. Premiums (life & non-life), Combined ratio, Assets under management, Net Income

2. Strategic guidelines provide guidance on areas of focus & priorities to achieve ambition



Macro areas of focus

e.g. priorities to protect existing/ recurring business, new avenues of growth, efficiency priorities & goals



LoB specific guidelines

e.g. opportunities & threats, Customer segment & channel priorities, 5-year target metrics

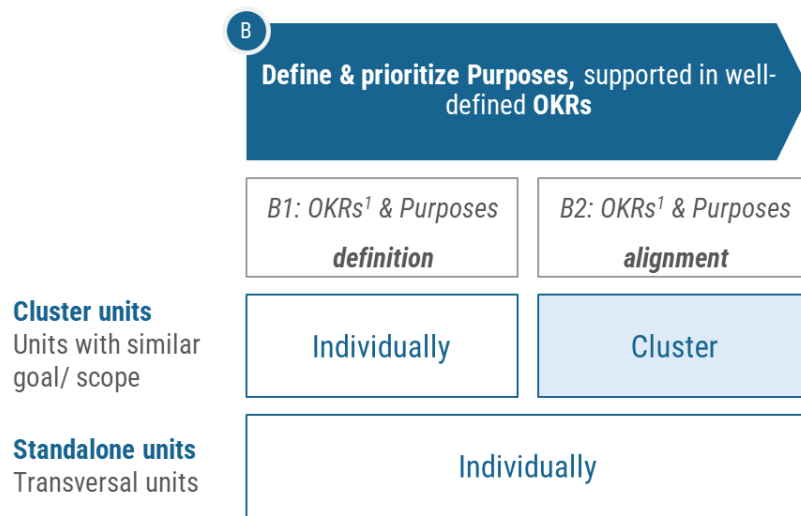
Figure 4.8 - Key outputs from Step A of ABP

The third session is led by the Planning Team and aims at sharing the main highlights and trends from the insurance market and its competition. Then, in the fourth session, the ExCo shares the macro areas of focus and the LoB strategic guidelines for the upcoming year (second bullet of Figure 4.8).

Finally, in the fifth session, the Planning Team explains the timeline and stages of the ABP process.

4.3.2 Step B - Define & prioritize Purposes

Step B can be divided into two phases: step B1, where each unit individually identifies its Purposes and OKRs, and step B2, where those Purposes and OKRs are presented and aligned in the Clusters (for the Cluster Units) (Figure 4.9).



1. OKR: Objective & Key Results

Figure 4.9 - Two phases of Step B

4.3.2.1 Step B1 - OKRs & Purposes definition

Step B1 aims to identify and detail all units' Purposes and Objectives and Key Results (OKRs) for the upcoming year, based on the strategic guidelines and business objectives shared before in Step A.

This choice of including Purposes and OKRs in the process design was majorly influenced by Horlach et al.'s *Design Goals and Principles for Agile Portfolio Management* (Horlach et al., 2019). Choosing to adopt Purposes and OKRs as the central planning artifacts of this process was considered suitable as they both contribute to the fundamental principle of "having an aligned autonomous portfolio decision-making," which relates to this process's goals.

Often, agile processes struggle to guarantee alignment across the organization while at the same time promoting the autonomy of each unit in its decision-making. OKRs are helpful to achieve that "aligned autonomy" as they empower units' teams to set their own Key Results while ensuring that they contribute to the achievement of a certain Objective derived from the company's strategy. On the other hand, Purposes are also helpful in this matter as they align teams from different units in contributing to the same solution. In addition, purposes demonstrate each individual's impactful contribution in unlocking a clear outcome for the customer, the agent, and/or the insurance company (Figure 4.10).

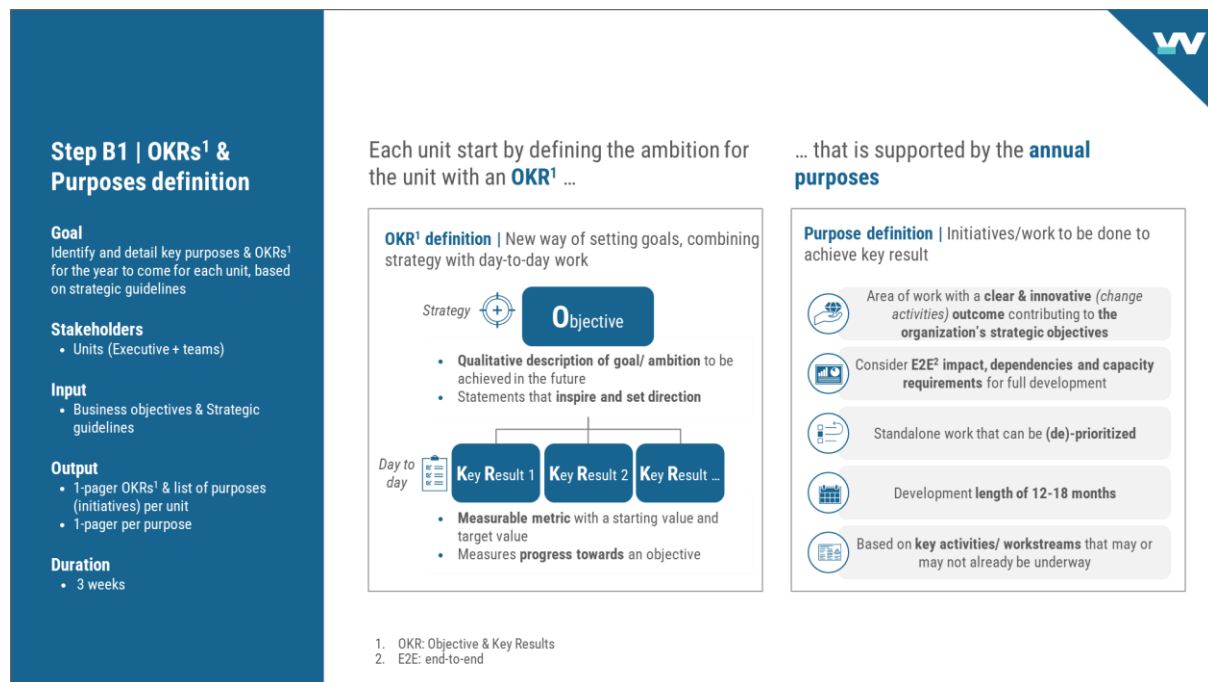


Figure 4.10 - Step B1 of the ABP process

The main stakeholders of Step B1 are all the units in the organization that will develop their Purposes and OKRs. In addition, some ad-hoc sessions might be held with the Planning Team for the quality assurance of those Purposes and OKRs. The primary inputs are the strategic guidelines and business objectives shared before in Step A. The outputs are two 1-pagers for each unit: one with the OKR and list of Purposes, and another for each Purpose identified (Figures 4.11 and 4.12 respectively).

Health | Annual OKR & proposed Purposes

%

Annual OKR

Objective

Be the number 1 health insurance company in Portugal, with the best customer service and the most efficient operation

Key results

KR1: Achieve X M€ of GWP

KR2: Improve combined operating ratio to Y%

KR3: Achieve Health Claims ratio of Z%

KR4: Improve customer satisfaction index to X

KR5: ...

Annual Purposes

Strategic priority	Proposed purposes	Impact KPI (within 1 year of implementation)	Key Results	Units involved
Digitalization & automation of processes	Simplify & digitalize reimbursement mgmt. process	FTEs: -X	KR2, KR4	Analytics, IT, Compl., Marketing
	Foster dematerialization of paper and document optimization	Paperless docs: X%	KR2, KR3	IT
Diversification of offer	Launch new products & coverages for standard customer segment	Annual GWP: +X M€	KR1	Marketing, IT, Actuary
	...	...	...	...
Strategic priority ...	...	...	...	...
	...	...	...	...
	...	...	...	...

Figure 4.11 - Template 1: Annual OKR and proposed Purposes of each unit (illustrative)

Template 1 is mainly a summary of each unit's Purposes and OKR. Figure 4.11 shows an illustrative example made a health insurance business unit. The Annual OKR is displayed on the left side of this template, and the list of Purposes is on the right side.

First on the OKR, there is the main objective, which is supposed to be mostly aspirational and qualitative. Then, below that objective, there are the key results, which are the quantitative targets that, in this case, the Health unit's teams must achieve to fulfill the desired objective.

The list of annual purposes contains all the purposes that each unit intends to develop in the upcoming year. The purposes are displayed on each line across five columns. The first column indicates the strategic priority (shared in Step A) that the purpose is inserted in. There might be more than one purpose for each strategic priority. The second column indicates the purpose's name, and the third column the KPI used to evaluate the purpose's impact.

Then, the fourth column indicates the key result from the OKR that the purpose will contribute to. By aligning each purpose with a strategic priority and a key result, the process guarantees the strategic alignment of all proposed initiatives, which was one of the goals for this model. For instance, in Figure 4.11 example, the "strategic cascade" becomes clear as the first purpose of "Simplifying and digitizing the reimbursement management process" is aligned with the Health unit's key results 2 and 4, of the improvement of the combined ratio and customer satisfaction, and with the company's strategic priority "Digitalization and automation of processes."

Finally, the fifth column indicates the units that need to be involved and participate in the development of each purpose. For instance, in this illustrative case, the first purpose will need the involvement of the Analytics, IT, Compliance, and Marketing units.

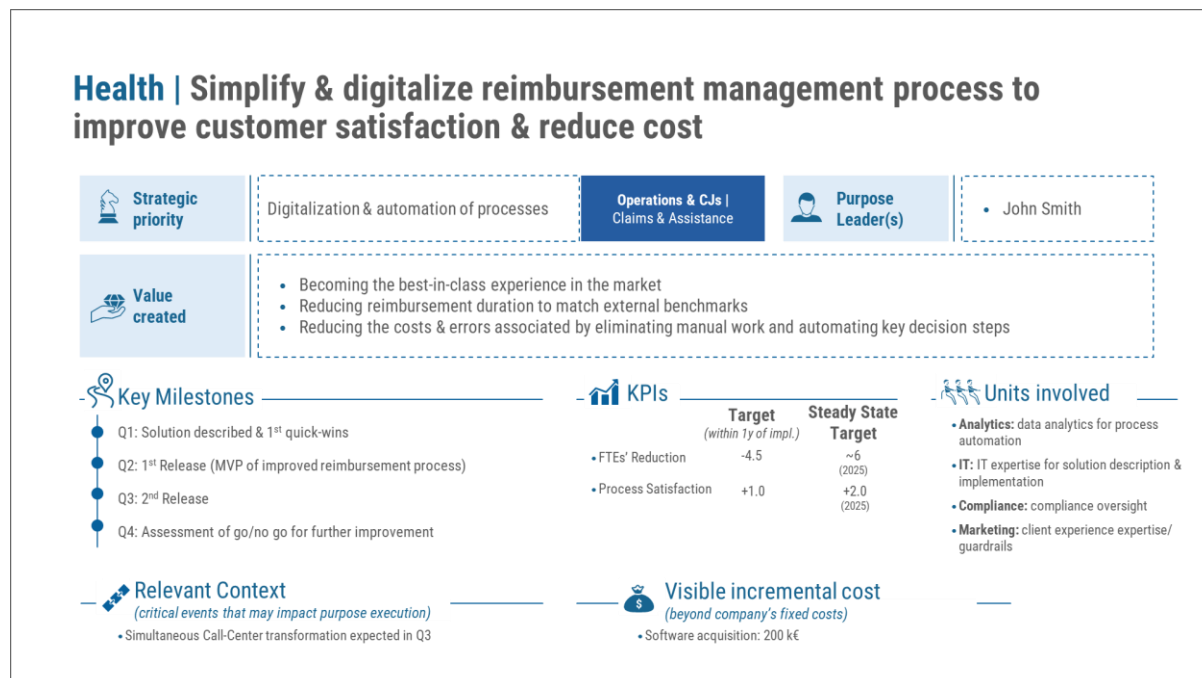


Figure 4.12 - Template 2: Detail of each proposed Purpose (illustrative)

The second template (Figure 4.12) is a 1-pager containing all the detail that was considered relevant to describe each proposed purpose. On the top of this template, there is the "owner unit," in this illustrative case, the Health unit, and the purpose's title. In order to have more homogeneous titles between the different purposes, they should all be written according to a standard formula where first there is the action that must be developed and then the value that action will bring. The formula is as follows:

- [What needs to be done] TO [achieve a particular value for the customer, agent, and/or the company]

Immediately below the title, from left to right, there is the strategic priority (the same identified in Template 1), the strategic lens, and the purpose leader(s). The Strategic Lenses are a set of labels created to catalog each proposed purpose. The lenses created were the following:

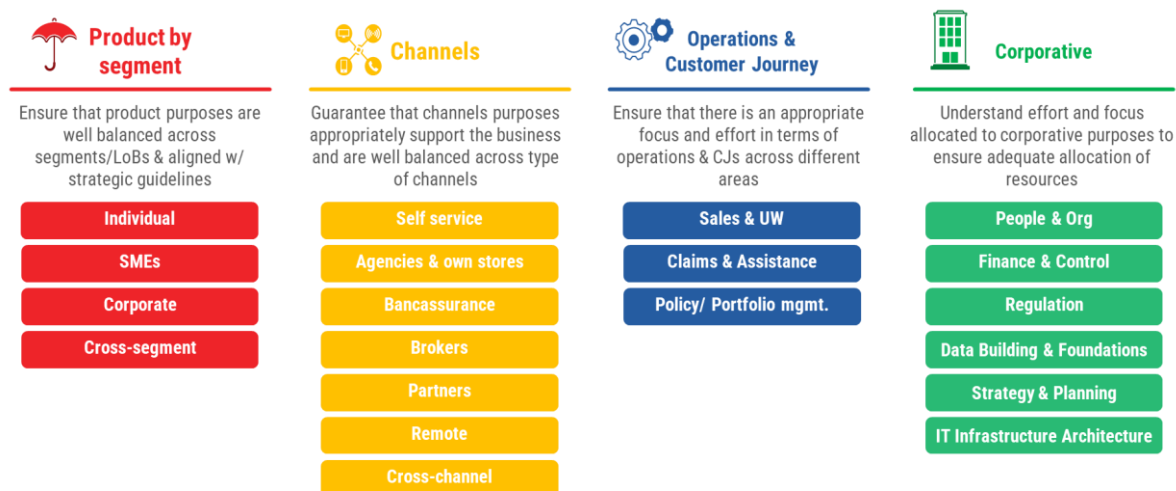


Figure 4.13 - Strategic Lenses

There are four major types of purposes. First, the purposes that focus on developing new products or coverages for one or more types of client segments: Individual, SMEs (small and medium-sized enterprises), and Corporate (large enterprises). Then, purposes can also focus on improving the distribution channels, such as the Agencies or the BancAssurance channel. In addition, some purposes have a more operational focus and aim to improve operations such as sales and underwriting (UW), claims and assistance, or clients' portfolio management. Finally, the fourth purpose type has a more internal and corporate intention. This final type of purpose can relate to themes such as the organization's finance, regulation, strategy, among others.

This classification is valuable for evaluating the overall picture of purposes being proposed. For instance, in step C, the ExCo can use the strategic lenses to grasp if the path the purposes are leading to is consistent with the company's strategy or not. It might be, for example, that there are too many purposes focusing on the Brokers channel when the strategic focus is actually on the Bancassurance channel. In this case, the ExCo will likely cut some of the Brokers channel purposes and prioritize the Bancassurance ones.

Finally, there is the purpose leader on the right of the strategic lens. The purpose leader is the main person(s) in charge of the purpose development. In order to guarantee the appropriate level of availability of every purpose leader, there is a guideline stating that he or she must not be involved in more than two purposes simultaneously.

The "Value created" box serves to highlight the value the purpose will bring for the customer, agent, and/or the company. Below this box, there are the "Key Milestones." In this space, each unit identifies the main activities that must be completed in the next year and when. In

the template's example, the milestones are organized in quarters (Q1, Q2, etc.) and provide a better sense of what needs to be done during the year.

Having strong KPIs is fundamental as it will facilitate the purposes' selection/ prioritization and enhance the purposes' monitorization that will occur throughout the year in the next planning phase. Therefore, it is critical to ensure that all purposes follow the same guidelines on target definition and have comparable KPIs between each other. In addition, those targets must be realistic and measurable, allowing for the correct monitoring of the purposes throughout the year and increasing the accountability inside the company

In this sense, there is a set of standard KPIs for each one of the four types of purposes previously described:

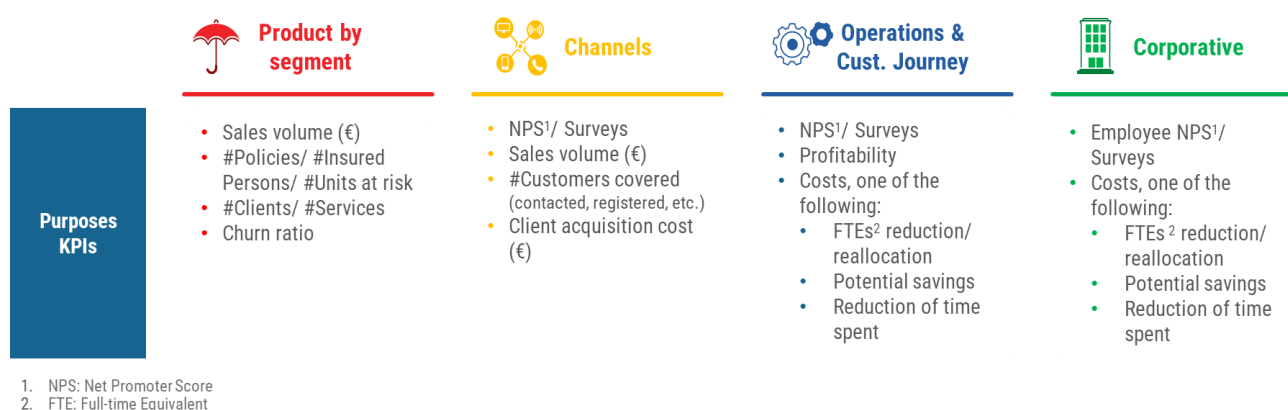


Figure 4.14 - Set of standard KPIs for each type of purpose

Depending on the purpose type (product, channels, operations and CJ, or corporate), each purpose should be defined with at least one or more of the KPI(s) identified in Figure 4.14. In addition, as can be seen in Template 2 (Figure 4.12), every KPI should be defined within two different time horizons: "Target" and "Steady State Target." The "Target" time horizon is a goal that must be achieved within the first year of the purpose implementation. All purposes' KPIs must fix this time horizon to promote greater comparability between them and avoid having KPIs with too distinct timeframes. The second time horizon is the "Steady State Target." This longer timeframe is included to demonstrate each purpose's full value and impact in cases where one year after implementation is short to truly demonstrate that.

In the example of Template 2 (Figure 4.12), it can be seen that the first KPI of reducing FTEs (full-time equivalents) is one of the KPIs prescribed in Figure 4.14 for Operations & CJs Purposes and has the two different time horizons. Therefore, in this illustrative case, the digitalization of the Health unit's reimbursement management process is expected to reduce 4.5 FTEs in its first year of implementation and approximately 6 FTEs until 2025.

The "Units involved" are on the right side of the KPIs. This information is coherent with the fifth column of Template 1. However, in Template 2, additional detail is provided on each unit's role in the purpose development.

Finally, the bottom of Template 2 contains the "Relevant Context" and the "Visible incremental cost." The relevant context is intended as all critical events that may impact the purpose execution or priority. For example, this box can describe potential market moves from the competition or regulatory changes that increase the purpose's priority or impact its development. The incremental cost is every cost beyond the organization's fixed costs that is necessary for developing that specific purpose (for instance, software, outsourcing or consultancy costs). This information is critical to bridge the purposes identified during the ABP with the budget process and ensure that both exercises are consistent. It is also a vital piece of information for the purposes' selection as financial resources are an extremely relevant constraint.

4.3.2.2 Step B2 - OKRs & Purposes alignment

Step B2 aims mainly to align in a forum with the cluster units on each cluster's OKR and critical purposes. The cluster OKR should be developed based on each cluster unit's individual OKR, and it should set the core ambition for the cluster LoB (only the LoB clusters will have a joint OKR). The critical purposes are chosen from all cluster units' lists of purposes. They are those that will impact the cluster most and, therefore, have greater priority. In this sense, the cluster sessions induce a "funnel" effect where each unit presents its individual OKR and list of purposes, and one OKR and a set of critical purposes are identified for the whole cluster (Figure 4.15).

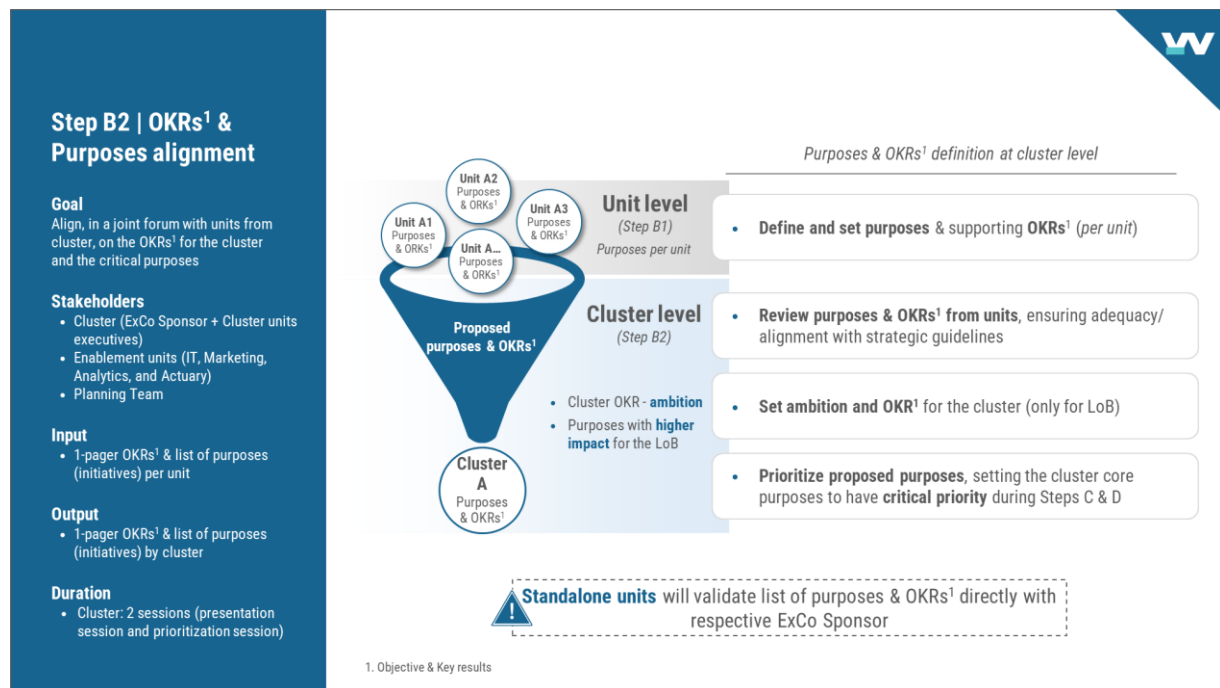


Figure 4.15 - Step B2 of the ABP process

The cluster alignment of Step B2 occurs in two different sessions. First, there is the presentation session, where each cluster unit presents its annual OKR and purposes and collect feedback from the other units. After that, the prioritization session takes place. In this second session, the cluster units align on their cluster OKR and define the critical purposes (Figure 4.16)

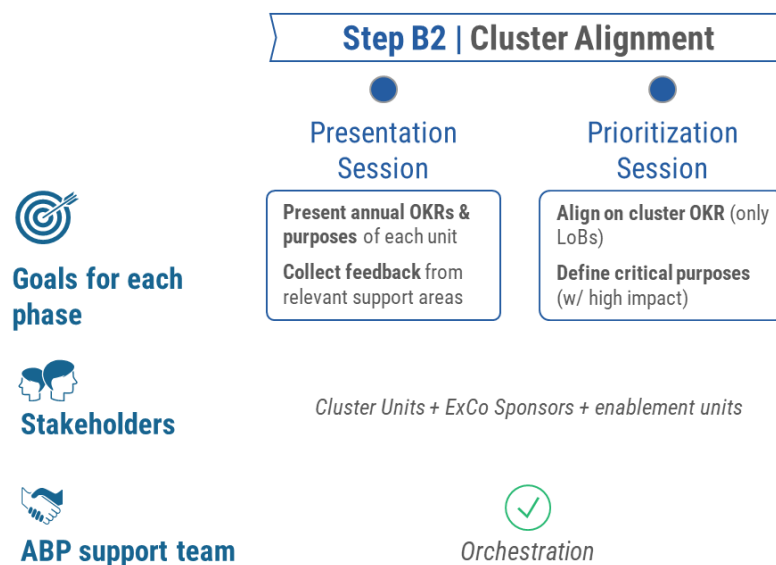


Figure 4.16 - Step B2 cluster sessions

The discussion of defining the set of critical purposes will consist mainly of analyzing each cluster unit's list of purposes and deciding on whether each purpose is a priority for the whole cluster or not. In this sense, each purpose can be defined across two levels: critical or important. Important purposes are those that have a high impact but can be dealt with in a more reasonable timeframe and are not so urgent for the cluster. On the other hand, critical purposes are urgent and high-impact purposes that need to be dealt with quickly and in-depth (Figure 4.17).

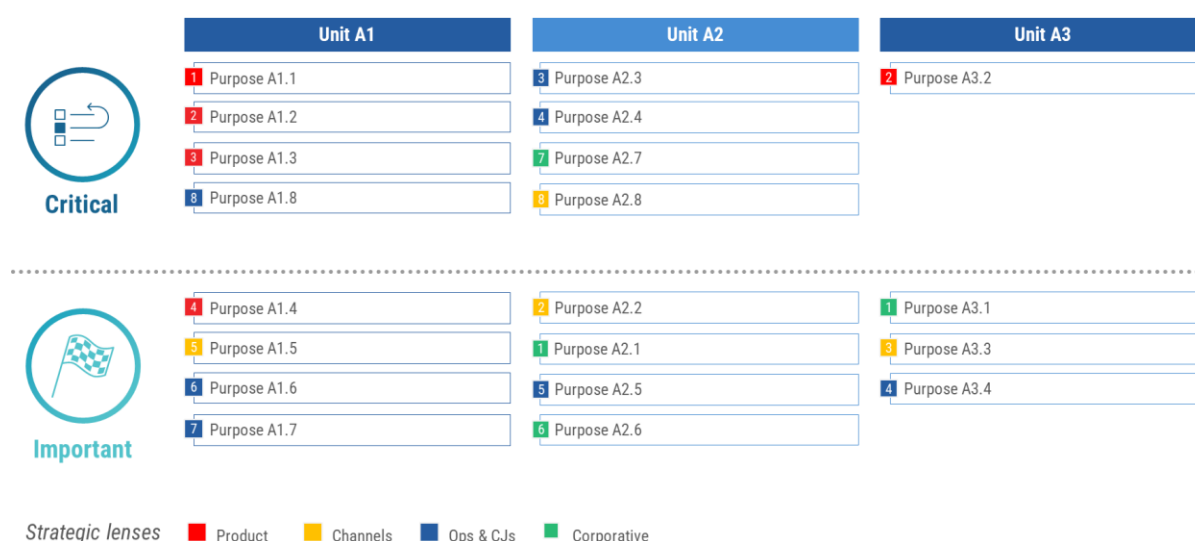


Figure 4.17 - Example of a purposes' prioritization in the cluster prioritization session

As mentioned before, this alignment in a cluster with units that share synergies and common goals is very beneficial for the organization. It provides a holistic view of the proposed purposes and ambition, allows for the prioritization of actions, increasing focus, and facilitates the identification of dependencies and synergies between the cluster units and the enablement units that are also attending the sessions.

This part of the ABP is one of the most critical parts of this whole portfolio management process as it is where the actual portfolios of purposes of every cluster are created. These portfolios are consistent with what is found in the literature as a "standard" portfolio. In this thesis literature review, it can be read that a portfolio should be a collection of programs, projects, or operations that can be measured, ranked, and prioritized in order to achieve particular strategic objectives (ISO, 2015; PMI, 2017). In the ABP, each cluster portfolio has a set of purposes that are measured and prioritized to achieve an ambition translated in the OKR. As in a portfolio, the clusters are also not time-bound as old, current, and planned purposes are

included in the cluster. Finally, as demonstrated before, the cluster's OKR and purposes reflect the organizational strategy as they are linked with the identified strategic priorities.

The Sales & Servicing cluster only identifies the set of critical purposes but does not produce a cluster OKR. Despite sharing synergies and common goals, typically the units from this cluster are from different natures, and, therefore, it would be challenging to identify a set of key results suitable for everyone. As for the Standalone units that are not part of a cluster, they should also produce an OKR and their list of purposes (Step B1) identifying the critical ones, but they do not align and share them in a cluster (Step B2). The Standalone units should only validate their OKR and purposes with their Sponsor from the Executive Committee before moving to Step C.

4.3.3 Step C - Present & Validate Purposes

Step C can also be divided into two phases: step C1 and step C2. Step C1 is mainly a forum, the ABP Alignment Forum, that aims to present and validate the Purposes and OKRs developed during step B with all the executives and the ExCo. Step C2 is a strategic prioritization that the ExCo executes to all purposes before moving on to the enablement units' demand management exercise in step D.

4.3.3.1 Step C1 - ABP Alignment Forum

The ABP Alignment Forum is a forum that reunites all the company's executives and the ExCo to promote transparency and alignment on overall OKRs and purposes that are proposed to be developed in the upcoming year. This forum lasts for a full day and has as primary inputs the forum's presentation and the list of all OKRs and proposed purposes developed during the previous phase, step B. The final output is the same list but incorporating all feedback and possible changes suggested during the forum (Figure 4.18).

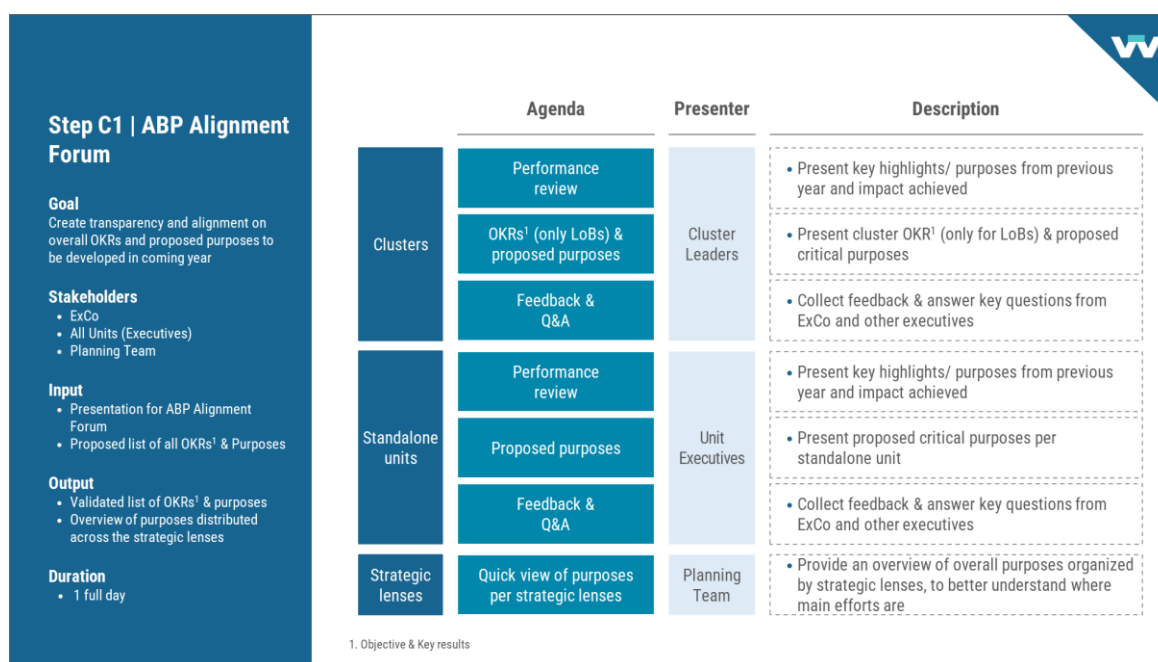


Figure 4.18 - Step C1 of the ABP process

The forum's agenda is divided into three main parts. The first part is destined for the clusters and starts with a brief performance review on the OKRs and purposes developed in the previous year and the impact they achieved. This part monitors if the purposes' key milestones have been completed on schedule and if the impact KPIs have been achieved or not. Following that, each cluster leader presents its cluster OKR and *critical* purposes that are being proposed to be developed in the coming year (the purposes categorized as *important* will also be shared offline). During this presentation, the cluster leader collects feedback and answers questions from the audience. After this cluster part, the same thing happens for the standalone units that also have a performance review and present their purposes while collecting feedback from the audience.

When discussing and providing feedback, the ExCo and the remaining audience should focus on guaranteeing that the five following topics are discussed:

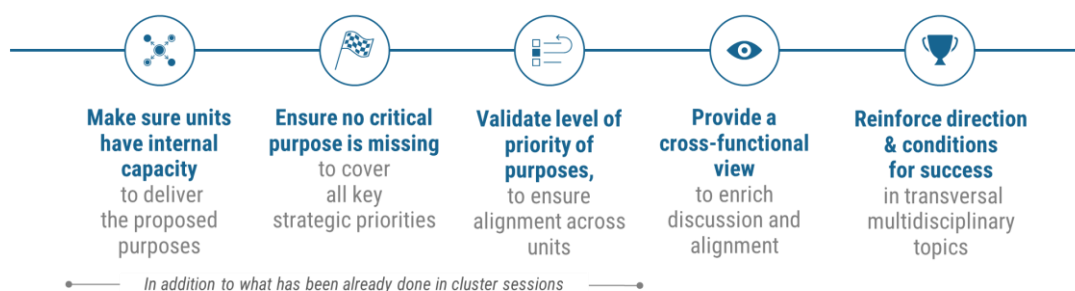


Figure 4.19 - Five key topics to be addressed during the ABP Alignment Forum

The first three points have already been assured at a certain level during the cluster sessions where the ExCo cluster sponsor was also present. However, additional confirmation might be advisable. Therefore, the first point is to guarantee that all units have the internal capacity to deliver their proposed purposes and that there are not too optimistic or unrealistic ambitions for the coming year. Then, it is also vital to guarantee that there is no critical purpose missing and that all strategic priorities are covered. The third point consists of validating whether the purposes' prioritization that was made at the cluster level (or by the standalone units) is adequate or not.

Finally, the last two points are also critical and are the main reason why the ABP Alignment Forum is so important for this process. First, this forum should provide a cross-functional view of other units' activities. This will enable the breaking of silos and promote transversal visibility, which was one of the primary goals for the ABP. Secondly, having this transversal forum with all the organization's units represented will enable a greater alignment and concertation of efforts in developing the several multidisciplinary topics that the company is facing.

The last point on the forum's agenda is to provide an overview of all purposes distributed across the strategic lenses (Figure 4.18). This overview will enable the organization to better understand where the main efforts are being put and discuss whether they are consistent with the company's strategy or not. In addition, the strategic lenses overview is one of the primary inputs for the strategic guidance sessions that will occur afterward and where the purposes will be prioritized.

4.3.3.2 Step C2 - Strategic Guidance sessions

After this moment of transversal alignment on the purposes proposed to be developed during the coming year, the ExCo will then analyze them in more detail and decide whether they are a priority considering the company's overall strategy and the distribution of purposes across the strategic lenses.

In this sense, during step C2, three sessions of Strategic Guidance take place. These sessions aim in filtering the volume of proposed purposes before they move on to the demand management sessions in step D. This step was considered suitable since in step D the prioritization will be mainly driven by the existing capacity of the enablement units to execute those purposes and not the actual strategic fit of them. Therefore, taking a step back and analyzing and prioritizing those purposes by comparing them against the company's strategic priorities and other variables such as the market and client dynamics or the existing commercial space was considered of most importance.

Therefore, during step C2, purposes will be classified across three levels: *Launch in N*; *Prepare in N, launch N+1*; and *Design & Proposal* (Figure 4.20).



Figure 4.20 - Step C2 of the ABP process

The purposes classified as *Launch in N* are those addressing top priorities for the company. Therefore, these purposes are those where a high effort and focus must be put in from both the owner and all remaining units involved in the purpose development. These priority purposes will obviously move on to the demand management sessions in step D, where they will be prioritized based on the existing capacity of the enablement units.

The second level of priority is *Prepare in N, launch N+1*. The purposes classified in this level also address essential priorities for the company. However, they are perhaps not so urgent as the previous ones, and its launch can be delayed for year N+1. Nevertheless, the preparation and development of these purposes must be initiated in the upcoming year (year N) to ensure that they are launched in the year after that (N+1). Therefore, these purposes will also require high effort and focus from all units involved, and they will move on to the demand management sessions in step D as well.

Finally, the last priority level is *Design & Proposal*. The purposes classified in this level are those that the ExCo does not consider to be a critical priority for the company at the time. In addition, these purposes may still lack a certain level of maturity and need to be further assessed and designed by the owner unit before a decision to develop and launch can be taken.

Therefore, the effort and focus put on these purposes by the involved units must be reduced, and they will not move on to the demand management sessions in step D.

4.3.4 Step D - Prioritize Purposes transversely

Step D aims at selecting purposes considering the strategic guidance provided by the ExCo during step C2 and the existing capacity of the enablement units (IT, Marketing, Actuary, and Analytics). This prioritization of purposes occurs in two demand management sessions. The first session is destined for the Marketing, Actuary, and Analytics units, and the second session is for the IT unit's demand management. The IT unit was isolated in a separate session since, in an insurance company, it typically faces more demand than the remaining enablement units (Figure 4.21).

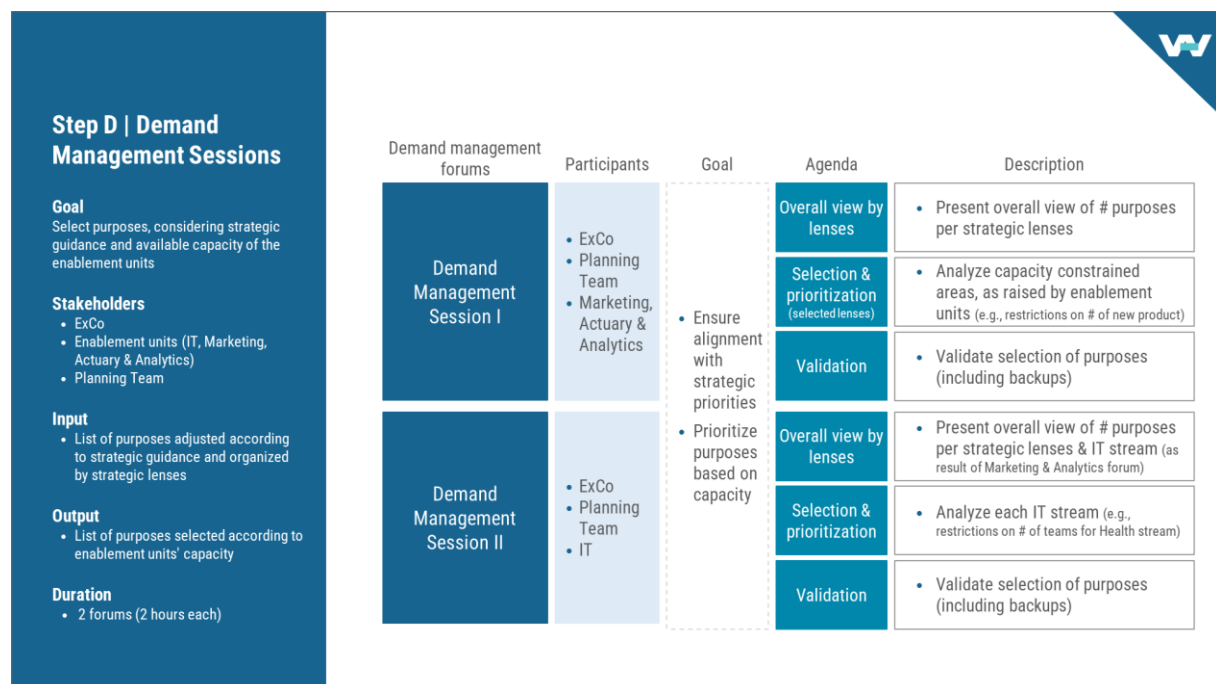


Figure 4.21 - Step D of the ABP process

In order to better prepare these demand management sessions, each enablement unit must follow four fundamental steps:

Enablement units' key preparation steps

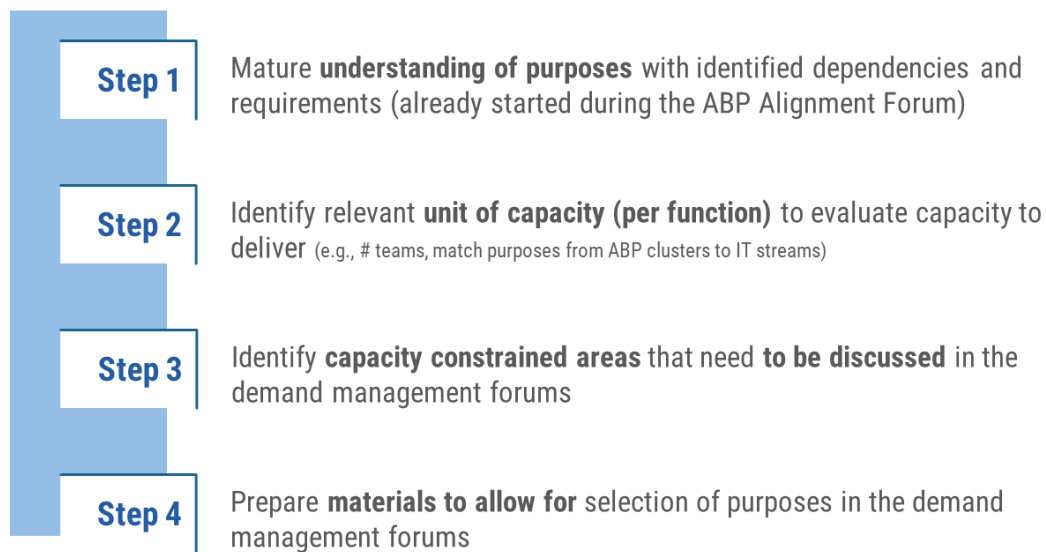


Figure 4.22 - Four key steps to prepare the demand management sessions

First, it is critical to ensure that each enablement unit fully understands all the purposes in which it is involved and that all the requirements have been identified. In particular, the enablement units must identify which teams will need to be involved in each purpose and their corresponding level of effort. The second step is to identify the unit of capacity needed to develop the purpose. For instance, is there a need to involve an entire IT team, or one resource working a few hours per week is sufficient to fully meet the purpose's requirements?

After these initial two steps, it is now essential to identify which areas/teams from the enablement units are suffering more demand and are capacity constrained. The purposes involving these areas will need to be discussed and prioritized in the demand management sessions since there is not enough capacity to develop all of them. In the case of the IT unit, let's assume that the developing teams are organized in streams that are similar to the ABP clusters. This similar structure would facilitate the discussions as purposes would be mostly competing with other purposes from the same cluster, and the priority levels identified during step B2 (*critical* or *important*, for each purpose) can be used in the selection.

Finally, the last step is to prepare all the materials that will allow the selection of purposes and facilitate the decision-making process (e.g., the presentation slides that will support the sessions).

The agenda for the two demand management sessions is relatively similar (Figure 4.21). First, there is a presentation of the purposes involving the enablement units distributed across the strategic lenses. Then, the ExCo analyzes all the areas from the enablement units that are

capacity-constrained and therefore need to reduce some of the purposes involving them. Possible capacity restrictions can be, for example, the number of new products that the marketing unit can launch in a year, or the number of IT teams in a particular stream. Finally, the purposes are prioritized across three levels:

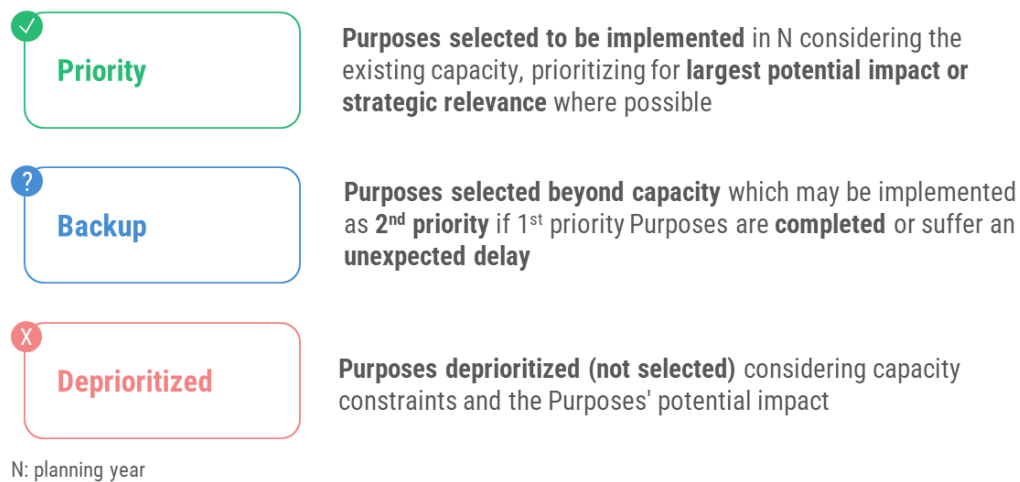


Figure 4.23 - Three levels of prioritization in the demand management sessions

The purposes included in the first level are the ones selected to be implemented in the next planning year (year N). The purposes included in this level should have higher strategic relevance and impact. The second level is the *backup* purposes, which can be considered as seconds priorities. For these purposes, at the moment, there is not enough capacity from the enablement units to implement them. However, if the first priority purposes are completed or suffer a delay, the backup purposes will be the next in line to be implemented. Finally, the last priority level belongs to the *deprioritized* purposes. These purposes cannot be implemented considering the existing available capacity and are likely purposes with less strategic value for the company.

4.3.5 Step E - Refine Purposes & OKRs according to prioritization

Step E is for each unit and cluster to refine their purposes and OKRs after the strategic guidance and the demand management sessions. Since these sessions will deprioritize some purposes, the units and clusters will likely need to refine their remaining purposes and OKRs accordingly.

For example, suppose that one business unit had a purpose of launching a new product in the upcoming year. However, during one of the demand management sessions, this purpose was deprioritized due to lack of capacity from the marketing unit to support that product

launch. In addition, suppose that same purpose was contributing, for example, to a GWP key result (gross written premium, or volume of sales). In that case, that key result will likely need to be adjusted considering the volume of premiums sales that was lost with the product not being launched. All of these adjustments in the units and clusters' Purposes and OKRs should be made during step E.

4.3.6 Step F - Sign-off and share annual plan of Purposes and OKRs

Step F is the closing step of the ABP. It aims mainly to present next year's plan of purposes and OKRs for every cluster and standalone unit. This plan is presented in the ABP Closing Forum, whose agenda is presented in Figure 4.24:

Step F Sign-off and share annual plan of Purposes and OKRs			
Goal Close the process and present next year's plan of purposes and OKRs			
Stakeholders - ExCo - All Units (Executives) - Planning Team			
Input - Presentation for ABP Closing Forum - List of OKRs and purposes adjusted during step E and according to outputs from strategic guidance and demand management sessions			
Output Annual plan of purposes and OKRs			
Duration 1 forum (3 hours)			
	Agenda	Presenter	Description
Share key messages for next year's plan	Quick recap of planning journey	ExCo & Planning Team	Present strategic imperatives, ABP iterative process (W-approach) and next steps
	Share next year's key goals		Present growth, cost & profitability targets
	Present next year's Purposes overview		Present purposes overview by strategic lens and by cluster
Present next year's plan highlights	Clusters highlights	Cluster Leaders	Present each cluster's key targets and most relevant purposes
	Stand alone units highlights	Unit Executives	Present each standalone unit's most relevant purposes
Closing remarks	Process wrap up and final messages for next year	ExCo	Provide brief evaluation of the ABP process and share key messages for next year

Figure 4.24 - Step F of the ABP process

Having this forum with all executives and the ExCo is valuable for several reasons. First, the ABP Closing Forum is a good moment to look ahead to next year's plan and ensure that all units are aligned with it and know each other's priorities. In addition, giving the stage to each cluster and unit will encourage their accountability to accomplish the purposes and OKRs plan.

MODEL IMPLEMENTATION AND EVALUATION

After designing the ABP model and detailing all its stages, it is now time to implement and evaluate it in the real-life context of an insurance company. In this case, Fidelidade Insurance Group, a leading insurance group in the Portuguese market, was chosen to implement the ABP model.

Therefore, this chapter will start by describing the Fidelidade Insurance Group (also referred to as FIG or Fidelidade in this paper) and conducting an initial diagnostic of the group's strategic planning.

After that, there is the implementation of the ABP in Fidelidade. Some adjustments were made to the model's initial design to facilitate its implementation in Fidelidade. In addition, a digital tool was also created to support the ABP's implementation in the organization.

After the implementation, the ABP model is then evaluated through a survey and quantitative and qualitative analyses.

5.1 Description and diagnostic of the insurance group

This section will briefly describe the insurance group studied in this case study, the Fidelidade Insurance Group. In addition, there is also a diagnostic that was conducted to the group's current planning processes and forums that identified the major improvement opportunities.

5.1.1 Description of the insurance group

Fidelidade has over 200 years of history, emerging as the merger of several leading insurers in Portugal. Its roots date back to 1808 when Bonança was established. In 2001, Bonança was merged with another leading insurer, Império, originating the market leader Império-

Bonança. At the same time, another two insurers were merged, Fidelidade and Mundial-Confiança, establishing Fidelidade-Mundial. Finally, in 2012 Fidelidade-Mundial and Império-Bonança were merged to create the undisputed market leader, Fidelidade (Figure 5.1).

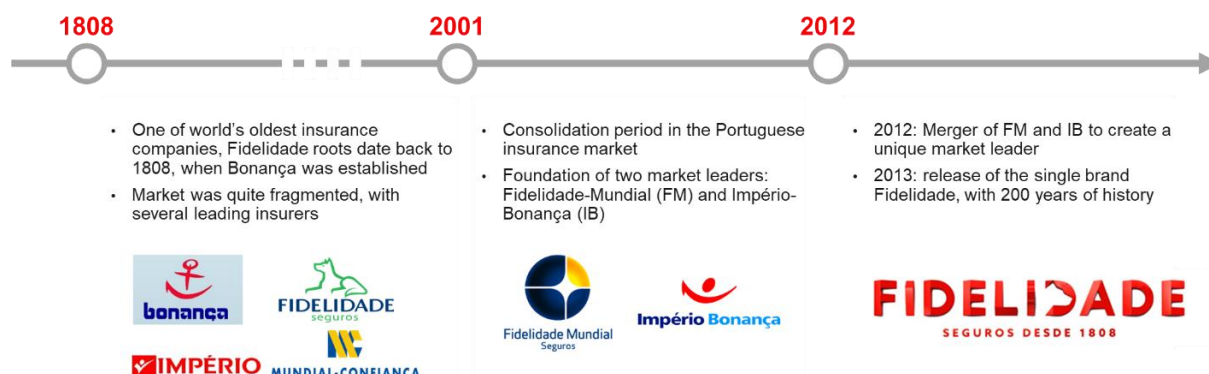


Figure 5.1 - Fidelidade's history

The Fidelidade Insurance Group has two reference shareholders, Fosun and Caixa Geral de Depósitos (CGD). Fosun owns 84,99% of FIG and is a world-class Chinese investment group present in various industries focusing on insurance. CGD, which owns 15% of FIG, is a Portuguese state-owned bank and the largest financial institution in Portugal. The remaining share of 0,01% belongs to Fidelidade's workers (Figure 5.2).



Figure 5.2 - Fidelidade Insurance Group Shareholder Structure

Fidelidade Insurance Group includes both insurance companies and insurance-related service companies. The insurance companies offer health, non-life, and life insurance through traditional channels, via Multicare and Fidelidade, and through direct/online channels, with OK! Teleseguros. The FIG also has international insurance companies such as La Positiva and Garantia (Figure 5.3).

In addition to the insurance companies, FIG also has several companies that provide different services in healthcare, assistance, health and safety, asset management/ real estate, loss adjusters, and auto repair (Figure 5.3).

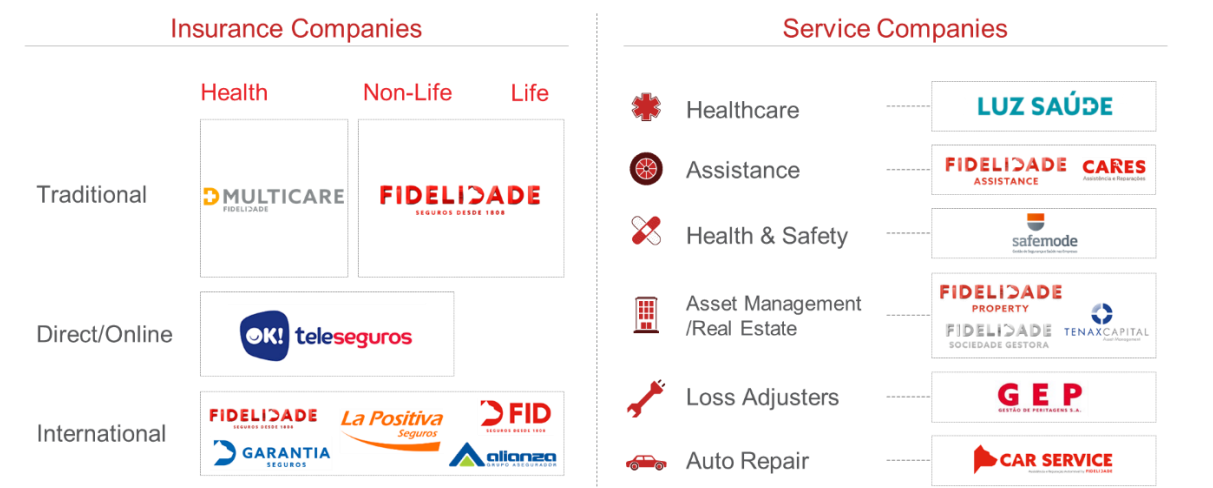


Figure 5.3 - Companies of Fidelidade Insurance Group

Fidelidade has a clear international growth ambition materialized by exploring four regional clusters: Europe, Sub-Sahara, Latin America, and Asia (Figure 5.4). Moreover, this international growth strategy has been reinforced in the last years by acquiring new competitive companies such as La Positiva in LatAm, SIM in Mozambique, or The Prosperity Company in Liechtenstein.

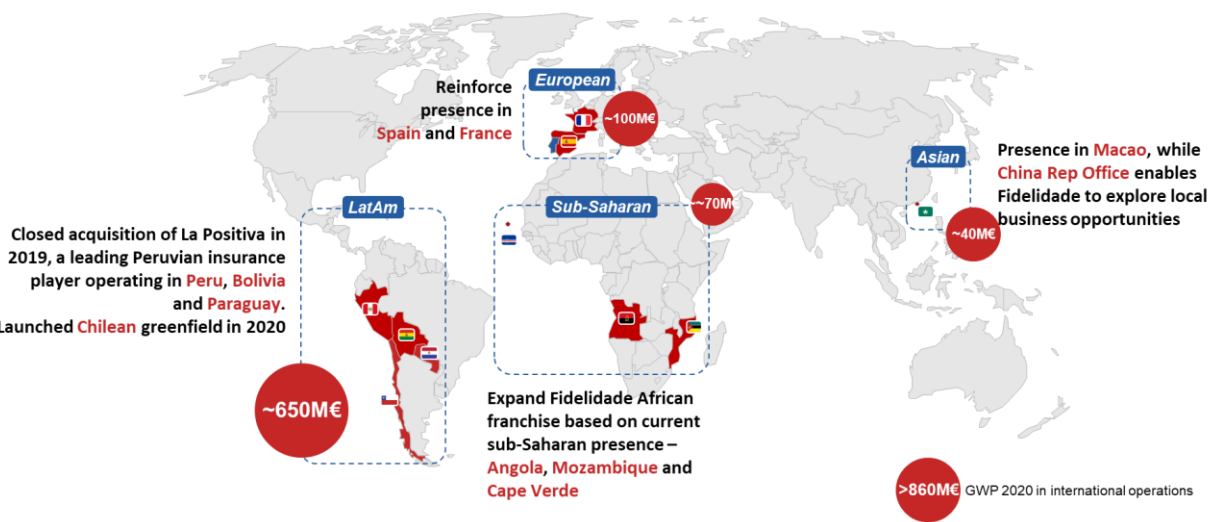


Figure 5.4 - International expansion of Fidelidade

Fidelidade has a full spectrum insurance offer, including all relevant Life and Non-Life lines of business such as Motor, Home, Health, Workers' Compensation, Accidents, Travel & Leisure, PETs, Savings, and Life Risk & Annuities (Figure 5.5).

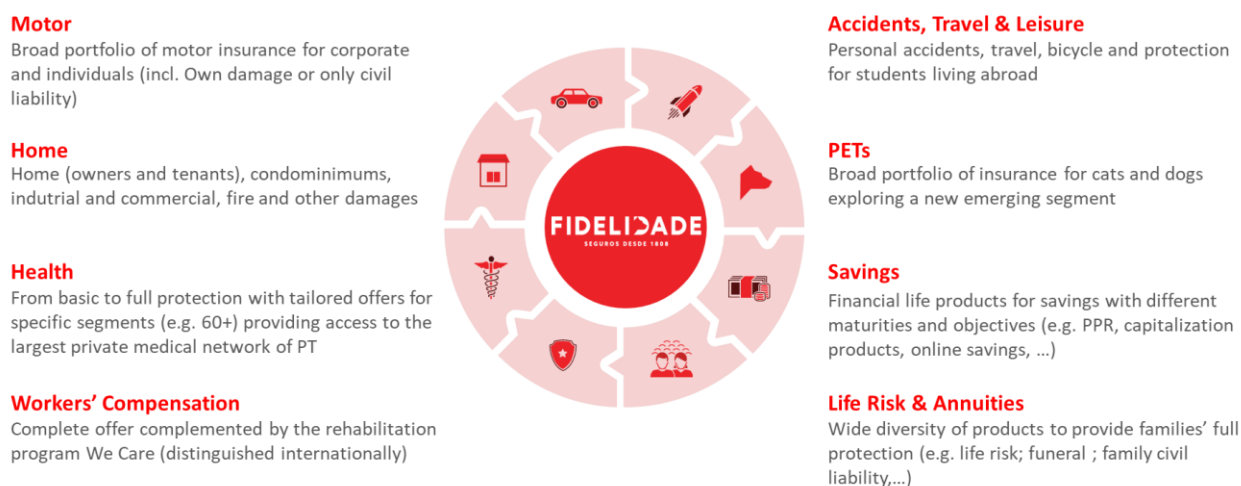


Figure 5.5 - Fidelidade's full spectrum insurance offer

Fidelidade is amongst the largest Iberian insurance groups, with 3,6Bn€ in GWP (Gross Written Premium), more than 6,8 million customers, over 7000 workers, and a net income of 222Mn€ (data as of 2020). Fidelidade is also the undisputed market leader in Portugal, with a market share of 27% and leading both Life and Non-life insurance markets (Figures 5.6 and 5.7).

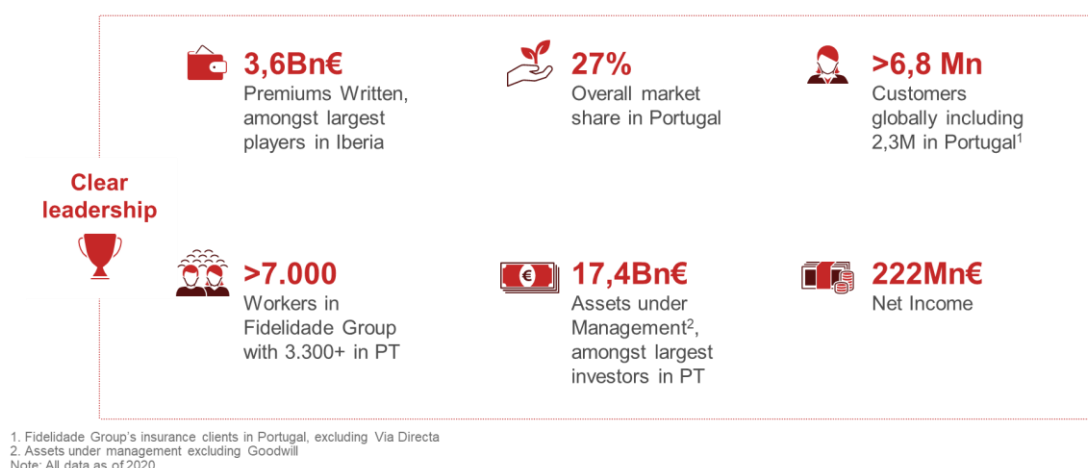


Figure 5.6 - Major performance numbers of Fidelidade Insurance Group

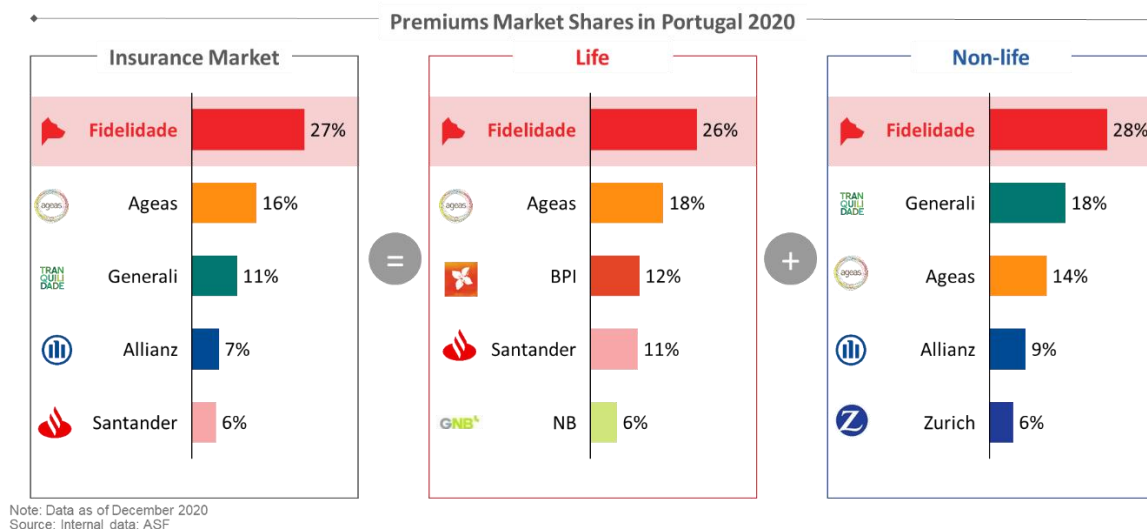


Figure 5.7 - Fidelidade's leadership position in the Portuguese insurance market

In conclusion, given Fidelidade's dimension and leading position on the insurance market, it can be considered that Fidelidade is a representative company of the insurance industry and, therefore, a suitable case to implement and validate the ABP model.

5.1.2 Diagnostic of the insurance group's strategic planning

This diagnostic was conducted prior to implementing the ABP model in Fidelidade and aimed at identifying the critical pain points and priority areas of improvement regarding Fidelidade's strategic planning. The goal was to assess if the designed model would enable the company to address those pain points and implement the identified improvement opportunities.

The diagnostic had three significant sources of data: analysis of Fidelidade's strategic planning processes, interviews with key stakeholders, and the project team's internal meetings (Figure 5.8).



Figure 5.8 - Three phases of the diagnostic process

The first diagnostic phase aimed to analyze Fidelidade's current processes that contribute to the group's strategic planning. Those processes and forums can be organized across a value chain with three phases: strategic reflection, annual corporate planning, and execution and monitoring (Figure 5.9).

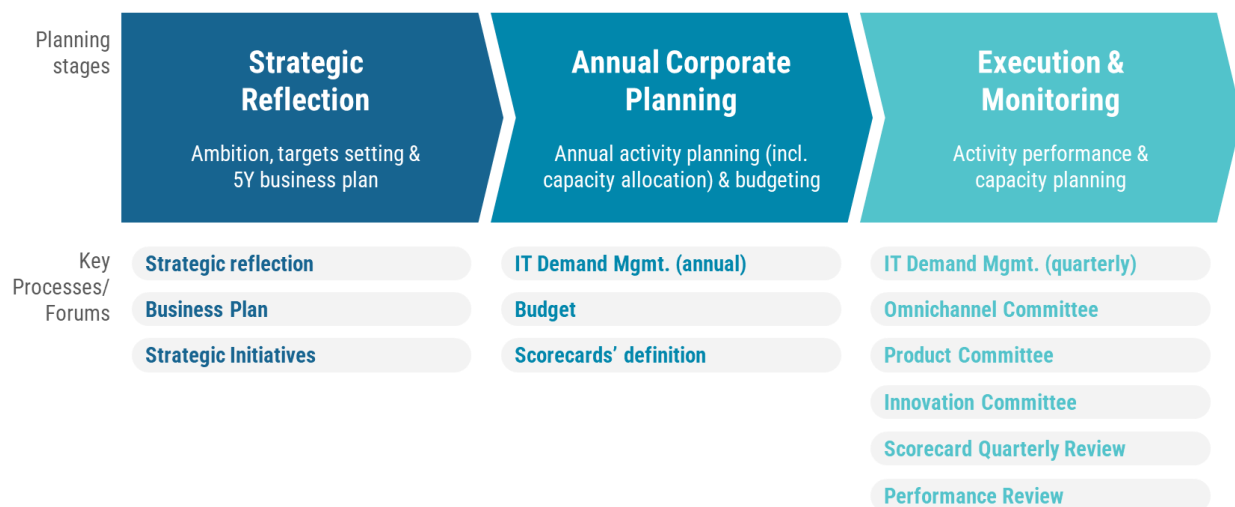


Figure 5.9 - Fidelidade's strategic planning value chain (non-exhaustive)

At Fidelidade, the planning starts with the Strategic Reflection phase, which serves as the primary input and basis for all the subsequent phases. The Strategic Reflection aims to set the group's ambition and targets for the next five years and is constituted by the strategic reflection itself, the business plan, and the strategic initiatives.

Then, the Annual Corporate Planning phase should translate the Strategic Reflection into an annual plan of initiatives along with budgeting and the definition of the scorecards of each unit. At the time, this stage was materialized by the IT annual Demand Management, the annual budget, and the scorecards' definition. Therefore, the existing plan of initiatives considered

mainly only the initiatives involving the IT department, and there was not a holistic and transversal plan that would define, prioritize, and select all initiatives, with or without IT, for all the Fidelidade Group.

Finally, in the third phase, the annual plan was executed and monitored through several processes and forums, such as marketing's Product and Omnichannel Committees, the IT Demand Management forums, among others.

The main conclusion drawn from this first part of the diagnostic was that Fidelidade had many planning forums and processes and that they could be more well connected with each other. There was some desynchronization between the different pieces, which sometimes led to misaligned decisions between them. Moreover, it was notorious that the entire organization spent much effort executing these forums and that the added value was not always entirely clear.

In conclusion, there was a clear need to develop a transversal planning and monitoring process that would link (and perhaps absorb) some of these processes to create a more aligned, effective, and simpler planning process.

After this internal analysis from the project team, it was time to hear the organization and listen to what the main stakeholders of Fidelidade had to say regarding these current planning processes. In this sense, the team reached out to more than ten executives responsible for several business, commercial, and support units.

In order to enhance the credibility of the collected information and allow the interviewees to better prepare for the sessions, the team sent a script containing the main themes and key questions for the interview. However, since it was a semi-structured interview, the session was guided according to the type of answers received from the interviewees and did not strictly follow all these themes and questions. Moreover, the order by which the different themes were approached varied and new themes might have emerged during the interviews.

The script sent to the different interviewees was the following one:

	General overview	• How would you describe the annual planning process today and what are the main improvement opportunities ?
	Strategic alignment	• Do you consider that the current process promotes alignment with Fidelidade's strategy and ensures the necessary clarity about the macro-objectives/strategic guidelines & targets ?
	Activities prioritization	• Do you believe that the current prioritization of initiatives in Fidelidade is sufficiently robust and transparent , promoting the appropriate level of focus?
	Objectives' clarity	• Do you consider that the strategic priorities of Fidelidade's different units are reflected in clear KPIs and objectives ?
	Connection with budget	• Do you consider that the impact of the planned initiatives is adequately reflected in the budget ?
	Transversal visibility	• Do you consider that there is a transversal visibility on Fidelidade's initiatives and activities?
	Capacity management	• Do you see advantages in creating a demand management process for transversal projects that incorporates other non-IT resources ? If yes, which ones?
	Monitoring	• Do you consider that there is an adequate monitoring process for initiatives and activities throughout the year ?

Figure 5.10 - Interviews' themes and key questions

The interviews aim mainly in collecting the interviewees' feedback on the current planning processes of Fidelidade and, therefore, to understand their views on key themes such as the strategic alignment of the initiatives, transversal visibility, initiatives' prioritization, capacity management, among others.

Throughout these two phases of the diagnosis and later, the project team reunited almost every day in working meetings where the interviews and analyses were digested. In addition, these sessions serve to identify Fidelidade's main pain points and consequent improvement opportunities.

In this sense, the project team decided to identify the improvement opportunities across seven critical areas of planning at Fidelidade:

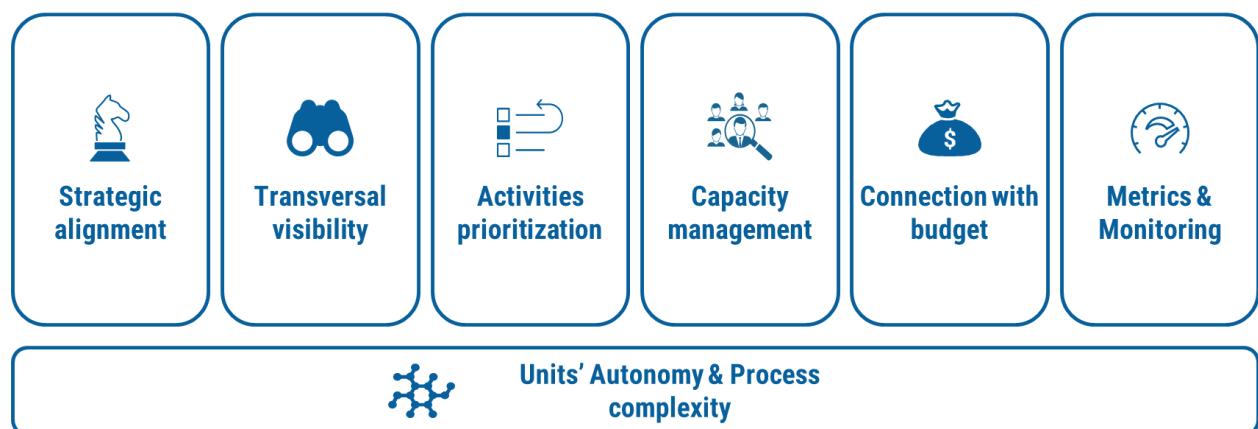


Figure 5.11 - Seven critical areas for the improvement opportunities

These areas were the ones with the most pain points identified during the interviews, and the team considered them the most urgent to address and improve in Fidelidade. In this sense, a total of ten improvement opportunities were identified across these seven areas (Figure 5.12).

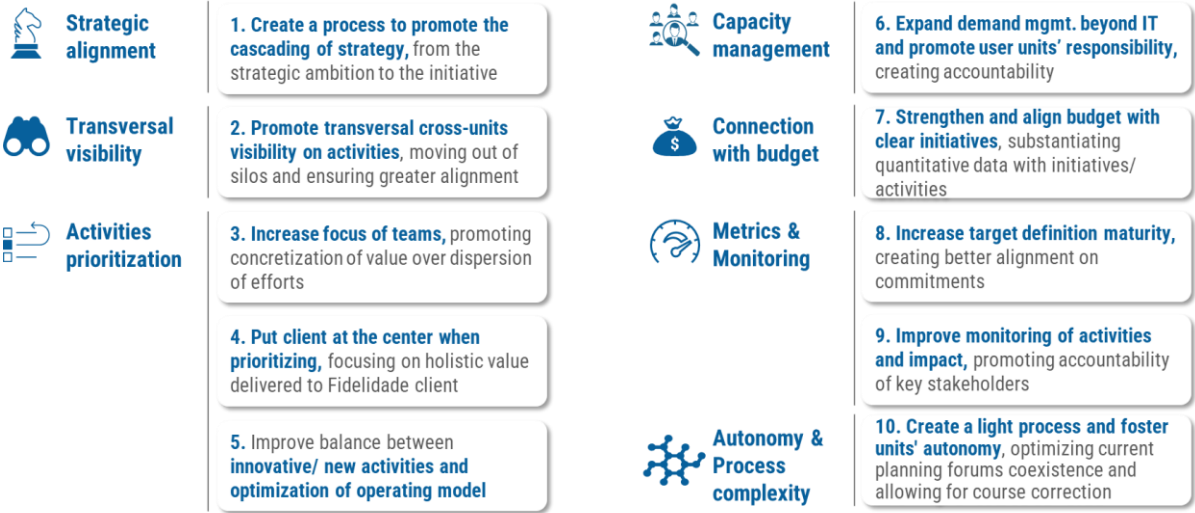


Figure 5.12 - Ten improvement opportunities identified across the seven areas

The **first improvement opportunity** is to guarantee the strategic alignment of all the proposed initiatives. This alignment should be achieved with a process that enables the "cascading" of the strategy from the high-level corporate vision and ambition until the low-level unit's initiatives, that will enable the group to achieve that vision and ambition and all the levels in between (Figure 5.13).

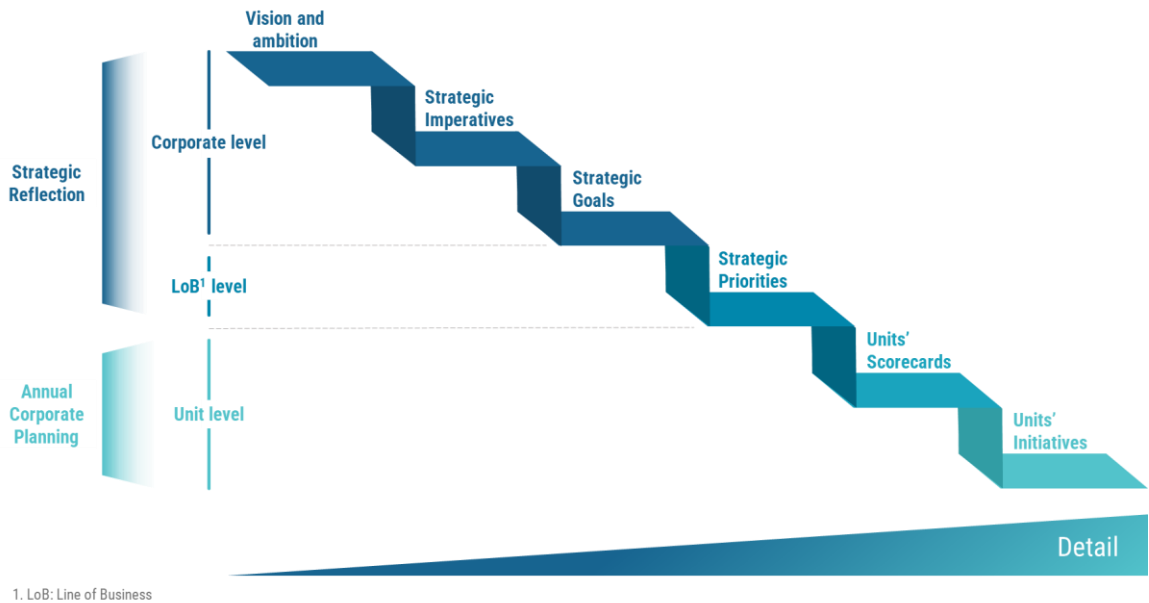


Figure 5.13 - The strategic cascade

The **second improvement opportunity** relates to the insufficient transversal visibility and alignment between the organization's different areas. Fidelidade is a vast organization with more than 40 units and ensuring that all of them are aligned and have cross-unit visibility on other's activities can be challenging. Several interviewees mentioned the need to break these silos and create a process that promotes a transversal alignment across the organization, namely between the business and support units. Moreover, this need for a greater alignment tends to increase due to the surge of more meta-products (multi-risk insurance products) that involve several units in their development and commercialization.

The third, fourth, and fifth improvement opportunities are related to the prioritization of activities.

The **third improvement opportunity** aims to increase the focus of teams and Fidelidade as a whole. It is clear that Fidelidade is currently developing a high number of initiatives simultaneously, which might be expected from a large organization that is the leader in its market and is multi-product, multi-customer segment, and multi-distribution channel. However, several interviewees mentioned that this high volume of ongoing initiatives might impact the quality of their execution and decrease the company's agility. Therefore, Fidelidade should increase its focus by decreasing the volume and developing its initiatives more consistently and effectively.

The **fourth improvement opportunity** is to put the client at the center of all the decision-making processes. Some considered that Fidelidade should continue to promote an increasing client vision over a product vision. In other words, Fidelidade must strive to align its efforts in a way that delivers increasingly more value to its clients.

The **fifth improvement opportunity** addresses the balance between developing initiatives that deliver new and innovative value and initiatives that optimize the current operating model. This is the theme already mentioned in the literature review of the ambidexterity that many companies struggle to achieve (Lindskog and Magnusson, 2021). In Fidelidade, there is a need to refine prioritization not to leave behind core operational initiatives to give way only to innovative ones.

Currently, only the IT resources have a demand management process at Fidelidade. Not managing the demand of other resources besides IT was considered as insufficient as it might create a discoordination between the demand from the business units and the supply capacity of other critical support areas such as marketing or actuary. A typical project in Fidelidade, such as the design and launch of an insurance product, involves several units with different capacity restrictions, and managing the demand and capacity of all involved parts is crucial to minimize

delays and discoordination. In this sense, the **sixth improvement opportunity** is to expand the demand management to other non-IT resources that also suffer a high demand, such as marketing, actuary, and analytics.

The sixth improvement opportunity also aims to promote greater accountability and visibility on allocating resources from the support units to business initiatives. Promoting greater involvement of the different areas in the decision-making process will enhance their buy-in on the decisions taken and increase their accountability over the projects' development.

The **seventh improvement opportunity** is strengthening the alignment between budgeting and selecting initiatives. At the time, the annual budget occurred prior to any selection of initiatives, causing the budget process to not clearly reflect the initiatives that would be developed in the upcoming year. Moreover, this calendar misalignment also implied that the selection of initiatives was majorly dictated by the budget funds allocated previously. The fact is that both processes should influence and support each other as part of the global annual corporate planning of Fidelidade. That is, the budget should allocate funds in function of the major initiatives that need to be developed in the next year, and, at the same time, the selection of initiatives needs to be restricted by the available financial funds. Therefore, the seventh improvement opportunity is to simultaneously develop these two processes to strengthen their alignment and synchronization.

The eighth and ninth improvement opportunities relate to metrics definition and activities' monitorization.

From analyzing the existing planning forums, it was clear that many initiatives did not have KPIs (Key Performance Indicators) with robust metrics that clearly demonstrated their impact. This theme was also approached during the interviews, where many executives argued that creating robust KPIs and business cases for their initiatives can be challenging. Therefore, the **eighth improvement opportunity** would be to increase the maturity of targets' definition to promote accountability on the commitments taken.

Having created strong KPIs, it is then crucial to establish a robust monitoring model that tracks them. Therefore, the **ninth improvement opportunity** is to enhance the monitorization of the activities not only throughout their development, ensuring that all milestones are completed on schedule, but also after those developments are finished. Monitoring the initiatives after their launch is vital to guarantee that their initial KPIs are met and that the company continues to grow in the correct direction.

Finally, the **tenth improvement opportunity** is to decrease the complexity of the planning processes and guarantee the autonomy of Fidelidade's units. Since Fidelidade already has a

wealth of planning forums and processes, it is crucial not to increase the existing complexity by creating long additional planning processes that require a lot of preparation and effort from all involved parts. In addition, when creating a transversal planning process, it is essential not to reduce the autonomy of each unit in its decision-making.

This diagnostic identified the key pain points and improvement opportunities of Fidelidade's planning. By analyzing the ABP model that was previously described, it can be seen that all of the ten improvement opportunities are consistent with the ABP's major goals and are addressed in the several stages of the model. Therefore, the ABP model was considered a highly suitable model to implement in Fidelidade and address its major needs.

5.2 Implementation of the ABP Model

This section will detail the implementation of the ABP model in Fidelidade and the major steps that were taken to promote a more successful implementation of the model.

First, the model needed to suffer some adjustments to make it more suitable to the company's already existing planning process and forums.

Secondly, a digital tool was created to support the execution of the process and promote greater communication between the several units involved.

Finally, the first release options of the model were analyzed, and a set of key elements for a successful implementation were also established.

5.2.1 Model adjustments for implementation

After analyzing the ABP model and all its stages, Fidelidade decided to approve the entire process with no significant changes, except for one regarding the OKRs.

At the time, Fidelidade already had a Scorecards process in place where each unit defined their annual objectives that were monitored monthly throughout the year. Despite agreeing on the benefits of the OKRs, namely their ability to promote autonomy and alignment simultaneously, it was considered that they would have a high degree of overlap with the Scorecards. Therefore, the OKRs were dismissed from the ABP process. Instead, it was considered that each unit should simply define its annual objectives during the ABP process that would then be integrated into the Scorecards process.

Therefore, the process's steps B, E, and F were redesigned, replacing the OKRs with the annual objectives, and Template 1 was also updated (Figure 5.14 and 5.15, respectively).

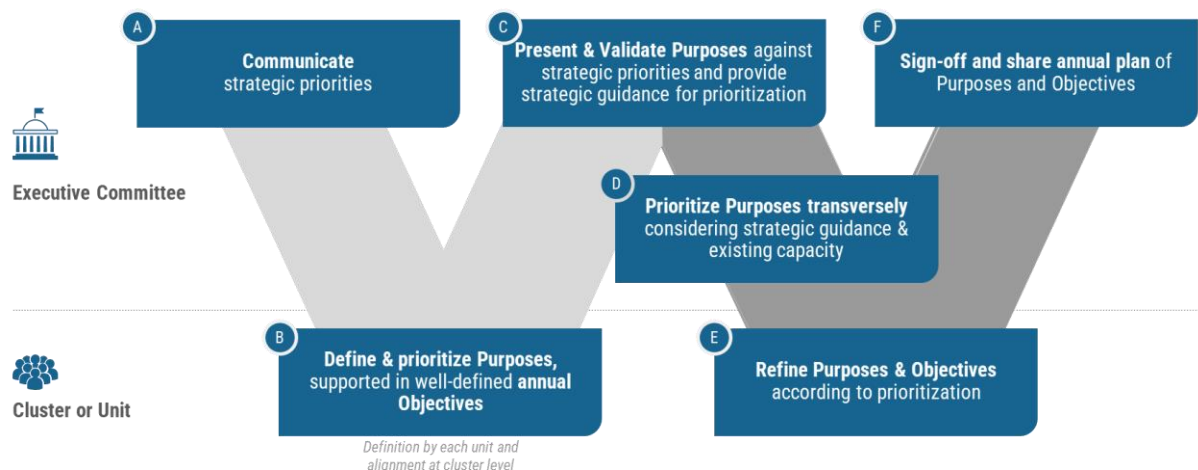


Figure 5.14 - ABP W-shaped model after Fidelidade's adjustments

Health | Annual Objectives & proposed Purposes

Annual Objectives		Annual Purposes				
		Strategic priority	Proposed purposes	Impact KPI (within 1 year of implementation)	Objectives	Units involved
01	Achieve A M€ of GWP	Digitalization & automation of processes	Simplify & digitalize reimbursement mgmt. process	FTEs: -X	02, 04, 05	Analytics, IT, Compl., Marketing
02	Improve combined operating ratio to B%		Foster dematerialization of paper and document optimization	Paperless docs: X%	02, 03	IT
03	Achieve Health claims ratio of C%	Diversification of offer	Launch new products & coverages for standard customer segment	Annual GWP: +X M€	01	Marketing, IT, Actuary
04	Improve customer satisfaction index to D	Strategic priority —	...	...	...	...
05	Reduce costs to E M€		...	...	...	...
0...	...		...	...	...	...

Figure 5.15 - Template 1 after Fidelidade's adjustments (illustrative)

In addition, it was also suggested that the existing guidelines for the Scorecards' definition should be used in the unit's annual objectives definition that will occur during step B1. These guidelines provided a set of standard objectives in function of the unit type (commercial, business, financial/risk, support, or subsidiaries), and the objectives' nature: budget linked, operational, and initiatives linked (Figure 5.16). Defining objectives shared by two units or more was also encouraged to promote greater alignment and share of synergies.

Objectives may be shared by 2 or more units					
Objectives by Type of Unit					
	Commercial	Business	Financial/Risk	Support	Subsidiaries
Budget linked	- Life Financial budget sales - Life Risk budget sales - Non Life budget sales - Technical Margin - Budget Costs	- LoB sales budget - LoB claims ratio - Budget Costs	- Income Budget - Budget Costs	Budget Costs	- Sales Budget - Budget Costs - Budget Combined Ratio - Budget Net Income
Operational (examples)	# policies/# FTE¹ - Premiums/# FTE¹ - SLAs² - Churn ratio - Other	- SLAs² (claims opening; quotes) % automation # new products - Other	- SLAs² (reporting) % automation - Other	- SLAs² (deliverables) - NPS³ / Surveys % automation/digital - Other	# policies/# FTE¹ - Sales /# FTE¹ - SLAs - NPS/Surveys - Other
Initiatives linked	KPIs included in ongoing initiatives (e.g. ABP Purposes)				

1. FTE: Full-time Equivalent
 2. SLA: Service-Level Agreement
 3. NPS: Net Promoter Score

Figure 5.16 - Guidelines for the annual objectives' definition

Finally, regarding step B2 and the previous cluster OKR alignment, it was decided that each cluster should now align on its main objectives for the next year, considering each cluster unit's individual annual objectives.

5.2.2 Development of a digital supporting tool

An online digital tool was created to support the process and facilitate its implementation. This tool was created using only Microsoft tools, such as Sharepoint lists and Power Apps. The creation of this tool was due to two main reasons.

First, there was a need to reduce the level of bureaucracy that the ABP might imply and, therefore, found a simpler and more agile way for each unit to develop and share their purposes and annual objectives with the ABP supporting team and the rest of the organization.

Secondly, there was an intention to promote a greater alignment between all units right from the beginning of developing their purposes and not only on the several forums and sessions of the ABP. Creating an online tool where all units could observe and provide feedback on each purpose of other units they were involved in seemed like a viable solution to achieving this.

Thus, the ABP Tool was created to support all stages of the ABP, particularly step B1, where all units must develop their purposes and annual objectives. This tool enables each unit to write its purposes and annual objectives simply and intuitively, not requiring any sort of training to be fully used. In addition, it also allows each unit to visualize every purpose from

other units that have identified it as a unit involved in the purpose's development, promoting alignment and transparency between all units right from the beginning.

Figure 5.17 demonstrates the tool's front page, where there is a link to a booklet that was developed explaining every stage of the ABP process in both Portuguese and English. In addition, there is a second link to a small video tutorial that provides simple instructions on how to use the ABP Tool



Figure 5.17 - Front page of the ABP Tool

The tool was organized across five main pages: *Overview*, *Annual Objectives*, *My Purposes*, *Purposes I'm involved*, and *Purposes / Cluster*.

The *Overview* page provides precisely that, an overview of each unit's purposes and annual objectives. It is basically the tool's version to Template 1 that was presented before (Figure 5.18).

Overview			Purposes Area		Purposes Cluster	
Annual Objectives			My Purposes	Purposes I'm involved		
Annual objectives			Annual purposes			
Objective	Description	Var. '21	Purpose	KPI 1	KPI 2	
Objective 1 title		X	Purpose 1 title	X	X	
Objective 2 title		X	Purpose 2 title	X	X	
Objective 3 title		X	Purpose 3 title	X	X	
Objective 4 title		X	Purpose 4 title	X	X	
Objective 5 title		X	Purpose 5 title	X	X	
Objective 6 title		X	Purpose 6 title	X	X	

Figure 5.18 - Print of the *Overview* page in the ABP Tool (illustrative)

In Figure 5.18, there is the *Annual Objectives* page. On this page, each unit can upload its annual objectives, including the description (title) of the objective, the target for year N (2022, in the picture), and the variation of that target considering the previous year's value (2021, in the picture). Each unit can also edit their objectives after they have been created (pencil icon), delete them (trash icon), or create a new one (*New* button).

Overview		Annual Objectives		Purposes Area		Purposes Cluster	
				My Purposes	Purposes I'm involved		
Objective 1 title				Area	Unit 1		
Area Unit 1				Description	Objective 1 title		
Variation '21: X				Target 2022	Y		
Objective 2 title				Variation '21	X		
Area Unit 1							
Variation '21: X							
Objective 3 title							
Area Unit 1							
Variation '21: X							
Objective 4 title							
Area Unit 1							
Variation '21: X							
Objective 5 title							
Area Unit 1							
Variation '21: X							
Objective 6 title							
Area Unit 1							

In the *My Purposes* page, each unit can create, edit, delete or visualize all of its purposes (Figure 5.20).

Figure 5.20 - Print of the *My Purposes* page in the ABP Tool (illustrative)

In the *Purposes I'm involved* page, each unit can visualize all the purposes from other units that have identified it as "Other main Units involved." In addition, it is also possible to download the list of purposes to an Excel sheet (*Export to Excel*/button) to facilitate the visualization and analysis of the different purposes (Figure 5.21).

Figure 5.21 - Print of the *Purposes I'm involved* page in the ABP Tool (illustrative)

Finally, Figure 5.22 pictures the last page, the *Purposes / Cluster* page. On this page, the cluster units can visualize all the purposes created by the remaining units of their cluster (even if they were not identified as "Other main Units involved"). The sharing of the purposes between the cluster units promotes a greater alignment and visibility inside the cluster. In addition, it also facilitates the cluster sessions as the cluster units are aware of the other purposes of the cluster prior to the meetings.

Overview		Annual Objectives		Purposes Area		Purposes Cluster	
				My Purposes	Purposes I'm involved		
Purpose 1 title Area Lider Purpose 2 title Area Lider Purpose 3 title Area Lider Purpose 4 title Area Lider Purpose 5 title Area Lider Purpose 6 title Area Lider	Area	Cluster		Priority level			
	Purpose						
	Strategic Goal			Strategic Priority			
	Unit Objective			Value Created			
	Leader					Target (1 year)	Steady State
	Milestones			KPI #1			
			KPI #2				
Other main Units involved							
Relevant Context			Visible inc. cost				

Figure 5.22 - Print of the *Purposes / Cluster* page in the ABP Tool (illustrative)

5.2.3 First release options and implementation key elements

After the approval of the ABP model in June 2021, it was immediately decided to implement it in that same year, starting in July 2021. However, since it was a transversal process that would impact all levels of the organization, several options for the ABP's first implementation were considered (Figure 5.23).

Implementation variables		Options to be considered	
Units Define scope of units to be included in 1st release	➤	All units	Selected group of units (e.g. business units)
Steps Define process steps to be implemented in 1st release	➤	All steps	All steps, except step D (demand management sessions)
Timing Define implementation timings for 1st release	➤	Jul-Oct (fully aligned with budget)	Jul-Dec (partially aligned with budget)

Figure 5.23 - First release options for the ABP

The first release options can be divided across three main implementation variables: scope of units to be included, process steps to be implemented, and implementation timings.

Regarding the scope of units, the decision was between including all Fidelidade Insurance Group units and companies or, in opposition, selecting a particular group of units (e.g., only the business units or only some of the clusters).

Then, there was also the option to not implement the process entirely but only some of its steps. One of the options considered was not implementing step D since the IT unit already had its internal annual demand management forums.

Finally, the implementation timings were also taken into account, namely the ABP's alignment with the budget process, which was one of the goals for the new model. Fidelidade's budget process occurs annually between September and October. Therefore, the two available options were:

- Fully implement all stages of the ABP before the ending of the budgeting process (implement between July and October). In this case, both processes would be fully aligned; or
- Stretch the timings in the first implementation and deploy the ABP from July until December. In this case, only some stages of the ABP would coincide with the budget.

After much deliberation, it was decided to include all units and companies from the group in the ABP's first implementation (except for Luz Saúde and the international operations). This decision was mainly driven by the fact that including only a small set of Fidelidade's units would highly affect the process's ability to promote a genuinely transversal alignment and focus, as some units would be left out. Therefore, despite the additional high effort, it was decided that all units should be included to allow the process to deliver its true value for the organization.

Regarding the process steps that should be implemented, it was also decided that all steps should be included in the first release. The only step that could be left out was step D. However, that was not advisable as adjusting the purposes' demand according to the enablement units' available capacity is one of the most critical parts of the process. Moreover, this step is essential to promote an increasing focus on the activities that will be developed in the coming year. In sum, step D was considered a sort of "reality check" stage of the process, and not including it would highly affect the feasibility of the purposes' plan execution.

Finally, regarding the ABP's alignment with the budget process, it was considered that fully implementing the process until the end of October would be too optimistic, and it would be advisable to stretch the timings a bit more in the first year.

In Figure 5.24, there is the calendar of the ABP's first implementation. In this calendar, it can be seen that ABP's steps B and C are concurrent with the budgeting process, and steps D, E, and F will occur afterward. Despite not being ideal, this is still a favorable scenario since, in this way, the strategic guidance sessions that will occur in October can take into account the budget constraints. Furthermore, this synchronization will boost the budget robustness as the allocation of funds will be majorly influenced by the purposes that need to be developed in the next year.

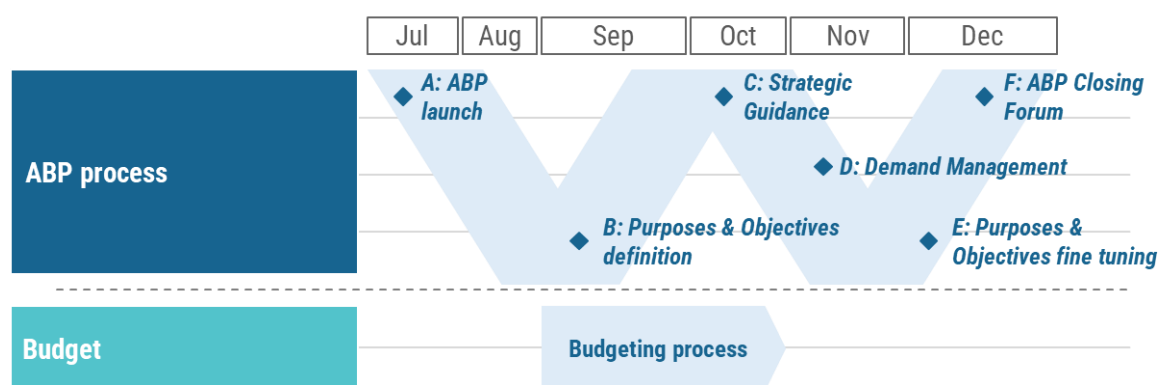


Figure 5.24 - ABP's implementation calendar

Finally, a set of key elements were established to ensure a successful implementation of the ABP in Fidelidade.

For instance, to ensure the buy-in of the entire organization on the ABP before its kick-off, the process was quickly presented to all Fidelidade's executives in July. In this way, it was guaranteed that everyone understood and agreed with the process's main goals and ambition before its implementation.

In addition, it was also guaranteed that all units participating in the ABP fully understood the process and were given the correct level of support throughout it, particularly when defining their objectives and purposes. In this sense, several one-on-one training sessions were scheduled with all Fidelidade executives during August (before the start of step B in September) and throughout the entire process.

5.3 Evaluation of the ABP Model

After implementing the agile portfolio management in Fidelidade, it was now time to evaluate it. In this sense, this section is divided into two parts.

The first part of this section aims to evaluate the model by providing the main results of its implementation, both qualitative and quantitative.

The second part provides some closing remarks and a summary of the main improvement opportunities identified during the implementation of the ABP model at Fidelidade.

5.3.1 Implementation results and model's evaluation

After settling the first release options, it was then time to implement the process and assess its success, particularly whether the ABP's initial goals have been met or not.

In this sense, this section will start by presenting some of the significant quantitative results of the model's implementation in Fidelidade. For confidentiality reasons, some of the original data were hidden.

At the end of the process's implementation, a survey was sent to all Fidelidade's executives who participated in the ABP. This survey aimed to collect their feedback by evaluating their satisfaction with the process and validating the major improvement opportunities.

5.3.1.1 Quantitative results of the ABP's implementation

Being the ABP a process whose primary purpose is to plan the implementation of the company's strategy, the majority of the analyses conducted aimed at verifying whether the proposed purposes and objectives were in line with the strategic guidelines or not. These analyses were used in several parts of the process, particularly in the purposes' prioritization moments that occurred during steps C and D.

In this sense, one of the primary analyses realized was distributing the purposes across the identified strategic lenses. This analysis was a valuable input to step C as it allowed the organization to understand where the major investments and efforts were being put on. In addition, with this analysis, the ExCo could discuss whether those investments were consistent with the group's strategy or not.

For instance, in the illustrative example of Figure 5.25, in the Channels strategic lens, the ExCo could question why there are so many purposes focusing on the Bancassurance channel and very few on the Brokers. As a result, some questions may arise, such as:

- Is the Brokers channel a strategic priority? If so, should the company place more effort and prioritize the purposes focusing on this distribution channel?
- Should there be such a high level of effort dedicated to the Bancassurance channel? If not, should the ExCo deprioritize some of the purposes focusing on this channel? Which ones?

In the ABP's first implementation, it can be confirmed that this analysis offered valuable insights to support the purposes prioritization during steps C and D. In particular, it was helpful to discuss whether the overall distribution of purposes across the strategic lenses was consistent with the company's strategy and to take corrective actions otherwise.

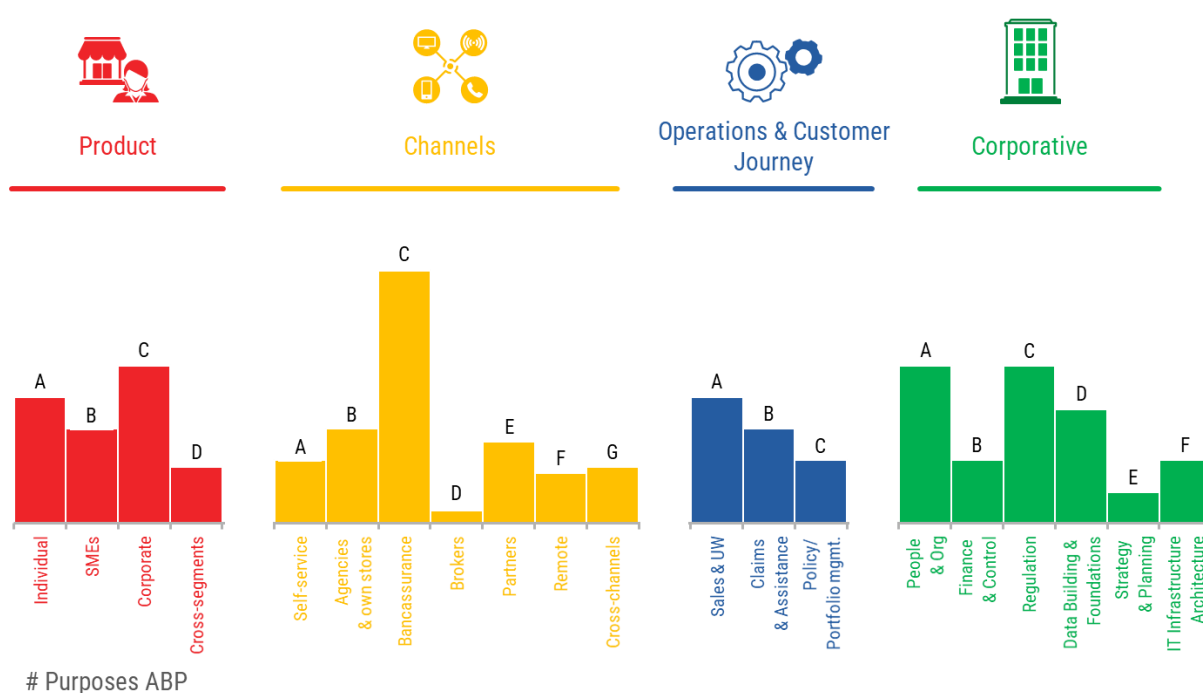


Figure 5.25 - Purposes' distribution across the strategic lenses (illustrative)

Another critical analysis was the distribution of the identified purposes across the nine units' clusters created in the ABP (Figure 5.26). This analysis was helpful to grasp which LoBs (lines of business) were planning to develop more initiatives during the next year and whether that level of effort is appropriate or not.

The graph is illustrative and does not show the real data, but it can be said that analyzing the distribution of purposes across the clusters (and LoBs) also offered valuable insights to support the purposes prioritization.

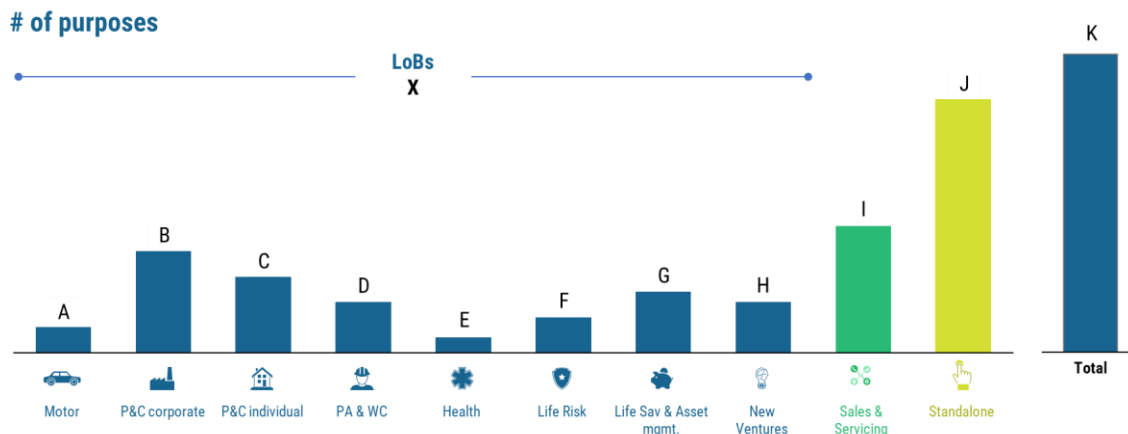


Figure 5.26 - Purposes' distribution across the ABP clusters (illustrative)

In addition to these broader analyses, several others were conducted with more detail. Namely, several purposes had their implementation costs and KPIs analyzed to assess if they should be prioritized or not. These analyses were made in synchronization with the budgeting process and were also a significant input for the prioritization sessions.

Finally, the prioritization that occurred throughout the process's stages is displayed in Figure 5.27. In this graph, it can be seen that the initial volume of purposes proposed after step B was constantly reduced throughout the prioritization moments (reduction of 27%).

Purposes ABP

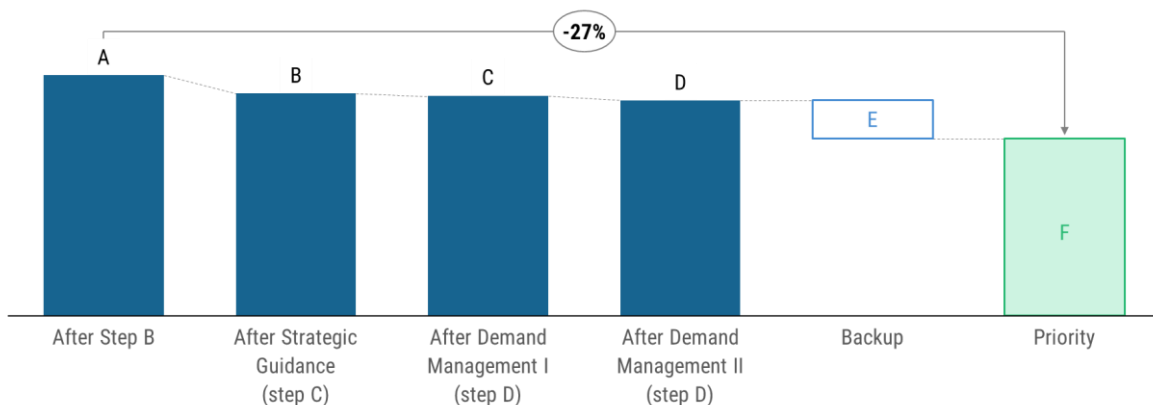


Figure 5.27 - Purposes' prioritization throughout the ABP stages

5.3.1.2 Evaluation of the ABP model

In order to evaluate the ABP model, a survey was developed and delivered to all Fidelidade's executives that participated in the process. This survey had five questions and aimed to measure the level of satisfaction with the process, assess to what extent the initial goals have been accomplished, measure the level of preparation for a future edition, and identify the more

significant improvement opportunities. Figure 5.28 demonstrates the survey form that was sent to 36 executives and had a participation rate of 75% (27 answers).

ABP feedback survey form

- 1 Overall, how satisfied are you with the ABP process that took place for the first time this year? (1 - Dissatisfied to 5 - Extremely Satisfied)
- 2 Do you agree with the following statements? (1 – Strongly Disagree to 5 – Strongly Agree)
 - 2a The ABP allowed a greater **strategic alignment** of the organization's activities
 - 2b The ABP has led to a greater **focus** of the organization for 2022
 - 2c The ABP allowed the various units to have a **transversal visibility** on the priorities for 2022
 - 2d The ABP increased the **capacity coordination** between units, promoting a successful execution of the defined Purposes
- 3 Do you consider yourself **prepared for next year's edition of the ABP** (e.g., to define Purposes and establish annual objectives)? (1 – Very unprepared to 5 – Very well prepared)
- 4 What are the **main improvement opportunities** that you identify for the ABP process? (put first the improvement opportunities that you consider most relevant; it is not necessary to select all options)
 - Improve the quality of the definition of Purposes (example: tangibility of ambition)*
 - Simplify communication*
 - Improve the support given to 6 units*
 - Promote greater quality and relevance of the discussion moments*
 - Reduce the effort dedicated to the process (example: number of preparation meetings)*
 - Optimize the calendar of discussion moments, minimizing overlap with other processes (example: budget)*
 - Strengthen the validation and prioritization of Purposes taking into account the strategic priorities and available resources in the organization*
 - Other (if yes, which one?)*
- 5 What **other considerations** would you like to provide as feedback to the ABP process?

Figure 5.28 - ABP feedback survey form

The results to questions 1, 2, and 3 are provided in Figure 5.29.

The first question was intended to measure the overall level of satisfaction with the ABP. The survey found that the average satisfaction score is 3.6/5 and that 96% of the respondents (26 out of 27) feel between satisfied and extremely satisfied with the process.

The second question aimed to assess if the process's initial goals have been met or not. In this sense, the respondents were asked whether they agreed or not with four statements that described the four major goals of the ABP: strategic alignment, focus, transversal visibility, and capacity coordination. The survey found that most of the respondents agree with the statements and that, therefore, the ABP goals have been successfully accomplished.

The third question wanted to assess the level of preparedness of Fidelidade's executives for a future edition of the ABP. Since much effort was dedicated to training and supporting all units during the process's first edition, the ABP supporting team wanted to evaluate whether the executives feel well prepared for the next ABP, particularly in defining their units' objectives and purposes. The survey found a preparedness score of 3.8/5, which is close to being well prepared (4/5).

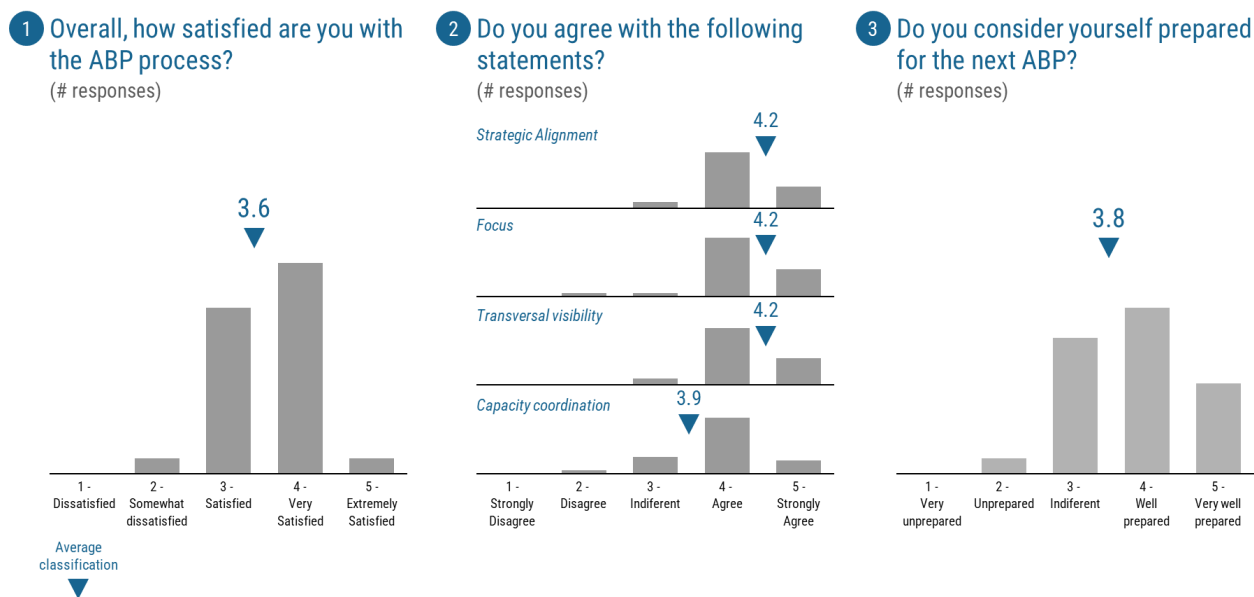


Figure 5.29 - Questions 1, 2, and 3 results

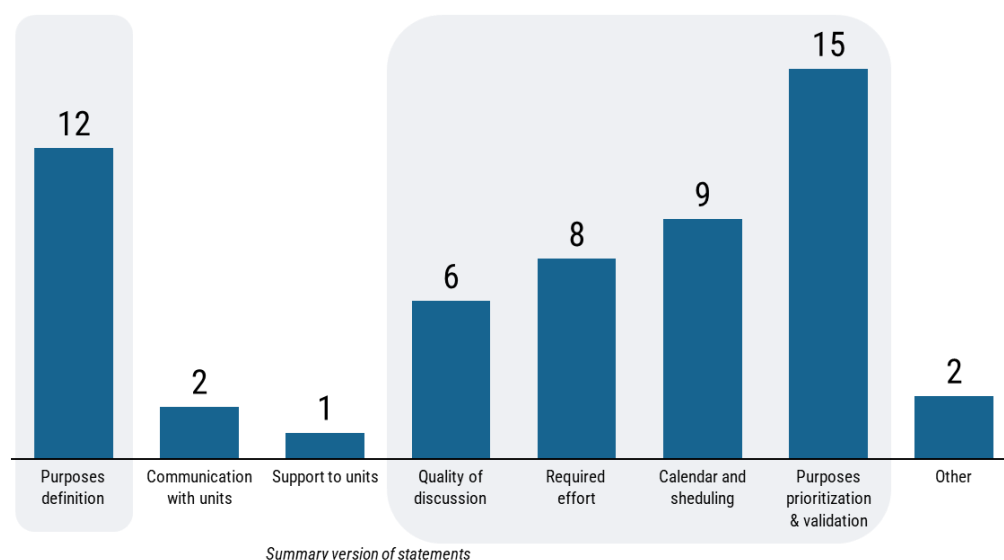
The fourth question aimed to identify the process's most significant improvement opportunities in the eyes of Fidelidade's executives. In this sense, a set of seven improvement opportunities were identified across the following themes:

- Purposes definition;
- Communication with units;
- Level of support given to the units by the ABP support team;
- Quality of the discussion moments;
- Level of effort required by the process;
- Calendar and scheduling of the process's stages; and
- Purposes prioritization and validation.

In the survey, the respondents were asked to rank the improvement opportunities according to their relevance. The respondents could also add another one if they intended to. In this way, it was possible to assess the overall relative importance given to each improvement opportunity.

In Figure 5.30, it can be seen that the improvement opportunity that was considered more relevant was the one regarding the purposes' prioritization and validation. After that, several respondents also attributed high relevance to improving the purposes' definition, optimizing the calendar and scheduling of the discussion moments, minimizing the process's required effort, and improve the quality of the discussion moments.

4 What are the main improvement opportunities that you identify?
 (please rank the available options)
 (responses weighted according to the stated preference¹)



1. Responses are weighted according to the stated preference order: from 8 points if ranked in the 1st place to 1 point if ranked in the 8th place; then normalization was performed so that the least stated preference equals 1

Figure 5.30 - Question 4 results

Finally, the fifth question aimed to collect richer and more interpretive feedback by allowing the respondents to give their own answers. This question was not mandatory and was answered by 11 respondents (41%). As expected, this question provided all types of answers. However, most respondents only expressed their satisfaction and congratulated the ABP Planning Team on their good support throughout the process (which again verifies the high satisfaction level obtained in question one). Nevertheless, others did provide additional feedback and gave more interpretive opinions about the ABP. Some of the topics mentioned were the following:

- Rethink the organizational perimeter of the process, namely the allocation of units in the different clusters;
- Improve the cost/benefit analysis of the different purposes, prioritizing those with more significant impact;
- Strengthen the process of building impact KPIs, namely in purposes focused on operational improvements;
- Ensure greater transversality in the purposes, since some focus on different dimensions of the same objective.

5.3.2 Closing remarks and main future developments

This section is a summary of the main future developments identified during the implementation of the ABP (Annual Business Planning) model at Fidelidade. This summary also provides some practical and more specific closing remarks for Fidelidade's organization. These final considerations will certainly be helpful for a future edition of the ABP in Fidelidade or any other organization.

Strengthen the cascading logic from strategy to execution

One of the initial goals of this model was to foster greater adherence to strategy by creating a clear alignment between the units' purposes and the group's strategic priorities. As the survey confirmed (with a score of 4,2 out of 5), this first implementation of the ABP in Fidelidade was very successful in this matter and a significant improvement over the past.

Nevertheless, the cascading logic from strategy to execution was not always clear and could still be strengthened in some areas. In addition, the process would also benefit from having additional mechanisms to assess and compare the strategic relevance of the proposed purposes. In this sense, the literature described some solutions that can be considered, such as Multiple Criteria Decision Making (MCDM) or the Analytic Hierarchy Process (AHP). These solutions can assist in the assessment of the strategic relevance of the purposes and strengthen their validation and prioritization, which was considered in the survey as the most relevant improvement opportunity. (Romano, 2013; Samanlioglu and Ayağ, 2020).

Strengthen link with the budgeting process

Another goal of the model was to boost the budget robustness by ensuring a coherent link with the purposes. In this matter, there is still some room for improvement, particularly in detailing the purposes' incremental costs.

In this first edition of the ABP, some units could not describe the expected costs of their purposes despite acknowledging they would exist. This situation may impact the budget's robustness and makes prioritizing purposes more challenging. Therefore, all units should plan their purposes in more detail and advance to ensure that all the needed information is gathered by the time they propose them in the ABP.

Reduce the effort required by the process

The ABP can be considered a rather demanding process, as it requires several preparation meetings and working hours before each discussion moment. Moreover, the survey confirmed

this view with many executives considering that reducing the process's required effort was a significant improvement opportunity.

However, it must be said that this level of effort is expected to decrease in future editions as people become more familiar with the process. Moreover, the feedback collected through the survey is promising, as most executives considered themselves well prepared for the next edition of the ABP (score of 3,8 out of 5). Nevertheless, it is essential to continue empowering and training all units to define their purposes and objectives more autonomously and easily, which will reduce the duration and complexity of the process.

Shorten the process duration and streamline meeting sequencing

Another action that would also minimize the process's required effort is optimizing the calendar of the discussion moments. It is clear that the sequencing of meetings could be simplified and that the overlap of the ABP with other key processes could be minimized (e.g., budget).

Moreover, in some stages, the number of sessions could also be reduced. For instance, in some clusters, the two sessions of step B2 are not necessary and could be merged into one, and the ABP Alignment Forum (step C1) could be terminated since it is a long session (1 full day) and its agenda is similar to the ABP Closing Forum (step F).

Enhance the quality and standardization of Purposes

The second most voted improvement opportunity in the survey was to improve the quality and standardization of the Purposes. Essentially, there should be a greater focus on ensuring a higher degree of maturity when defining each purpose, particularly in articulating its ambition and potential impact (e.g., clear KPIs). Representing the value of each purpose clearer would trigger more impact-oriented decisions and facilitate prioritization.

However, this improvement opportunity is not new. The diagnosis carried out before the implementation of the ABP had already identified that the definition of targets and metrics could be improved. Now, after the ABP's implementation, there have been clear improvements, but there is still a long way to go. In this sense, the ABP supporting team should continue to assist and encourage the units in defining more robust business cases and impact metrics for their purposes.

Promote a higher level of cross-unit collaboration

The ABP depends greatly on the constant alignment and communication between the areas. However, this alignment between units is not always easy to achieve, particularly in large

organizations such as Fidelidade that have a multiplicity of areas. In this sense, the model is characterized by having several alignment sessions that promote cross-unit collaboration and communication. Nevertheless, it was clear from the beginning that these sessions would not be sufficient and that each unit should also be proactive in reaching out to other units, particularly when they intend to involve them in their purposes.

In this matter, despite significant improvements (transversal visibility had a score of 4,2/5 in the survey), there could still be a higher level of cross-unit collaboration, ensuring alignment and review between the units involved in the Purposes. This higher collaboration is expected to sharpen expectations around scope and level of involvement, contributing to more successful and smooth execution.

Champion accountability throughout the process

During the ABP's implementation, some units were perhaps rather ambitious in their plans and proposed more purposes than they would have the capacity to execute. Moreover, there was a tendency to categorize the purposes as *critical* (instead of just *important*) since that would improve their chances of passing in the prioritization sessions.

The true test of the units' capacity to successfully deliver all of their proposed purposes will be done after the ABP in the execution and monitoring phase. Nevertheless, early impact-based discussions at the cluster level must be triggered to ensure a more active prioritization in the first steps, promoting increased focus, boosting engagement, and reducing waste.

Advance maturity of strategic asset (re)allocation

The demand management sessions of step D are perhaps the stage in the ABP that could be improved the most. The fact is that, given the low level of detail and knowledge of some purposes, it was challenging to truly assess whether there was enough capacity from the enablement units to execute them or not. This might have resulted in a general tendency to categorize those purposes as "second priorities" (*backups*) instead of deprioritizing them. Moreover, the *backup* concept does not promote a proper focus and creates uncertainty about what will actually be developed in the coming year.

However, several solutions could be prescribed to solve this issue, being the leading one to simply increase the level of detail of some purposes and ensure a more significant alignment and collaboration between the units involved (as mentioned before).

Nevertheless, perhaps the better and more agile solution would be to redefine step D and shift its focus from prioritizing purposes to allocate capacity for each cluster or unit. In this solution, step D would allocate resources from the enablement units (teams, FTEs, etc.) to each

cluster, instead of selecting purposes. After that, based on the allocated capacity, each cluster would autonomously decide throughout the year on the purposes that have higher priority to be developed. This model would promote the autonomy of each cluster in establishing its priorities, making the decision-making process more agile and simple. In addition, the developing teams would become more stable and specialized in their lines of business.

Streamline communication with units

During steps C and D, a great deal of effort was made in communicating to the units the several decisions that were being made on their purposes. These communications were made mainly via email and not by using the ABP Tool, which would be a simple and more intuitive communication vehicle.

Another aspect that made this communication more challenging were the several purposes' categorization labels that were used throughout the different ABP stages. To give an example, in step B, units should categorize their purposes into two levels - *Critical* or *Important*. Then, in step C, the ExCo would prioritize the purposes across three additional levels - *Launch in N*, *Prepare in N*, *launch N+1*; and *Design & proposal*. Finally, in the demand management sessions of step D, the purposes were prioritized across three other labels: *Priority*, *Backup*, and *Deprioritized*. All of these different labels were considered relevant and adequate to reflect the different outputs from the discussions being made. However, there were so many that ensuring simple and clear communication with the units was challenging and sometimes even confusing.

Therefore, there is a need to optimize the communication with the units by leveraging more on the ABP Tool and standardizing purposes' classifications throughout the process.

This summary of the main closing remarks concludes chapter 5 of this dissertation. Next, chapter 6 will draw the main conclusions of this dissertation, namely by assessing if the research question has been successfully answered and establishing this study's most critical future developments.

STUDY CONCLUSIONS

This final chapter will conclude this case study on the design, implementation and evaluation of an agile portfolio management model.

First, the main research question of this dissertation will be answered. To this end, some theoretical considerations will be drawn regarding the model's agility, the model's accordance with the leading portfolio management standards, and its suitability for an insurance company.

Finally, the last part will briefly describe the main limitations of this study and the most significant future developments.

6.1 Answering the research question

This section will answer this dissertation's research question - *What could be an agile portfolio management model aligned with the standard practices and suitable for an insurance company?* - by analyzing if the ABP model that was implemented in Fidelidade is, in fact, a suitable agile portfolio management model for an insurance company. To this end, the ABP model will be analyzed across three aspects: its agility, its accordance with the portfolio management standards, and its suitability for an insurance company.

The agility of the ABP model

The ABP model embedded several agile features in its design, such as the clusters alignment, the Purposes and OKRs (Objectives and Key Results), the customer centricity, or the alignment between business and IT. Nevertheless, in some aspects, the model could still improve its agility by reducing its duration and complexity. Moreover, the units could be further involved in the several decision moments of the process.

The previous chapter has already prescribed some solutions to decrease the process's complexity and duration, such as reducing the number of sessions and training the units in defining their purposes and objectives more autonomously and easily.

Having the units and clusters more involved in the decision-making is perhaps more challenging. To become more agile, the clusters would have to be empowered and become more autonomous in their decisions. An agile model should allow the clusters to make recurring and time-critical decisions autonomously and leave the high-impact, long-lasting and critical decisions to the corporate level.

The internal structure of the company made it more challenging to ultimately achieve this. In Fidelidade, critical business supporting resources such as IT, Marketing, or Actuary have their own autonomous units and are not spread through the several business units. This creates a competition between the business units, as they need those resources to develop their key initiatives, such as launching new products or improving their operational systems. In order to arbitrate this competition, a robust process such as the ABP was implemented to prioritize and select all the initiatives. However, it would be more agile if units could do that exercise more autonomously.

The execution and monitoring phase of the ABP will play a key role in minimizing this question. As the purposes defined and selected in the ABP are periodically reviewed and generate more granular and shorter initiatives (or epics), clusters should be empowered to autonomously deliberate on their top priorities for the next cycle (typically three or four months). The corporate level would monitor the decisions and intervene only on critical strategic initiatives or to resolve potential conflicts in resource allocation.

ABP's alignment with the current portfolio management standards

The main objective of any portfolio management model should be to enable a company to finish more initiatives (or purposes in this case) by doing (less) right initiatives. In other words, to make an organization more effective in the right direction.

A company is more effective by being more focused and less multitasked. In this way, there is less waste, better resource usage, and the initiatives become more value-oriented.

A company goes in the right direction because the selected initiatives are clearly linked with the strategic direction.

The survey confirmed that the ABP model did promote an increased focus in the organization (with a score of 4,2 out of 5). However, time will tell if this level of focus is enough to actually become more effective and execute more successfully and consequently. As in before,

the execution and monitoring phase of the ABP will also play a critical role in this matter, as it will periodically review which initiatives are progressing as planned and which are behind schedule. In addition, it will also monitor whether the purposes are delivering the value and impact that was initially proposed or not.

The survey also verified that the ABP increased the strategic alignment of the organization's activities (with a score of 4,2 out of 5). In this matter, the ABP proved to be highly effective by linking each purpose with the company's strategic priorities and each unit's annual objectives. As a result, in the ABP, each purpose should have a clear value and impact on the company's strategic direction, which is extremely positive.

Moreover, the ABP was very successful in aligning the entire organization on the path moving forward, ensuring a great comprehension and engagement on the annual plan. In fact, through its several alignment sessions, either within each cluster or with the entire organization, the ABP allowed for a transversal visibility that will undoubtedly facilitate the execution of the annual purposes plan (transversal visibility had a score of 4,2/5 in the survey). This alignment was fostered by the unique W shape of this model that enabled both a top-down (ExCo to Units) and bottom-up (Units to ExCo) alignment. Moreover, the cluster units could also align with each other on the main objectives and actions for their lines of business.

In conclusion, and to answer the question, it can be said that the ABP is compliant with the main portfolio management standards but will certainly benefit from the addition of the execution and monitoring phase.

ABP's suitability for an insurance company

It can be said that the ABP would be suitable for any large corporation in the insurance industry or any other. The only aspect that made this model more suitable for an insurer was its cluster structure that was made according to the insurance's lines of business. Nevertheless, the ABP model could easily be applied in any other company, from the insurance sector or not, with no significant changes besides this cluster structure.

However, the model is more suitable for a traditional company that has a functional structure (instead of a projectized or matrix structure). These organizations typically separate their departments in silos and therefore benefit from the model's several alignment and visibility moments. Moreover, these organizations generally tend to have their support resources centralized and need a model that manages the demand from the business units.

6.2 Study limitations and future developments

This case study was executed through a single case. Since the research question was focused on the insurance industry, Fidelidade constituted a typical and suitable case to answer the research question and achieve the goals of this research project. Nevertheless, the fact that the model was applied to a single company from the insurance sector limits its validity. Therefore, the model developed in this dissertation would benefit from being applied and validated in other companies in the insurance sector (or others).

Furthermore, it can be said that perhaps the best assessment of a planning model would be evaluating if the plan developed through that model has a successful implementation or not. However, at the time this dissertation is being written, it is not yet possible to assess the success of the annual plan developed in the ABP since its implementation has just begun. Therefore, once the plan is fully implemented, additional validation would be advisable to confirm the success of the ABP as a planning model.

Several future developments have already been provided in section 5.3.2. This section summarizes the main identified improvement opportunities that are relatively simple to implement and would highly benefit the model.

However, perhaps the most significant future development would be designing and implementing the execution and monitoring phase. As mentioned before, this additional phase is highly relevant to increase the model's agility and guarantee the successful execution of the planned initiatives. Therefore, the execution and monitoring phase should address the following four key objectives:

- Review business performance in the past cycle (typically three or four months);
- Update Purposes' pipeline and share key achievements and next steps, considering the success metrics and the committed roadmap;
- Ensure quality in the definition of Epics and success metrics for the upcoming cycle; and
- If needed, prioritize Epics competing for the same capacity and manage dependencies between Epics

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AGILE - MANIFESTO, ROLES, CEREMONIES & METHODOLOGIES

Several definitions for Agile can be found in the literature. Some researchers define it more as a philosophy where agility is ultimately about creating and responding to change, recognizing people as the primary drivers for project success, and focusing on effectiveness and maneuverability (Abbas et al., 2008; Highsmith and Cockburn, 2001). On the other hand, some researchers give a more practical definition. For instance, Barry Bohem describes Agile methods as "lightweight processes that employ short iterative cycles, actively involve users to establish, prioritize, and verify requirements, and rely on a team's tacit knowledge as opposed to documentation. A truly agile method must be iterative (take several cycles to complete), incremental (not deliver the entire product at once), self-organizing (teams determine the best way to handle work), and emergent (processes, principles, and work structures are recognized during the project rather than predetermined)" (Boehm and Turner, 2005).

A.1 The Agile Manifesto

In February 2001, seventeen researchers and software experts came together to find an alternative to the existing documentation-driven, heavy-weight software development methods. In this group, there were several representatives of the so-called "light methodologies" (the previous term for agile methodologies) such as Scrum, Extreme Programming, Crystal, Adaptive Software Development, among others. They gathered for two days and agreed on the famous "The Agile Manifesto" (Highsmith and Cockburn, 2001). The Agile Manifesto consists of four values and twelve principles, which are now the basis for all Agile methods. It reads as follows (Beck et al., 2001):

"We are uncovering better ways of developing software by doing it and helping others do it. Through this work, we have come to value:

1. Individuals and interactions over processes and tools
2. Working software over comprehensive documentation
3. Customer collaboration over contract negotiation
4. Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

We follow these principles:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference for the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity - the art of maximizing the amount of work not done - is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly."

These were the fundamental values and principles that "The Agile Alliance" established in their Manifesto. There is, however, one deeper theme at the center of it. The core of all the Agile methodologies is the fundamental appreciation of the human values and culture, of putting people always at the center, both customers and developers. Thus, being Agile is about "delivering good products to customers by operating in an environment that does more than talking about "people as our most important asset" but actually "acts" as if people were the most important, and lose the word "asset"." (Beck et al., 2001).

More than twenty years have passed since the Agile Manifesto creation, and thousands of people continue to agree with it and sign the manifesto.

A.2 Agile roles

Generally, in Scrum, the most commonly used Agile methodology in the insurance industry, there are three main roles: Product Owner, Scrum Master and Development Team. Each role has a set of different responsibilities and tasks that are fundamental for project development.

a) Product Owner

The product owner is the main responsible for the project's success. This person is a highly visible figure in the organization and is responsible for planning each release. The product owner's main task is to manage the Product Backlog by working on the specifications and refining and prioritizing the features the team must develop. From a portfolio management perspective, the product owner is also the primary go-to person (Krebs, 2009; Schwaber, 2004).

b) Scrum Master

The scrum master is perhaps the role most similar to the project manager role of traditional projects (e.g., Waterfall). However, in Agile projects, the development team is self-managed. Therefore, instead of managing and leading the development effort of the project, the scrum master acts as a servant leader whose primary goal is to work for the team, ensuring that it becomes more productive and effective over time. This person implements the rules of Scrum and is responsible for planning the Sprint Backlog (a list of activities and deliverables that need to be tackled in the next sprint) and for facilitating the daily scrum meetings. In addition to implementing the rules of Scrum, the scrum master also ensures that the development effort is made according to the organization's culture and delivers the expected benefits (Krebs, 2009; Schwaber, 2004).

c) Development Team

According to the Scrum terminology, the development team is the group of persons who develop the product features through increments in each iteration or Sprint. In Agile projects, particularly in Scrum, the team takes over many project management responsibilities typical in traditional projects, as they are self-managed and plan and assign work to themselves. The

team is also cross-functional and is collectively responsible for the success of each sprint and the whole project (Krebs, 2009; Schwaber, 2004).

A.3 Agile ceremonies

Agile ceremonies are everyday management events that occur during different project phases and aim to manage the projects' unpredictability and complexity in an empirical, instead of defined (as in Waterfall), approach (Schwaber, 1997).

In the Scrum methodology, there are four main ceremonies: Sprint Planning Meeting, Daily Scrum Meeting, Sprint Review, and Sprint Retrospective (Schwaber, 1997).

a) Sprint Planning Meeting

The sprint planning meetings are sessions that the customer, the product owner, the scrum master, and the development team have at the beginning of each sprint. These sessions have two parts. The first part aims to establish the final releases and goals of the sprint. In contrast, the second part is only held by the scrum master and the development team and focuses on planning the development of the features.

In the first part of the meeting, the product owner presents the product backlog with the prioritized features that should be developed next. The product owner also answers any questions that the development team might have.

In the second phase of the meeting, the development team members estimate what can be achieved at the end of the sprint according to their previous experience and knowledge. In agile projects, the development team, and only the development team, produce the estimates without outside influence. The output of this estimation process is the Sprint Backlog, which is a list of tasks that should be developed in the next sprint (Abrahamsson et al., 2002; Krebs, 2009; Rubin, 2012).

b) Daily Scrum Meeting

The daily scrum meetings are short daily meetings that should take no longer than 15 minutes. These meetings are orchestrated by the scrum master, that typically only asks three questions to each team member:

1. What have you done since the last daily meeting?
2. What are you planning on doing until the next daily meeting?
3. What issues and impediments are you facing that prevent you from accomplishing these things?

By answering these three main questions, each team member reports to the rest of the team (and not only to the scrum master) the main deliverables and tangible results produced in the last working day. Explaining to the rest of the team the work plan for the next day also enhances work synchronization and collaboration between the team members. In addition, all the impediments that might have been expressed during the meeting are captured as a to-do list for the scrum master to solve (Krebs, 2009; Rubin, 2012).

c) Sprint Review

The sprint review is an inspect-and-adapt activity at the end of every sprint. In this session, the development team demonstrates the product increment developed in the last sprint to the client and the remaining interested stakeholders. Then, the client provides feedback on whether what has been produced corresponds to the expectations or not and, if not, suggests possible changes that would add value to the product. Therefore, this meeting indicates which features have or have not been produced according to the acceptance criteria and product definition. Finally, the product owner and remaining attendees analyze the customer suggestions and decide whether they should enter the product backlog or not (Rubin, 2012; Schwaber, 1997).

d) Sprint Retrospective

The sprint retrospective is another inspect-and-adapt activity that is a crucial contributor to the continuous improvement of the team processes. In contrast to other methodologies where the retrospectives are held only at the end of the whole project, in Scrum, the retrospectives occur at the end of each sprint and before the next sprint planning session. Therefore, by inspecting and adapting at the end of each sprint, the team can gain early and incremental learning throughout the development process and, thereby, significantly improve the project's outcome.

The sprint retrospective is only attended by the development team, the scrum master, and the product owner. While the sprint review inspects and adapts the product, the sprint retrospective focuses on inspecting and adapting the process. In a nutshell, a sprint retrospective could be summarized by answering three fundamental questions:

1. What worked well this sprint that we want to continue doing?
2. What did not work well this sprint that we should stop doing?
3. What should we start doing or improve?

Therefore, in this session, the team should analyze its working methods, identifying improvement opportunities and plans to execute those improvements. In addition, the team

should carefully analyze essential factors such as communication, tools, processes and practices, environment, and others (Krebs, 2009; Rubin, 2012).

A.4 Agile Methodologies

Several agile processes have been successfully adopted in the past in various sectors, including the insurance one. This section briefly reviews the most commonly used frameworks, such as Scrum, Extreme Programming, Crystal, and Kanban.

a) Scrum

Scrum was developed in the 1990s by Ken Schwaber and Jeff Sutherland, who define it more as a framework for agile project management than an agile process or technique (Krebs, 2009). Scrum is a framework to address complex and adaptive problems within which various processes and techniques can be employed.

The term Scrum has its origins in Rugby, where it is a method to restart the match after a rule infringement. The Scrum framework is composed by the Scrum Team that has different roles, events, artifacts, and rules. Each of these framework components has a specific purpose and is crucial for Scrum's success and usage (Rubin, 2012).

Scrum is based on empiricism, lean thinking, and iterative-incremental development. Scrum provides a simple set of rules that are easy to understand and make it highly flexible and adaptive to emerging situations. There are three empirical pillars where Scrum is based upon (Krebs, 2009; Schwaber and Sutherland, 2017):

- **Transparency:** all the work undertaken should be available for those who execute it and those who receive it. That is, the three Scrum artifacts should be visible to support critical decisions. Transparency enables inspection, and inspecting without transparency would be misleading and meaningless.
- **Inspection:** all the Scrum artifacts must be inspected along with the work being made. The cadence of Scrum's five events helps achieve that and assures that all undesirable variances and problems are detected in due time. Inspection enables adaptation, as inspecting without the ability to adapt would be pointless.
- **Adaptation:** if any characteristics of the process or product are outside of their acceptable boundaries, the process or the materials being used should be adjusted. Self-managing and empowerment are critical for adaptation as any learnings identified through inspection should be deployed immediately (Schwaber and Sutherland, 2017).

There are three different roles in the Scrum Team that have already been defined earlier: Product Owner, Development Team, and Scrum Master. In addition, Scrum has five events: the Sprint, the Sprint Planning, the Daily Scrum, the Sprint Review, and the Sprint Retrospective (Schwaber and Sutherland, 2017).

Moreover, Scrum has three primary artifacts:

- **Product Backlog:** it is an ordered list of all the requirements known to be needed in the product. The Product Backlog is dynamic and evolves with the product development as requirements are changed, taken, or added. The Product Owner is responsible for the Product Backlog.
- **Sprint Backlog:** it is a set of Product Backlog items planned to be developed during the Sprint that will enable the team to achieve the Sprint Goal. It should also include at least one high-priority process improvement identified in the last Sprint Retrospective session.
- **Increment:** it is the sum of all the Product Backlog items completed in the last Sprint along with the value of all the increments developed in the previous Sprints. The Increment should be an inspectable and done body of work that consists of a step toward a vision or goal (Schwaber and Sutherland, 2017).

In a nutshell, Scrum emphasizes the effectiveness of product management and working techniques, allowing for the continuous improvement of the product, the team, and the working environment.

b) Extreme Programming

Extreme Programming (XP) was developed in the 1990s by Kent Beck, Ward Cunningham, and Ron Jeffries as an alternative solution for the problems caused by the long development cycles of traditional development methods (Abrahamsson et al., 2002). The main difference between XP and the traditional Waterfall was that instead of analyzing, designing, implementing, and testing at the project beginning for the far future, XP does all of these activities - a little at a time - throughout the development (Beck, 1999).

Extreme Programming has seven fundamental roles in its framework (Abrahamsson et al., 2002):

- **Programmer:** writes and keeps the program code as definite and straightforward as possible;
- **Customer:** writes the stories and functional tests, deciding when each product requirement is satisfied;
- **Tester:** runs functional tests regularly;

- **Tracker:** keeps track of team estimates and provides feedback on how accurate they are in order to improve future estimations;
- **Coach:** is the main responsible for the project as a whole and guides the remaining team members in following the XP process;
- **Consultant:** is an external member that possesses the specific knowledge the team needs and guides them in solving specific problems;
- **Manager (Big Boss):** is the decision maker that keeps in contact with the team to detect and help solve any difficulties in the process.

Finally, there are several standard practices in XP, such as (Beck, 1999):

- Planning game;
- Small releases;
- Metaphor;
- Simple design;
- Tests;
- Refactoring;
- Pair programming;
- Continuous integration;
- Collective ownership;
- On-site customer;
- 40-hour week;
- Open workspace; and
- Just rules.

c) Crystal

Alistair Cockburn idealized the Crystal family of methodologies. As in the other Agile methodologies, Crystal is also based on iterative-incremental development and is heavily focused on people and communication. In addition, Crystal also promotes a continuous product and process fine-tuning and improvement, even in the middle of the iteration (Abrahamsson et al., 2002; Krebs, 2009).

In Crystal, projects are characterized by two variables: criticality (i.e., the possible losses that would be caused by defects) and the team size. That is, the higher these two variables are, the more complex the project will be. Therefore, a Crystal Clear methodology is adequate mainly for projects with low criticality and few people involved. That is, projects that require less bureaucracy and where the communication is highly effective and straightforward - small teams with five or ten members (Cockburn, 2002).

There are no specific guidelines on how to implement the different methods of the Crystal family. However, Alistair Cockburn states that the design and evaluation of methods should be done according to seven principles. These principles highlight the cost of moving to a heavier methodology and when to accept that cost (Cockburn, 2002):

1. Interactive, face-to-face communication is the cheapest and fastest channel for exchanging information;
2. Excess methodology weight is costly;
3. Larger teams need heavier methodologies;
4. Greater ceremony is appropriate for projects with greater criticality;
5. Increasing feedback and communication lowers the need for intermediate deliverables;
6. Discipline, skills, and understanding counter process, formality, and documentation;
7. Efficiency is expendable in non-bottleneck activities.

d) Kanban

Kanban is mainly used in lean production but can also be applied in software development. The main advantage of this technique is that it minimizes the Work-In-Progress (WIP) and gives a good view of the project's workflow (Anderson, 2010).

Kanban consists of having a board divided into columns representing the workflow through the software development phases, from left to right. The first column on the left is usually the project backlog or the input queue, which are the features in line to be developed. The second column is the Analysis phase containing the items being analyzed before moving on to the Development phase in the third column. After development, there is the Test phase in the fourth column and finally the Release phase in the last column on the right of the board (Anderson, 2010).

Kanban uses a set of five main properties that are essential in creating emergent Lean behaviors in organizations (Anderson, 2010):

- Minimize Work-in-Progress
- Measure and Optimize Flow
- Visualize Workflow
- Make Process Policies Explicit
- Recognize Improvement Opportunities



5th year

VASCO FRANQUEIRA DIAS

AGILE PORTFOLIO MANAGEMENT:
A CASE STUDY FROM THE INSURANCE SECTOR