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Organizational Design & Development: A Case Study to set-up a new global center of excellence in the pharmaceutical industry

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Master in Human Resources Management and Organizational Consulting

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July, 2024

BUSINESS
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Department of Human Resources and Organizational Behavior

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Resumo

Este caso de estudo pretende explorar a complexidade e volatilidade que rodeia o mundo das organizações. As mudanças emergentes geram importantes reflexões sobre o papel desempenhado por elementos-chave como a estratégia, a liderança e a cultura. Este trabalho procura refletir sobre a literatura e os pensamentos de autores reconhecidos nestas áreas da gestão, partindo do campo teórico para acompanhar a sua implementação no contexto prático. Para esse efeito, foi elaborado um caso prático que acompanhou o desenho e desenvolvimento de um novo centro de excelência de uma multinacional farmacêutica em Portugal, ao longo de 3 anos. Este enquadramento teórico, ajustado a um contexto real dinâmico e complexo, permite validar e renovar teorias vigentes na gestão organizacional.

A metodologia aplicada resulta da combinação de diferentes autores e teorias para analisar os desafios presentes nas fases de desenho e desenvolvimento organizacional desta empresa, com destaque para as suas interdependências conforme demonstrado pela observação no terreno e por conversas privadas com executivos envolvidos no processo. O caso destaca as particularidades da indústria farmacêutica, para permitir uma análise cuidada das suas contingências.

Ao destacar um exemplo concreto de uma organização emergente, este trabalho disponibiliza uma interseção da realidade teórica com o meio empresarial, possibilitando aprendizagens valiosas sobre os elementos e os agentes fundamentais para a mudança organizacional. Esta conjugação poderá, no futuro, permitir consolidar e concretizar conceitos teóricos e frequentemente vagos, bem como encorajar académicos e profissionais a cooperar sem barreiras com vista a criar organizações mais resilientes para superar os desafios e as rápidas mudanças da sua envolvente interna e externa.

***Keywords*:** Organigramas, Desenho Organizacional, Modelos organizacionais, Mudança Organizacional

***JEL Classification System*:** I15 Health and Economic Development
L22 Firm Organization and Market Structure
M13 New Firms
M14 Corporate Culture
O15 Human Resources

Abstract

This case study intends to explore the complex and volatile world where new organizations emerge and are shaped by continuous change on their elements and context, leading to multiple responses through strategy, management and culture. This work aims to leverage on existing research and ideas from renowned organizational theorists and explore their implementation in a real word organization, building a case study to analyze the design and development of a new center of excellence within a multinational pharmaceutical company in Portugal. Connecting organizational theory with a fast-changing reality is required to validate and renovate theories and transformations impacting modern organizations.

Concerning methodology, this work blends different authors and theories to navigate the challenges of organizational design and development alongside complementary research on management, strategy and culture. Literature highlighting the unique context and challenges affecting the pharmaceutical industry has been considered alongside private conversations and field observation, to study the contingencies but also the success factors to implement and develop a new organization in a super competitive and dynamic external environment.

By focusing on a concrete organization design and development scenario, this case offers an effective intersection of theory and business context, with valuable insights and findings on the critical elements and stakeholders involved. This thoughtful combination can contribute to enhance existing knowledge and establish more comprehensive and structured approaches for managing vague concepts as organizational design and development. The research and conclusions assembled may encourage further collaboration from academics and business professionals to consolidate knowledge and cope with a fast-paced context.

Keywords: Organizational Design, Organizational Development, Organizational Change

JEL Classification System: I15 Health and Economic Development
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M14 Corporate Culture
O15 Human Resources

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1. Introduction

1.1 Overview and Context

"*We live in a world of organizations"* (Mintzberg, 2023, p.1). From companies, to institutions, associations and governments, across all the core areas of a modern society including healthcare, education, justice and financial institutions. Organizations are the product of "*articulated purpose and an established mechanism for achieving it*" (Miles et al., 1978, p.547). This definition expresses the variety of purposes that can coexist in the form of organizations. This case study aims to reflect and summarize existing research about organizations design and development, exploring the main components and interdependencies, complemented by the practical case of a growing global biopharmaceutical recent set-up in Portugal. The case combines existing literature and observation in business context, to analyze and elaborate on the key organizational elements required to develop a successful organization in a highly competitive landscape where business requirements need to be integrated with social responsibility (Hamel, 2009; Santos et al., 2015).

Since the era of bureaucratic organizations and traditional management (Miles et al. 1978) until our times where self-managed organizations emerge, organizations are often represented by simplistic organizational charts as a mere demonstration of the hierarchy and levels of responsibility that often fail to capture the complexity of organizational design. Even when major reorganizations or restructurings take place, design often remains unchanged as the backbone apart from minor adjustments to individual roles (Mintzberg, 2023). This work aims to bridge this knowledge gap, by demonstrating interdependencies between various concepts inside organizations, combining research and relevant observations that shape organizations specifically in the pharmaceutical sector. It is one of world largest industries and still undergoing significant transformations over the last years due to biotechnology breakthroughs (Birkinshaw et al.2016). Organizational design field has evolved along the way with management theories, impacted by organizational strategy, culture, management and change. Over time and across authors we can find consensus that effective organizations require a consistent alignment between design and context (Mintzberg, 2023), management and culture (Chong & Duan, 2022) to enable added-value strategy and competitive performance (Porter, 1996).

McKinsey's 7S model developed in 1980's (Figure 1) provides a useful framework to comprehend and discuss organizational design beyond the structure, including systems and strategy as core principles complemented by a network of shared values, skills, style and staff. This case highlights mainly structure,

strategy and systems as core while acknowledging the roles of management style, culture of shared values and mindful of the staff and skills importance for a successful roll-out and performance.

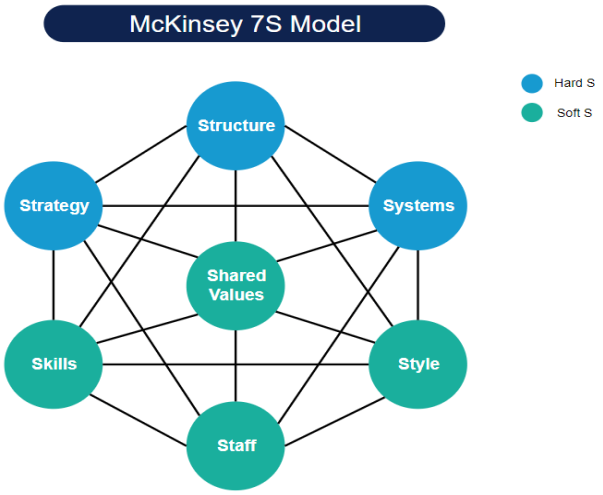


Figure 1 - McKinsey 7S Model

1.2 Research scope and objectives

Research and observations reveal that these connections and correlations on Fig.1 have a strong influence in organization design and development, as demonstrated along this case. This work summarizes theoretical backgrounds in these interconnected fields, extracting key lessons and addressing future challenges in an articulated and holistic approach, focusing on the pharmaceutical industry as illustrative due to its fast innovation, complex environment and dynamic organizations. Structure, strategy, internal elements, external context, management practices, organizational culture and change - all of these can work either as part of the solution or causes of the problem (By, 2005) and so this case proposes a deep dive into each aspect examining their connections and complementarities to design synergic organizations.

This work aims to be a useful reference of how to design and develop organizations in pharma, attending the specific business environment in Portugal. This purpose can be relevant for other companies facing similar objectives and still in the process of developing their own design or redesign strategies. Moreover, valuable lessons on organizational behavior can be provided to those studying organizational design and strategy or to determine effective development models and capabilities suitable to different scenarios (Birkinshaw et al., 2016). The case study is based on a recent organization set-up during the COVID-19 pandemic, thus addressing important reflections on navigating organizational change amid present challenges as remote work, digitalization, decentralized management and global workforce trends in a post-pandemic world that impacted severely healthcare and the pharmaceutical industry.

1.3 Structure and methodology

This exploratory case study is grounded on literature review, searching for interdependencies amongst existing theories on organizational design, strategy, management and leadership, human resources trends shaping organizations, organizational culture and behavior, and organizational change and development. These fields have been analyzed in the context of pharmaceutical industry as reference industry for this case, following an inductive theory approach. Research fields and questions were determined according to literature review, observation and emerging challenges faced by the company and environment analyzed.

Different organizational design forms and elements are presented to elaborate on the main contingencies and impacts, alongside examples of different organization strategies and change processes in the context of pharmaceutical industry. Additional information on the latest industry trends that can shape organizations design and change have been collected from news, industry and company reports.

Complementary, qualitative research was conducted including inputs from confidential conversations with senior executives involved in the process to implement the new Center of Excellence in Portugal. These discussions added unconditional value to understand the key drivers and main managerial challenges associated with CoEs being a popular organizational model amongst multinational companies to develop competencies and adapt to the competitive environment (Frost et al.,2002).

1.4 Expected impacts and contributions

Organizational design is a very complex part of building and running a structure as it deals with multiple agents in a continuous changing context and involves a series of intangible impacts that are hard to measure or anticipate (Yokoyama, 1992). Thus, the pertinence of the work hereby contained foremost for the company studied, including HR and Leadership teams at local and global level with responsibilities on organization change. Since this organization is still undergoing stabilization three years after set-up, this research can contribute with insights and recommendations for continuous organizational development.

Beyond in-company application, conclusions and impacts can also be used by external parties, including students, other researchers or private and public entities looking for examples and case studies on organizational design and development. There is often a considerable gap between the limitations of some concepts or research theories and the reality observed on the field (E.H. Schein, 1996), therefore the added value of collecting evidence from a real case in a relevant and complex business environment as Pharma. The content here contained can also be relevant for other leaders and HR professionals within this same industry, outlooking for alternatives to reorganize, restructure or design new organizations.

2. Case Study

2.1 Problem presentation

Organizations are a core part of modern society and are constantly evolving. Close to 1.5 million organizations are registered in Portugal (INE, 2022). In 2023, the country registered the highest number of new companies ever created: 51.320 entities, +5% versus 2022 (Informa D&B report cited by Carvalho, 2024). In contrast, 13.362 organizations have ceased their activity in this period, according to the same report. Additionally, INE (2022) reports that in 2022 only 75,5% of companies were still operating after one year. This percentage dropped significantly if considered data after 2 years (59%) and below 50% after 3 years. So, what is required to design, develop and manage a successful organization nowadays? This data provides preliminary hints to discuss the relevance of design and development, but we must explore beyond numbers, profits and structure charts to understand what influences organizational performance.

Despite research and progress on management theories, organizational design encompasses till today ambiguity and complexity due to the multitude and subjectivity of constantly changing elements involved (Liedtka, 2000; Martela, 2019; Mintzberg, 2023; Puranam et al, 2014; Yokoyama, 1992).

The present case seeks to focus on good practices that can emerge from organizational change to develop successful structures, identify effective management and design elements suited to the context and business strategy in place. The case covers transversal management topics and concepts but reinforces the specifics of the pharmaceutical industry, also considering its growing presence in Portugal. In the latest years several examples of multinational companies within this industry have decided to establish or enlarge their operations in Portugal including Abbot, AbbVie, AMGEN, AstraZeneca, Bayer, Boehringer Ingelheim, Convatec, Ferring, Grünenthal, Hikma, Hovione, IQVIA, Johnson & Johnson, Lilly, Organon, Roche, Sanofi, Siemens Healthcare, among others. Considering this industry growth in Portugal, the questions and research contained in the case are meant to support organization design at an initial stage but also to support management decisions on elaborating responses to address life-cycle changes over time and adapt to environmental discontinuities (Birkinshaw et al., 2016). As an illustrative example of external impacts, this case provides real insights on organizational design change during and post the coronavirus pandemic period which caused serious disruptions to global economy and demanded organizations to review and adapt rapidly their structures (Chong & Duan, 2021).

In a world shaped by organizations, this case explores the complexity of organizational design and development within the pharmaceutical industry to drive insightful conclusions for management. By bridging theoretical insights with a real case scenario, this work demonstrates how an organization can be

designed end-to-end to attend context requirements and strategic needs. Qualitative research and discussion of the key elements impacting organizational design and development are encouraged. Questions and potential gaps are detailed below in section 2.3 to guide this case review, adding constructive insights for these fields considering the specifics of centers of excellence and pharma industry.

2.2 Case Study Context

2.2.1 Company Overview

This case is based on a research-driven biopharmaceutical group with global presence in over 50 countries and products currently distributed in over 100 locations. It is a privately-owned company, still controlled by the founder's family, who have led the company across generations and throughout the different expansion moments. Despite the large size of today, with annual revenues above €2 billion, the company accelerated the establishment of worldwide subsidiaries more recently in the 1990's, which originated some fast growth and required significant adjustments in terms of structure, management, strategy and culture. The company employs now around 7.000 employees, including research and development centers in 10 countries, manufacturing facilities in 10 countries and the commercial entities alongside corporate functions in all continents. The company is highly committed to science and research, collaborating with external institutes, different biotechnology and pharmaceutical companies. The main investments and discoveries are within three core therapeutic areas: Reproductive Medicine, Urology/Uro-oncology and Gastroenterology. New technologies as artificial intelligence and machine learning, combined with innovative medical discoveries and data science are therefore key competitive advantages, demanding a workforce composed by talented and highly educated professionals.

In 2022, the company was responsible for 25% of the biological medicine products approved by the US Food & Drug Administration (FDA), anticipating new steps in terms of future growth and organizational development. For the future, the main strategy is to leverage on the existing mature portfolio to fund investments in R&D to develop differentiated therapies and fulfil unmet needs in those key therapeutic areas through novel technologies. As long-term vision, the company aims to be the world-leading healthcare company in reproductive medicine and maternal health, supporting patients on their journey from conception to birth and contributing for reducing maternal and infant mortality in the world. In order to achieve that, progression on the drugs pipeline involves not only science and medical breakthroughs, but also optimizing manufacturing for production, operating systems and the increasing digitalization

required to integrate all these elements. As part of this strategy to streamline structures and enhance organizational efficiency, the creation of a new global center of excellence in Portugal was initiated in 2020.

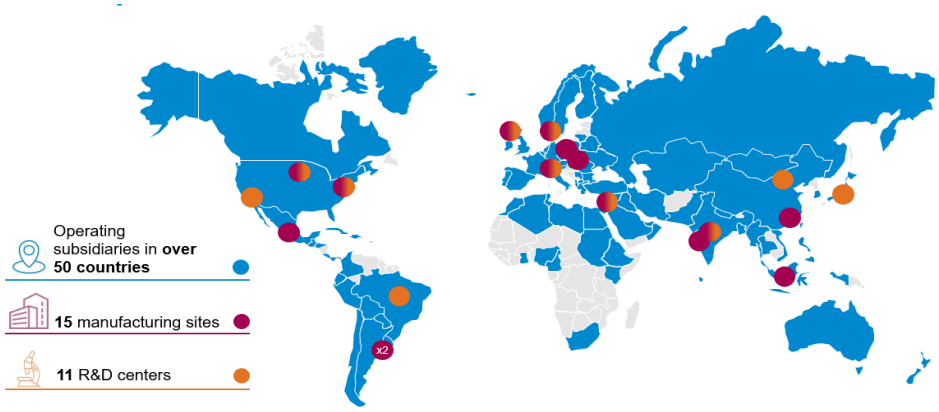


Figure 2 - Company Global Presence

2.2.2 New Center of Excellence (CoE) in Portugal

Introduction

The organizational model of a center of excellence (CoE) can be described as a unit that centralizes in one country an important set of capabilities recognized as key for the value creation, to develop specific know-how and services for internal teams across the company. CoE's are simultaneously influenced by the local environment and also by the relationship with headquarters (HQ) and other internal subsidiaries (Frost et al., 2002). The formation of the new CoE was conducted in the form of a greenfield investment demonstrating the firm willingness to develop and shape internally the capabilities and knowledge required to optimize processes and activities (Oshri, 2012).

Organization Strategy - scope and activities of the new CoE

The new center of excellence was initially established, following business process reengineering, to support the architecture, deployment and maintenance of a new enterprise resource planning (ERP). An ERP is crucial for managing and integrating company operations, processes, and applications, impacting key departments such as Manufacturing, Supply Chain, and Finance (Porter, 2008). This integration could enhance organizational efficiency and create a competitive global advantage by managing cross-functional business applications and building efficiencies of scale. Furthermore, the ERP's impact extends to new commercial platforms, CRM, and business data analytics, aligning with the company's vision for streamlined processes, stronger collaboration, and higher productivity. The change involved shifting systems, processes, technologies and ways of working to build a wider variety of capabilities and expertise that could support accurate business insights and faster decision making, as key enablers to optimize drug development costs while improving quality and compliance (Agrawal et al., 2019). With this strategy in

mind, beforehand some European cities were shortlisted as potential locations for the new site considering multiple criteria as detailed later in the PESTLE analysis.

Why establish the new CoE in Lisbon?

Lisbon, in Portugal, was selected internally as primary location based on its growing reputation in technological services with an increasing pool of experts trained by high standard universities and also as showcased by tech-driven events like the Web Summit at that time. The strong proficiency in foreign languages allied with the economic, entrepreneurial and multicultural development of the city over the last decade contributed for the strategic decision taken by the company executives at the HQ. The global COVID-19 pandemic originated several challenges to the set-up in 2020, but also accelerated the evolution of workplace technology to start operating hybrid or remotely (Durth et al., 2022). Business travels were really limited in the early days but eventually increased over time to streamline collaboration, especially between team members based in the new CoE and senior leaders from the HQ.

Organizational Design – Leadership, Culture and HR model

Following the initial strategic plan defined at global level, a local HR team was formed to set-up all requirements including facilities, working model and corporate policies. A local management team was also appointed, mainly through internal recruitment, reporting into HQ senior leaders to ensure the successful implementation and overview the company strategy, resources and organizational culture yet to be developed. Sequential recruitment processes were launched throughout the initial months, considering the company's objectives and core activities for the new CoE based on business priorities. A middle management layer was created primarily to acquire the technical knowledge and capabilities also to design the teams and to define the most effective internal blueprints. These managerial teams were organized as independent sets within each function and then operating in hybrid forms (Mintzberg, 2023), both at executive and operational level, responsible alongside recruitment for the change management associated, performing a key role specially dealing with outside of the company for talent attraction and also ensuring the link with the rest of the organization at distance to promote onboarding, knowledge transfer and performance management. The alignment with HQ was ensured via remote onboarding and trainings, internal standard operating procedures and limited travels due to the COVID-19 pandemic restrictions. The emerging structure in the new CoE was highly matrix organized, including local and global reporting lines, requiring agile ways of working for effective communication and coordination. From a managerial perspective, this decentralized context required mainly mutual adjustment as a mechanism to cope with distance and on-going change while supervision was limited by default.

The HR operating model also evolved over time to support the organizational growth and globalization and it was established based on Ulrich+ principles to modernize the HR function as a strategic partner and change accelerator mainly through Centers of Excellence, agile working principles and digitalization of HR operations and systems (Durth et al., 2022). Local HR Business Partners implemented the core programs designed by global HR CoE's to enhance a consistent employee experience with increased accountability from business leaders. The organizational culture had to be cultivated in a supportive and innovative form, attending the company background and the pharmaceutical environment, but also considering the core elements and norms in Portugal to set-up an attractive workplace to foster high performing organization.

Organizational Development – Navigating change and challenges

In the pharmaceutical industry, the constant nature of change is especially amplified. Either due to internal factors, as the research and launch of new medicines as highlighted above, or motivated by external drivers as technology, healthcare needs or regulatory requirements continuously under review. A dynamic environment demands companies to be more reactive (Mintzberg, 2023) and so the versatile teams and capabilities established in the new CoE are now a strong pillar to tackle continuous and discontinuous changes in context to dynamic contexts (Girod & Whittington, 2017). Following the first teams hired to work on the ERP migration, multiple key projects across different departments were developed in Portugal anchored on similar criteria and objectives. The CoE in Portugal is nowadays, in 2024, a knowledge hub for around 300 employees working in different functions including IT, Finance, Supply Chain, HR, Legal and Marketing. The local structure is organized by function specialization in matrixial structures spread across the company, integrated in global teams and collaborating mainly in global projects. Three years after the design and implementation phase, the company has been successfully operating in Portugal and grew exponentially year on year maintaining a voluntary workforce turnover below market under very dynamic circumstances (Lopes, 2024). Some internal people metrics across talent attraction, retention and engagement are tracked internally as key performance indicators to measure the success of the new CoE. However, the major contribution is determined by the expanded scope and service delivery capacity of the teams installed in Lisbon, providing new capabilities to support organizational development and therefore supporting the company strategy, vision and objectives.

Conclusion – Key learnings

Research evidence investigating the impact of centers of excellence located abroad demonstrates that those normally have a positive contribution for outcomes measuring performance (Frost et al., 2002). Nonetheless, establishing this new CoE within a multinational pharmaceutical facing global expansion originated unprecedented managerial challenges and has now created also multiple options for future

organizational development resulting from intercompany synergies, performance, innovation and strategic decisions. Considering the significant expansion and positive outcomes of the new CoE in terms of workforce engagement and retention three years after the set-up, it can be already considered a successful example of a new company establishment in Portugal within the pharmaceutical industry. The consolidation and consistency brought by the new processes, systems and tools designed in three years will fuel the growth ambitions. The successful performance of the new CoE suggests potential for future expansion and the company is now better prepared for change after establishing a global business center in Lisbon. A significant investment in a new structure is expected to yield returns through specialized expertise and capabilities, with a larger geographic scope positively impacting group results (Frost et al., 2002). So, the core competencies acquired and integrated in the company will continue to produce intangible profits towards continuous development and modernization (Birkinshaw et al., 2016) which seems extra required in the post-pandemic world where science and medical industries must remain agile and ultra-fast to react. Hence, the importance of reflecting in this case considering key takeaways from the past and challenges for the future of this organization, considering touchpoints with literature and commonalities with existing cases.

This case study offers a real-world illustration throughout the implementation and development from scratch of a new organization in a challenging context driven by complex technology, dynamic players and a volatile environment worldwide. A comprehensive review of conventional and emerging literature is recommended to reflect and complement the organizational problematics contained in the case.

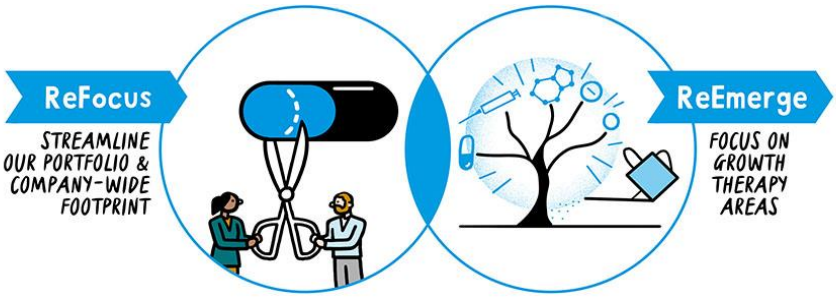


Figure 3 - Company Reorganization objectives

2.2.3 Organizational Context - PESTLE Analysis

Different dimensions of the local and global context had a particular impact on the decision to set-up a new Center of Excellence, and furthermore on the level of integration and results generated by this type of organization (Frost et al., 2002). This idea is also inspired by Porter's (1990) work on causal relationship between geographical location and organization's competitive advantage, emphasizing the key role of

environment characteristics on talent attraction, knowledge sharing and organizational outcomes. Following the decision to create the CoE, the following elements highlight the most influent aspects that determined its localization in Portugal, back in 2020, based on research and private conversations with company executives participating in the decision.

- **Political:** Portugal maintained relative political stability during the period between 2015 and 2022, which provided a stable regulatory framework for new companies to set-up in Portugal. Programs and incentives were also established by associations like Portugal's Global Trade & Investment Agency AICEP (2024), supported by increasing inward foreign investment (Gabinete de Estratégia e Estudos, 2023) and measures as special tax regimes to attract highly qualified professionals. As result, the number of global centers based in Portugal has grown significantly to over 450 (Jornal de Negócios, 2022) with on average 40 new companies entering the market consecutively in 2021 and 2022. Despite the positive outlook and the incentives supported by Portugal 2030 for innovation and digitalization, none was specially directed for the Pharma industry (Donato, 2023).
- **Economic:** Despite Portugal's modest economic growth experienced in recent years (INE, Pordata, 2024), the pharmaceutical industry has been a solid contributor with the total market estimated over 5.028 million euros in 2022 and 3.6% of Portugal's total exports in 2023 (Apifarma, 2024). Beyond that, centers of excellence often operate globally and provide internal support to the organization, therefore are mainly driven by global aggregated results. Factors such as employment rates (INE, Pordata, 2023), labor costs, educational level and skillsets availability influence the attractiveness of Portugal as a suitable location within Europe.
- **Social:** Portugal is number 25 on the World Talent Ranking by the Institute for Management Development (IMD) in 2023 and is regarded as having new generations of professionals trained by recognized universities, with talent diversity and including competencies as good communication and language skills, allied with adaptability which are all capabilities required to create a new CoE. Such business centers often compete to hire professionals with similar educational background and skills and face similar challenges to implement and scale-up their local structures, with 66% being focused on establishing competencies centers for software development and engineering, 23% dedicated to industrial units as electronics and automation and 9% as shared services centers (Expresso, 2022). Notably, more companies joining the labor market can motivate and attract also more students and professionals, therefore increasing the talent pool available by recruiting as well foreign citizens to develop their career in Portugal. A positive example of this growing interest and

potential is the recently created course focused on Global Pharmaceutical Industry by the Católica Medical School in Portugal (UCP, 2024).

- **Technological:** Relevant investments in digital transformation and acceleration have been deployed in Portugal, with a vast number of start-ups, scaleups and business incubators supported by universities, researchers, government and private entities contributing for the position of Portugal as a modern and technologically advanced labor market. Important events for digitalization as the Web Summit or the Portugal Digital Summit took place in Lisbon, reinforcing the spirit of innovation and collaboration in this ecosystem also attracting more organizations to the market. Within pharmaceutical industry, there are increasing opportunities resulting from the combination of healthcare and new technologies originating biotech's that can find in Portugal valuable synergies and know-how (Público, 2021).
- **Legal:** Pharmaceutical companies must comply with strict regulatory standards either established by national authorities such as Infarmed in Portugal or by European Union regulators. This variable has a strong competitive impact on the industry and institutions as the European Federation of Pharmaceutical Industries and Associations (EFPIA) argue that increasing regulation is slowing down R&D investment and clinical trials in Europe, versus accelerated growth in US and China (EPFIA, 2023). In this case, because the development and production of medicines is not under the scope of activities located in Portugal, the main concern is to ensure that the systems, applications and solutions developed and supported by the teams based in the new CoE are compliant with the group needs and requirements across other locations. As noted by Mintzberg (2023), the existence of external entities with regulatory powers influences the organization towards greater level of centralization and more formalized structures.
- **Environmental:** In general, Pharma companies operate in a dynamic and complex environment also impacted by innovation involving high volumes of information. Among other factors, the Covid-19 pandemic was also a very relevant and challenging element of the context since the new CoE presented in the case was created in 2020, still while the Portuguese society had severe lockdown restrictions and most companies were operating fully remote (Peixoto, 2020). Despite the struggles to set-up a new workplace and kick-off recruitment and training under these circumstances, this event highlighted the relevant role of the pharmaceutical industry as employer and healthcare provider in difficult times, demonstrating resilience and flexibility to change.

2.3 Case Study Questions

Following the company background, long-term vision and objectives and also the recent strategic decision to establish a new center of excellence in Portugal, with the context and main contingencies explained in the case and PESTLE analysis above, several questions and challenges can be presented to address organizational design and development. Summarized below are exploratory questions to guide research.

1. After reading the case, describe what reasons can influence a large multinational pharmaceutical towards organizational change with the creation of a new Center of Excellence (CoE) as explained.
    1.1 Explain the main characteristics of a Center of Excellence as an organization.
    1.2 Explain in a SWOT analysis what can be the organizational change impacts for this company resulting from the implementation of a CoE in Portugal, as an external advisor.
    1.3 Discuss why Portugal was selected as a preferred option to establish the new CoE.
2. Identify and describe the key elements that should have been considered in this new organization design according to literature. Provide your opinion about the process and steps outlined.
3. At the initial set-up stage, what organizational design form could have been more likely to succeed in this company? Justify and elaborate on advantages and downsides of your options in comparison with other forms.
    3.1 What type of management and coordination mechanisms could be more suitable in this proposed form, also knowing the new CoE is located in a different country from the HQ?
    3.2 What are the potential effects of this form on local HR strategy including hiring and training?
4. What could be considered the most relevant elements of external environment in the case provided, considering the moment of design and implementation of the new organization?
5. How can organizational design be suited to create a structure that is adaptable and flexible for the long-term, able to cope with organizational development and change over time?
    5.1 Present and describe the key internal drivers of change in this case.
6. What might be the most suitable organizational strategy for the company to continue investing in R&D to discover new medicines while also adopting organizational change for internal efficiency?
    6.1 How can that strategy be reinforced by the organization design in this case?
7. What recommendations can you provide to the HR and leadership team of this company considering challenges and workplace trends for continuous talent attraction, development and retention in the new CoE.

3. Methodology

The guiding research question for this case is going beyond superficial understanding of organizational design to unfold the multiplicity of factors that shape and influence this field in a modern volatile world. To accomplish this objective, this specific case analyzes various organizational design and development elements required to set-up a new structure in a dynamic environment as the pharmaceutical industry.

Research topics for this case include a combination of organizational theories to merge valuable academic knowledge together with business news and insights about the industry and personal observations within human resources management field. The case intends to summarize relevant organization design and strategy definition principles and highlights the role performed by management and leadership, alongside organizational culture and continuous change for development. It presents compatible organizational theories and different design forms to identify suitable solutions for the pharmaceutical industry. By combining organizational theory and in-company experience, the objective is to produce learning outcomes through evidence based on past, present and potential future challenges for long-term success.

In the pedagogical case format adopted, research problems consider challenges and knowledge gaps resulting from literature review, organizational practices and HR management trends. For enhanced value and applicability on the specific context, additional research was conducted to connect general theories with successful pharmaceutical companies and global centers of excellence in particular, searching similarities with this company. Relevant theories are discussed to formulate research questions for the case.

General theories are complemented by observations, internal documents and private individual conversations with senior executives of the company portrayed in the case, to ensure accurate inputs and experience about the main challenges required to set-up a new Center of Excellence in a global company. This approach included mainly leaders across IT, Finance and HR involved in the design and development of the new organization. It enlarged the observation field across time, location and department, combining local and international vision and cross-functional perspectives. Complementary empirical data was collected alongside these conversations, between 2021 and 2024 collaborating with this organization.

Overall, this work is simultaneously backward and forward looking, as it encapsulates key challenges and decisions taken over three years in one specific organization while also exploring theoretical topics and recommendations to support future development and changes in context for similar organizations.

Finally, the animation plan and questions proposed as part of this case study aim to foster reflection and discussion leading to practical outcomes and lessons learned alongside recommendations on emergent trends. The resolution may afterwards be shared with the company executives for mutual benefit and in-company implementation.

4. Pedagogical Note

4.1 Case Study Target

The dual perspective contained in this case, combining academic theories and business can offer different possibilities for additional research and application.

For academics, this case can provide theoretical background on concepts as organizational design, behavior, change and development exploring management theories key for fields across business, organizational psychology and human resources. The practical insights and examples used can support the link and transition of ideas and hypothesis to the organizational context, specifically to the pharmaceutical industry.

In the business environment, this case can be directed to business leaders, human resources experts, entrepreneurs, business consultants and professionals involved in organizational design and change. The discussion and conclusions can be particularly useful for the company studied in the case, to address future challenges and context, and to other corporations in the same industry who might envision to set-up centers of excellence. Global business centers as this are emerging for organizational development and expansion, sometimes as alternative to mergers, acquisitions or outsourcing and therefore worth studying.

4.2 Case Study Pedagogical Objectives

The core objective of this case is to further elaborate on existing theories concerning the design and development of organizations, by addressing the different questions detailed before in 2.3. The reading of this case can provide further knowledge and application of the ideas and findings of influent management authors including Henry Mintzberg, Edgar H. Schein, Michael E. Porter or Peter F. Drucker reviewed in face of emerging organizational challenges and complemented with more recent research on ambidextrous organizations, agile structures, hybrid organizations and discontinuous change environment.

Pedagogical objectives are also linked with the unique industry dynamics and real-word challenges found in pharmaceuticals, a solid growing industry with vast opportunities for students to develop a professional career although sometimes hard to navigate due to complexity, ambiguity and confidentiality.

Considering the subjective nature, uncertainty and combination of various elements associated, this case conclusions may not be applicable to every organization. It focuses primarily a specific organization for reinforced accuracy and impact. Even if some conclusions might be considered unprecise or vague, this can be in one hand related with the subjective nature of the object studied, and in other hand due to the continuous change on the elements and context that influence organizations, leading to different

responses in strategy, management and culture. These are evolutive fields and constant intersections between academic and corporate environments are recommended as per this case proposal.

5. Literature Review

5.1 Organizational Design Principles

An organization can be defined as the collective action structured for the pursuit of a common mission and the structure of an organization as the pattern of relationships designed to enable its people to take that action together (Mintzberg, 2023). As opposed to scientific management principles from Frederick Taylor that defended one best method to manage work, Mintzberg (2023) believes that organizations present immense varieties and therefore those specifications must be considered when it comes to organizational structure design. Working as integrated systems, organizations must be able to conciliate organizational goals with individuals' motivation and actions to fulfill their purpose (Martela, 2019).

Design, on its hand, according to Simon cited by Liedtka and Mintzberg (2006) is about changing existing situations into preferred ones and so the design as a process can be seen as a fundamental part of architecture, education, training and business in general. It is conceived as a series of hypothesis on how things could be (Monteiro, 2021), open to interpretation and without definitive solution (Liedtka, 2000).

From the nature of both concepts individually results that no standardized outcome that can be applied to all situations, nor a process exists for validation. So, how can those concepts work together? Organizational design is a complex blend that requires understanding how different layers and interpersonal relationships are integrated (Yokoyama, 1992) and also how to combine individual interests with organizational goals for the collective success (Martela, 2019). It requires alignment between leadership, processes, culture and people (Chong & Duan, 2022). Therefore, the need to conjugate multiple elements is very challenging and yet key to create, develop and preserve functional and successful organizations. Carucci (2019) explains some of the common issues resulting from organization design misalignments, leading to internal conflicting priorities, unwanted silos and higher turnover. To overcome those risks, organizations must constantly review and refine their own structures, processes and management practices (Miles et al., 1978).

The following research will further explore these different concepts, linking different management and organizational theories to contextualize the real case study of a pharmaceutical company presented throughout a unique organizational design and development journey.

Starting with the underlying pillars of the organizations, one can identify either the internal and external players (Figure 1) who can be divided in sub-groups that contribute for the observable shape and outputs generated. This is a renovated and more complete version of the five basic parts of the organization presented initially by Mintzberg in 1980.

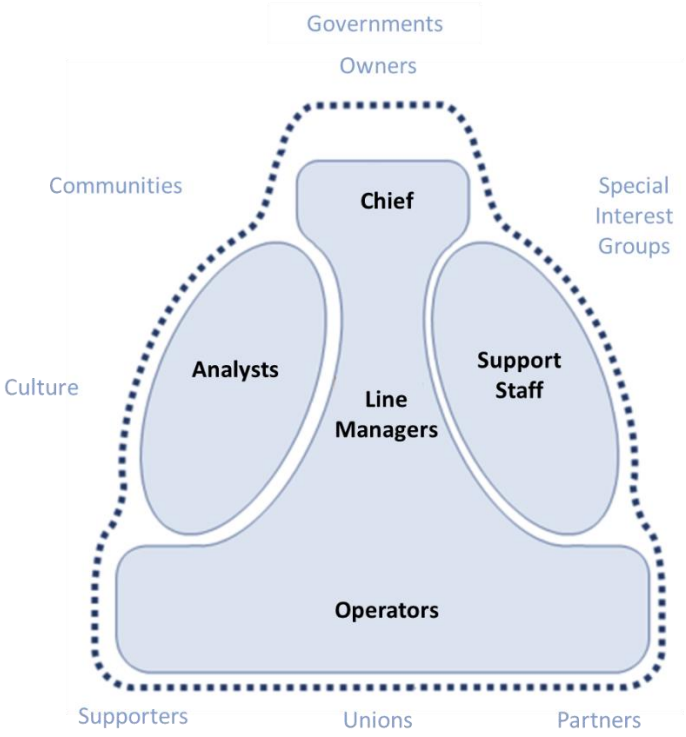


Figure 4 - Organizational players and parts (Mintzberg, 2023)

Operators are those involved in the production processes of products and services, managed by the Line Managers that ensure the link also with the Top Management. Analysts design and implement systems and controls applicable to the operators in liaison with the outside context and advise management, while staff usually provides support to the organization as a whole (Mintzberg, 1980). The different players and parts can be organized in different ways of working from the base to the top and how activities flow is what determines the interaction, collaboration and accountability presented in each organizational level.

As a consequence of the different organizational strategies and models, the managerial role can also variate in different ways. According to Mintzberg and Van der Heyden (1999) organizations can be organized and managed as detailed below and illustrated by Figure 2:

- **Chains**: In a Chain work flows in a linear sequence that follows a logic predefined path through standardization. This approach became popular after the value chain concept by Michael Porter. In

a chain, the manager is located on top and operates in a vertical chain of command and control over processes (Mintzberg & Van der Heyden, 1999; Mintzberg, 2023).

- **Hubs**: In a Hub all activities are centralized and organized around specific needs for desired outcomes. The manager is on the center, to follow and support all the actions and decision making. The traditional vertical layers are replaced by management circles and managing top-down is converted into coordinating around (Mintzberg & Van der Heyden, 1999; Mintzberg, 2023).
- **Webs**: In a Web work flows as in a network, open and flexible with no fixed chain or center. To flow smoothly, the manager needs to be a link and not just be on top to avoid centralization. Management is distributed and all players can contribute resulting in less hierarchical organizations (Mintzberg & Van der Heyden, 1999; Mintzberg, 2023).
- **Sets**: In a Set the parts are integrated in the same organization but with less interdependencies. Even if sharing common resources, the structure is usually divided into different workgroups. Members are conscious of their roles and responsibilities and management monitors at distance, with less direct intervention (Mintzberg & Van der Heyden, 1999; Mintzberg, 2023).

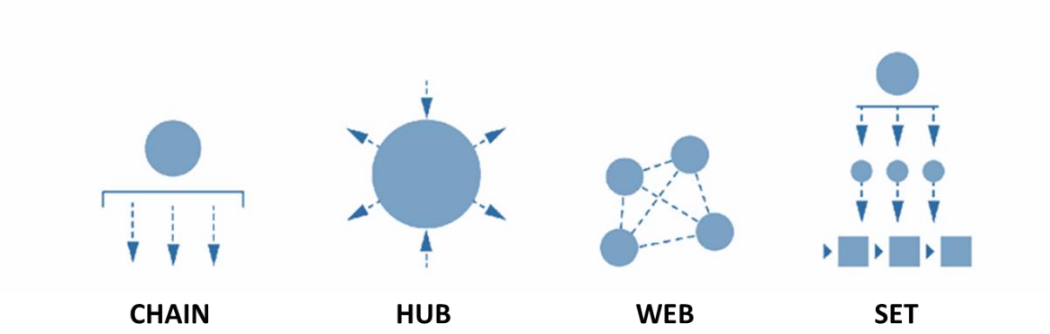


Figure 5 - The Four Philosophies of Managing (Mintzberg, 2023)

Starting from these organizational set-ups, very often companies can combine or alternate between some of the different organizational forms as will be discussed and demonstrated later in this case.
In conclusion, organization design is a mean and not an end and organizations need to adapt according to context as there are no universal solutions that fit every scenario (Birkinshaw et al., 2016).

In the following chapters, these different models towards organization and managing will be further explored to reflect a significant part, but not all, of the organizations existing today. This review will cover how people interact, the workflows and how the information is transmitted through these structures. Nonetheless, the existing interdependencies go beyond the traditional organizational charts and reflect more the actual ways of working (Mintzberg, 2023) like a holistic view of organizations, as systems with

structures and common practices (Fiss, 2007). This is crucial to understand organizational design, given the context of modern workplaces, where start-ups, digital businesses and cross-country remote project teams are taking over and competing with large established traditional corporations. Based on research, including examples and observation, the traditional approach to organization design seems often centered on either people or processes targeting isolated elements in the structure. Mintzberg (2023) considers this segregated vision limited and presents an alternative approach as a *design doing* exercise, derivate from design thinking concept, where organizations should be customized according to learning and experience promoted by the people who are part of such structures, to allow customization according to specific context. In this approach, the output is actually built throughout a shared process involving direct contribute from the users to maximize design applicability and durability (Liedtka & Mintzberg, 2006).

Complementary theories also explain that organizational design is normally performed by Managers, however its complexity requires skills and ways of thinking that differ largely from the traditional analytical and logical mindset that is applied to top-down decision-making (Yokoyama, 1992). Beyond design, it is highly complex to change organizational behavior, culture and strategy (Lucas & Baroudi, 1994) and thus the relevance of this work in considering and linking these instrumental concepts. In conclusion, across different authors organization design is considered permanently unfinished, and it requires constant linkage across the internal elements and external context that can shape the organizational response.

4.1.1 Organizational Design Principles in Pharma

Research reinforces the relevance of comparing organizations with similar goals (Puranam et al., 2014). So, to a more comprehensive understanding of the company described in this case, the pharmaceutical sector will be analyzed as the main comparative industry and benchmark in terms of strategy, culture, management practices and organization design along the different sections of this work. Considering organization design principles in a pharmaceutical company, Research and Development (R&D) is often the core activity and the one requiring more resources and investment, whereas additional departments exist to produce, sell and distribute the outcomes generated by R&D. Therefore, new product development should be by default the foundational piece of the organization design in Pharma (Beeson, 2014), around which the other elements and functions should be established as per steps outlined below. This is also explained in the case study, as the new organization emerges to support and enable R&D growth.

5.2 Organizational Design Elements

Research indicates as success factors for design characteristics as simplicity, emotional engagement and a mix of connection to the past with some innovation that leads ultimately to a competitive advantage for the future (Liedtka & Mintzberg, 2006). Strategic workforce planning principles also state the importance of distinguishing positions and incumbents through designing organizations based on role outcomes, skills and responsibilities instead of tailored around individuals, to ensure a sustainable design and consistent performance for the organization. The person should fit the position and not the inverse (Carucci, 2019).

It is through the intricate intersection of multiple elements that organizational design can be achieved, including elements used to design positions first at a micro level (scope, formalization, training) and elements to design the overall structure (grouping, sizing, centralization) at macro level. All of these are required to design the skeleton of the organization as demonstrated by Mintzberg (2023):

Elements of Design	Description of the context and decision-making in the new CoE
Scope	Positions within the structure can be defined as more specialized or general, also according to different levels of formalization and autonomy required.
Degree of Formalization	According to the level of standardization, formalization rules and guidelines are often required to measure and control the outputs of work expected for each role.
Level of Training	Level of training and competencies required determines also in part the level of internal control and expertise necessary for each role, and also to build the internal culture.
Grouping	Grouping can be done by region, by product and also by function leading to dedicated and specialized teams. Overall, different options trade off certain advantages for another.
Sizing	Size of the units, departments and teams will depend on the business context, management approach, coordination mechanisms and level of centralization.
Centralization	In a centralized organization a single individual holds the decision-making power, as opposed to the dispersion of power in a decentralized organization. To obtain decentralization, the decision-making power can be distributed throughout the different organizational levels.
Systems of Planning and Control	After establishing the positions and grouping, size and level of centralization, organizations need systems for planning and controlling. Planning usually takes place top down and performance controls are then designed to be implemented across the structure.
Lateral Linkages	For the structure efficacy, there are also less formal roles and elements that encourage mutual adjustments, to break the silos in a more organic way.
Matrix Structure	To further enhance collaboration, on top of the formal reporting lines, matrix structures are a good example for breaking the silos, moving out from the traditional vertical lines with single

	management to a structure with two or even more functional or hierarchical managers, which can be in different levels, functions, departments and countries (Mintzberg, 2023).

Table 1 - Elements of Organization Design, adapted from Mintzberg (2023)

These elements can then be grouped based on the number of existing units, their size and correspondent level of autonomy and decentralization to compound a structure. The grouping process to build up organizational design usually involves top management, line managers, HR or consultants. A potential knowledge gap exists because managers often handle grouping and design without specific skillset or training. Traditional education typically focuses on studying elements separately, whereas organizational design complexity requires the ability to predict how these elements will interact (Yokoyama, 1992). For the emerging design to be effective, a common culture, processes and control mechanisms need to be implemented and the adequate coordination of all the existing units is critical for consistency and alignment with the external context (Mintzberg, 2023). Carucci (2019) also elaborates on the need to develop performance incentives, objectives and metrics that reinforce the integration of these elements.

5.2.1 Organizational Design Elements in Pharma

Within the pharmaceutical industry, organizations often encompass these elements as part of their internal strategy and growth agendas, through budget preparations, large projects and innovative programs. Pharma will always be a highly regulated industry, with safety and compliance as a main priority, and so standardization of procedures and work is required in areas linked with product development and manufacturing. As noted in research, medical affairs and scientific functions the level of education takes more relevance and leads to organizational designs that encourage higher autonomy for such professional groups. Formal systems of planning and control still exist in the form of policies and processes, but a lot is achieved nowadays via cross-functional collaboration instead of authority. Examples of this include meetings, steering committees, project teams or sponsors, taskforces and consultants which are set to break the organizational silos (Drucker, 1988). Such connections and interdependencies are also empowered by matrixial structures, that reinforce collaboration principles and collective results over individual performance as the case study provided is a good example with the structure organized by functions across countries. Despite all the pros, this matrix set-up also increases complexity and ambiguity as it demands more coordination and time for alignment (Martela, 2019) and decision-making can be unclear (Ashkenas, 2011; Carucci, 2019). Also, the demand for self-control and responsibility raises is this organizational context (Drucker, 1988) which can be linked with higher training and education levels. Hamel

(2014) advocates the increasing importance of freedom and autonomy balanced with accountability as a requirement for organizations to overcome their core inefficiencies and to succeed in the 21st century.

5.2.2 Information Technology (IT) as a new element

Information Technology gained over the last two decades an increasing relevance and contribution for organization design and development as demonstrated by evidence across different industries (Puranam et al., 2014). The focus shifted from accommodating the changes introduced by IT, to the need to create or reorganize a structure considering the technological impacts on the previous elements. This led to more fluid structure designs enabled by a process of adaptative organizational learning (E.H. Schein, 1996).

Even typical management core aspects such span of control, coordination mechanisms or management layers are now deeply dependent on technological integration (Lucas & Baroudi, 1994) as also demonstrates The Leavitt Model no Figure 3 below. In fact, new technologies demand flexible structures, renovated processes and different ways of coordination and control (Miles et al., 1978). The change management associated demands a strong alignment between the hard factors (technology and structure) and soft interpersonal components that enable and implement actual progress (Iveroth, 2010).

IT has a transformational role on connectivity and integration, reducing complexity and facilitating data conversion into information (Drucker, 1988) allowing the organizations to focus more on ad-hoc projects and processes functioning more in the form of webs to overcome traditional hierarchical barriers.

In a broader understanding, within the pharmaceutical industry, technology can be seen as the outcome of research and development that generates new drugs or components that can be integrated in existing products, attend new needs in the market or allow current products to be developed in a more efficient or accessible way to upscale or accelerate distribution (Magistretti et al., 2021). Collaboration between different research teams can also lead to discovery of new complementary technologies, as recently observed within the COVID-19 pandemic that led to the development of multiple vaccines in short lead-times. This further integration of technology and innovation is key to reinforce the hybrid business model of pharmaceutical corporations to maintain a solid performance while expanding their value creation for society (Santos et al., 2015).

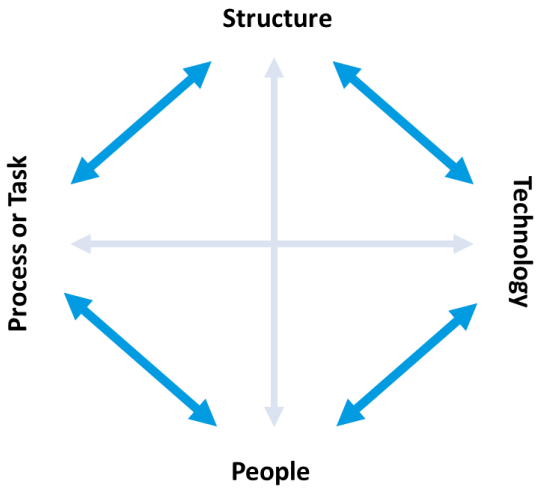


Figure 6 - The Leavitt model, adapted from Lucas and Baroudi (1994)

Overall, technology has certainly played a role together with the context factors presented below to accelerate the organizational transition from bureaucracies towards adhocracies, allowing concepts such as virtual organizations without physical facilities previewed in literature years ago to become a reality nowadays (Lucas & Baroudi, 1994); Puranam et al., 2014; E.H. Schein, 1996).

The case study provided a real example of the role and criticality of technology in pharmaceuticals, with the emerging projects and business landscape requiring specific tools and a set of capabilities that ultimately led to the creation of an internal center of excellence to fill this gap. Iveroth (2010) proposes a framework for IT driven change management including the need for common ground, meaning, interest and behavior to illustrate that complex commonalities are required for effective change in a given context.

5.3 Organizational Design Context

"*The goal of organizational design is to shape, facilitate or alter the behavior of individuals in order to meet the demands imposed by changed circumstances*" (Yokoyama, 1992, p.120). There is a vast set of situational factors that influence the elements of design into different shapes, and those are connected and depending on the organizational context. In fact, research demonstrates that effective organizational designing requires consistency between the elements and the context as advocated by Fiss (2007) and Mintzberg (2023). The latter suggests the following as key elements of the context:

- **Age and Size:** organizations with longer existence and larger sizes are usually more formalized, more predictable and follow similar patterns in decision making, through specialization.
- **Technical System:** instruments to control the operations and maximize outputs. Technical systems create higher level of formalization across the structure and between work relationships.

- **Environment:** dynamic organizational environments lead to more organic structures, while complex environments generate decentralized structures to handle the volume of information and to distribute decision making across the organization.
- **Power:** organizations influenced by external control are normally more centralized with formalized structures and management is accountable for governance and performance.

Notably, design can be a consequence of the circumstances as resulting from contingency theory but simultaneously a deliberate strategy to tackle them. A suggested approach to design can start by the interfaces required with external parties, including the community formed by customers, suppliers, regulatory authorities, governments, investors and partners. Ensuring those linkages should be the starting point for designing the remaining organization structure according to Yokoyama (1992). The maintenance of an effective alignment between environment and internal elements is also evidenced by Miles et al. (1978). As society evolves, social and organizational priorities change and today digitalization and sustainability are good examples of the influence displayed by the external context on shaping structures (Obel & Gurkov, 2023). Context plays a role not only on design but also on constant redesign, as it rapidly shifts and influences organizational change (By, 2005) as recently occurred due to COVID-19 pandemic (Chong & Duan, 2022). In such a volatile context, change can emerge from the constant tensions between elements ensuring stability and those driving change (Coghlan, 2021). Enabling change to shape adaptative organizations can be a competitive advantage and it can also be integrated through the structure, strategy and culture promoted by management. Dynamic capabilities, known as the "*ability to create, extend, upgrade, protect and keep relevant*" (Birkinshaw et al., 2016, p.36) an organization provide a framework for continuous *sensing* (assess opportunities and threats), *seizing* (allocation of resources to address change) and reconfiguring for effective adaptation. New centers of excellence (CoE) within multinational companies as evidenced in the case study can also be integrated in the context of developing additional organizational capabilities. These structures are influenced by internal factors as the resources and investments provided by headquarters, the connectivity between structures or the autonomy which is given to the CoE. Other external aspects, either local or global, also play an influent role in the implementation and performance (Frost et al., 2002).

5.3.1 Organizational Design Context in Pharma

From what can be observed on the pharmaceutical industry, with increasing size, maturity, and globalization, organizational structures are usually more specialized. The industry background and seniority also influence the organization behavior (Mintzberg, 2023), so structured industries normally

have higher level of formalization even for new organizations joining the market. Additionally, despite changes and progress some elements of the context tend to remain stable over time. Is the case in highly regulated markets, as pharmaceuticals companies must comply with strict rules imposed by governments and regulatory authorities that influence greatly the organizational dynamics specially around R&D activities for new products development and launch (Magistretti et al., 2021). Today, balancing corporate value with societal returns, including benefits for patients, governments, activists, and employees, is increasingly important (Santos et al., 2015). Pharma leaders must understand and manage hybrid organizations to leverage new business opportunities. Access to new drugs, vaccines, and treatments creates health benefits alongside economic development, resulting in a hybrid business model with dual impacts for society on health and the economy. Emerging requirements demand structures that continually improve access, availability, and affordability of new medicines (EPFIA, 2022). Additionally, research shows a decline in new drug pipelines for large traditional pharma over the last years, with opportunities now shifting to biotechnology and new biotech firms providing solutions in Pharma. This shift forces the global pharmaceutical industry to adapt to integrate existing and emerging organizations (Birkinshaw et al., 2016). Hence the importance of ensuring a consistent and continuous link between organizational design, leadership, strategy and culture for effective organizational design as covered in the following sections.

5.4 Forms of Organizational Design

As defined before, Organizational Design as a concept is hard to define and so are the numerous possibilities it can generate. Design as a concept is focused on the future (Monteiro, 2021) and so it can be linked with organization strategy and performance. In parallel, organizations face immediate challenges from the context and so the organizational design must conciliate present and future under the same form. In order to assembly the different components and elements detailed before, jointly with the context, research indicates plenty of alternatives. Mintzberg (2023) focus on four fundamental forms of organization presented as ideal types or simplifications of reality, although the author defends there is no best way and rather multiple possibilities given the circumstances. Each of these forms relies in a preferred coordinating mechanism according to Mintzberg and the strategic and management decisions differ also according to the context impacting all elements of design (Yokoyama, 1992). The forms presented below are the output of a consistent grouping of the components detailed in 4.2 and 4.3, seeking internal and external alignment (Mintzberg, 2023). Even if these forms are presented as simplifications, is important to understand that organizations are not born with a design. Instead, they evolve into these forms over time through the

consolidation of elements and their interaction with management, and (Miles et al., 1978). Organizational Design is thus the outcome of an ongoing process, rather than a simple choice.

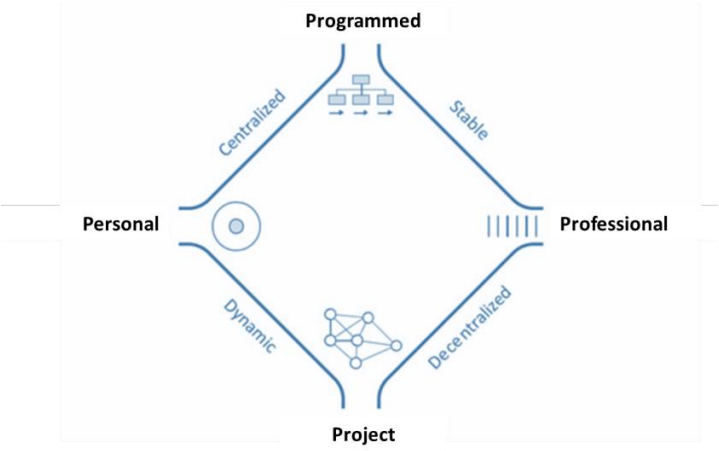


Figure 7 - Four Fundamental forms of Organization (Mintzberg, 2023)

These four forms have existed for long ago and remain relevant today at global level. The four have unique characteristics, as well as strengths and weaknesses. Ultimately, each form influences not only the organizational structure, but also the strategy and processes, management philosophy, coordination mechanisms, level of decentralization, training requirements and communication needs (Mintzberg, 2023). This explains the vast range of impacts resulting from design, with potential effects on results, workforce and even on the external community.

1. ***Autocracy - Hub - Personal Enterprise****:* Centralized and dynamic as a Hub described in the design principles above, normally with one person concentrating full responsibility and ownership for all organizational strategy and decisions, applying mainly direct supervision to coordinate others. Structure is often simple, with linear workflows and chain of approval and so it requires few planning or controlling systems. The managerial hierarchy is limited due to a wider span of control. This type of organization can be designed and operate with very high levels of dependence from the leader, creating potential challenges in terms of replacement and succession. This form is commonly seen in recent organizations, as start-ups and small businesses while the organizational size is compatible with direct supervision. Once the business and structure face considerable growth, this organizational form becomes less effective and hard to scale. Very likely, this design may have to metamorphose into another form at some development point. The ones operating in stable contexts can also grow and evolve into bureaucracies (Mintzberg, 2023).
2. ***Bureaucracy - Chain - Programmed Machine****:* These structures normally contain all the layers and staff indicated above on Fig. 4, relying on hierarchy, rules, control and systems and ideal for

centralized and stable environments. Became popular during the early 20th century industrialization, influenced by Frederick Taylor's scientific management principles with focus on the productivity and profitability and also by the bureaucratic theories developed by Max Weber, emphasizing hierarchical authority and control, work specialization and speed. These structures feature a vertical chain of command with specialized, standardized jobs and minimal training requirements to favor standardization of work and outputs (Mintzberg, 2023). This form targets efficiency and it is often used in mass production of products or services by large and mature organizations. Despite their focus on efficiency, social and organizational theories also emerged to stand out the disadvantages of the bureaucratic organizations, as Elton Mayo and the management theories that followed advocating the role of human relations, motivation and workforce well-being (E.H. Schein, 1996). Nowadays, bureaucracies are still criticized by their vertical hierarchy and control limiting new ideas and failing to meet future trends and needs (Miles et al., 1978), to favor traditional ways of working in contrast with a fast-moving environment (Hamel, 2014).

3. ***Meritocracy - Set - Professional Assembly***: decentralized organizational encompassing a set of autonomous professionals assembled together but working independently. It relies on standardization of skills and knowledge from specialized training, requiring low supervision or vertical authority. This structure suits organizations involved in complex contexts requiring continuous training, although stable enough to apply some level of standardization and proficiency. Like in a set, the parts are integrated in the same organization but each individual or unit has a different mission linked to their own skillset. These organizations have less hierarchical levels and technostructure than bureaucracies. Such characteristics seem to respond to "*two paramount interests of many people working in organizations today: democracy and autonomy*" (Mintzberg, 2023, p.92), which can improve motivation and productivity following the well-being theories vis-a-vis bureaucracies. Despite the differences, at the higher organizational levels these normally rely on similar mechanisms in terms of supervision, information flows and key decisions (Martela, 2019). This form can face significant resistance to change as the power and decision making are disperse and largely dependent on the skillset of professionals that work apart in stable environments (Mintzberg, 2023). Drucker (1988) describes this form as information-based organizations, driven by technology and autonomous specialized workforces that require less middle management.
4. ***Adhocracy – Web - Project Pioneer*****:** dynamic and decentralized organizations, like an organic and adaptative web or network to achieve innovation in fast-changing environments. These rely mainly on mutual adjustment for coordination and require little direct supervision or standardization. The

support staff is more integrated in these structures and contributing for the projects. This form breaks organizations formal silos and separations, as agility and flexibility are highly correlated with faster performance (Mintzberg, 2023). Webs often operate in matrix structures and small teams with different management layers to facilitate coordination, resulting in less formal authority and top-down with managers acting as part of the team. This form of organization has become very popular lately, especially in industries driven by technology. This structure can be adopted temporarily, to deal with some specific project, or permanently switching between projects according to strategy and business model. Hamel (2009) suggests that such disaggregated structures allow quick reconfigurations in response to unforeseen opportunities, however the associated cons can be high ambiguity and lower efficiency.

Complementary to the previous four main forms, Mintzberg (2023) also identified three additional models as derivative and evolutive from the previous. A *Divisional form* can be commonly seen as an extension of the bureaucratic organizations, resulting from the business diversification in large companies either by product, services, region or costumers. Mergers and acquisitions, internal growth and reorganizations can also be in the genesis of this form (Mintzberg, 2023). *Community Ships* are another derivative form that can emerge when the organizational culture is very strong and acts as a dominant factor in the identity and outputs generated. Organizations in this form rely on the standardization of norms for coordination, so the social beliefs and principles are recognized and treasured by all its members. This form is commonly decentralized, with little hierarchy and with reduced distance to power (Mintzberg, 2023). Finally, the *Political Arena* is presented as a temporary form or stage until conflicts or existing disagreements are solved internally. This can emerge from any of the given forms if conflicts become dominant in the structure due to lack of coordination. This form might be observed when some significant changes and divisions prevail as the organization has to be disassembled before it can be reassembled again (Mintzberg, 2023).



Figure 8 - Three Complementary Forms (Mintzberg, 2023)

5.4.1 Anchored and Hybrid Forms

The different forms described previously offer clarity and simplicity but may not match all the existing organizations design forms in a rapidly evolving context. Fast-changing systems and technologies, leading to digitalization demand both formalization and agility for innovation which leads to ambiguity. This focus-versus-flexibility paradox (Obel & Gurkov, 2023) is evident in the pharmaceutical industry where strict regulation and the urge for innovation coexist. As result from these dynamics, further possibilities beyond the seven forms can be created including anchored and hybrid forms combining two or more distinct forces to achieve organizational balance and leading to other potential shapes (Mintzberg, 2023). Organizations have dominant forces depending on their elements that without proper balance or countervailing forces may turn defective. In the anchored form (Figure 9) there is some degree of containment by one or more forces instead of the pure version of each form. Culture and conflicts also act as countervailing forces in all forms impacting the organizational change and development process (Mintzberg, 2023).

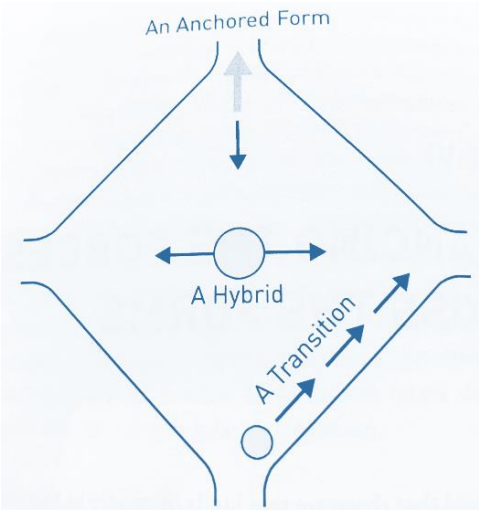


Figure 9 - Balancing across the forms (Mintzberg, 2023)

According to Mintzberg, a big part of the organizations in the modern world are structured in the hybrid form. Hybrids are regarded as an alternative to combine different forces to mitigate the risks of pure forms. In total, there are twenty-one possible combinations of the seven forms in pairs, although hybrids can combine 2 or more forces (Mintzberg, 2023).

This flexible approach to organizational design is supported by theories that defend design as permanently incomplete to allow adjustments from people over the circumstances (Yokoyama, 1992), contrasting with previous theories as the Taylorism that defended a high level of formalization of all the dimensions, positions and tasks. This leads to a greater discussion of the prevalence of individual decisions

and autonomy over the organizational structure and rules, where new visions about self-managing organizations have emerged. Such transformation in recent decades is due to rapidly changing environments, increased flexibility, more educated workforce and sophisticated systems that also influence organizational shape and leadership (Martela, 2019). Martela's research supports Mintzberg's view that some organizational structures combine characteristics from different forms, originating hybrid forms as adhocracies that can be considered in between bureaucracies and self-managed forms.

Even if some theories indicate that new organizational forms might be developed in response to universal problems like task division and allocation or integration of effort focusing rewards and information (Puranam et al., 2014), research still demonstrates that traditional forms can also be adapted to respond effectively to new situations created by the context. So, new challenges do not necessarily require new forms, which facilitates organizational change even in traditional settings (Obel & Gurkov, 2023).

5.4.2 Forms of Organizational Design in Pharma

Pharmaceutical companies, as in the case study, are often good examples of hybrid organizations combining different forms within the main larger structure. By using project pioneering teams (webs) for research, collaboration is encouraged through distributed power and decision making also to tackle faster changes in the environment. Professional assemblies (sets) are applied to highly skilled teams in product development and in corporate functions alongside machine programmed teams (chains) used for manufacturing, packaging and quality control (Mintzberg, 2023). As explained before, decentralization is key especially when designing structures in contexts that demand higher levels of education and expertise, as is the case for medical and scientifical departments (Yokoyama, 1992). Ultimately, from all the forms presented hybrids can be very challenging to coordinate as very different organizations can emerge and collide within the larger structure, which requires strong management and alignment around the overall strategy. Thus, the pertinence of considering complementarily the pivotal role of management, strategy and culture alongside design.

5.5 Management role in Organizational Design and Strategy

Management can be defined by the conjunction of structures, processes and techniques utilized to combine individual work in order to enable complex and larger outcomes (Hamel, 2009). In the optimal form, Management would be capable of creating a stable structure to run the present activities while simultaneously enabling the mechanisms to anticipate the future (Miles et al., 1978). As result from these challenges and conflicts, managers can take different roles and responsibilities according to the

organizational forms illustrated on figures 7, 8 and 9. A key differentiator in the organizational design forms presented above is the management approach and the distribution of the managerial roles. The inclusion of this chapter between the organizational design and the strategy symbolizes the fundamental link performed by management in organizations. Management is responsible for "*controlling and deciding, doing and dealing, thinking and leading all together*" (Mintzberg, 2023, p.32). Managerial tasks and challenges encompass a need to combine both backward and forward looking to take high impact decisions, what implies the need for versatile managers who have this comprehensive capacity to build ambidextrous organizations (O'Reilly & Tushman, 2004). Different management layers play a different role in design, as for instance Line Managers might influence top management to rearrange their own structure and reduce complexity upwards, more often in decentralized organizations as sets or hubs. Besides, managers need to adapt and deal with all the misfits and challenges resulting from the existing design (Ashkenas, 2011).

The model exhibited on Figure 10 aggregates all management components, from leading internally to external links. The managerial outputs are resulting from the combination and interaction of all these elements and a sort of balance between them can be considered as the ideal approach (Mintzberg, 2023).

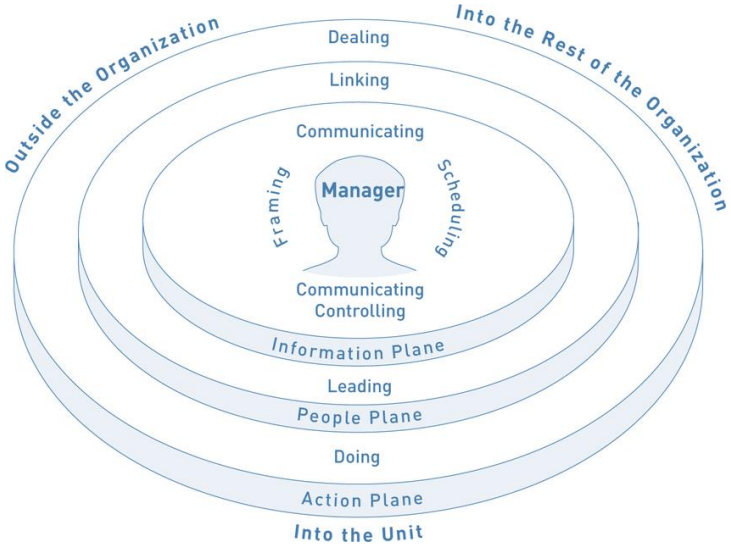


Figure 10 - A model of Managing (Mintzberg, 2023)

Associated with the different organization design principles and management responsibilities, there are also distinct coordination mechanisms to clarify allocation of tasks and responsibilities in the structure.

Coordination can be defined as the organization process to divide labor, according to the company mission, workforce and technology (Mintzberg, 2023). Guiding mechanisms are particularly relevant to guarantee that individual actions and decisions are beneficial for the whole organization (Martela, 2019).

Following the model on Figure 10, Mintzberg (2023) identifies *Mutual Adjustment, Direct Supervision and Standardization* as three concrete methods to achieve coordination via organizational design. *Direct Supervision* requires the existence of a person who controls and coordinates others through information and communication. This approach is common in the hub organizations (autocracies). *Mutual Adjustment* is rather fluid and direct, allowing higher flexibility and less control. This is common in web-like organizations as adhocracies. *Standardization* is usually embedded in the organization ways of working and it can be achieved either through rules, outputs/results, skills/knowledge and norms/beliefs. This coordination mechanism is frequent in bureaucracies (by rules or results to control performance) and also in organizations designed as meritocracies (by training and skills). Summarizing the three, direct supervision is more centralizing while mutual adjustment is less and standardization forms are in between (Mintzberg, 2023). Even though diverse approaches exist within management literature on the advantages and disadvantages of these mechanisms, very often modern organizations can combine different forms of coordination. In stable environments, standardization can be used for coordination but in a highly volatile environment as the pharmaceutical industry increased flexibility is required to foster innovation. These singularities reinforce the importance of adapting management practices alongside design and context.

Managers are still a central piece of the organizational balance as building blocks. However, as result of the numerous forms of organizational design, the concept of top management has been progressively converting into other managing styles more aligned with the different structures, beyond formal authority (Mintzberg & Van der Heyden, 1999). Following the traditional models that defend concentration of the power and tasks seen as important at the top, social needs seen as impacting workforce motivation such as belonging and recognition gradually expanded the involvement of the lower levels in the organization. Later, the Human Resources management theories contributed to enlarge the value added with additional responsibility and meaningful roles disperse across all members originating successful results in organizations performance (Miles et al., 1978). Over the last decade evolutionary perspectives to management have emerged as alternatives to traditional structures, consisting in flat and decentralized organizations without the middle management layer and coordination mechanisms to originate self-managed organizations where employees have increased authority and autonomy (Hamel, 2009; Martela, 2019). Technology also plays a role at this level and contributes for informal and less conventional methods of managing including tasks delegation and coordination at distance (Puranam et al., 2014). Modern

organizations with flatter structures cause additional challenges for management, as the knowledge and information tend to be dispersed across specialists instead of vertically concentrated throughout management, reducing their own added value for the structure (Drucker, 1988; Hamel & Zanini, 2016). Increased autonomy demands also more awareness to align individual and organizational needs and goals. Additionally, top management and HR practitioners must review and adapt hiring, training and rewards, besides creating new coordination methods for self-disciplined organizations (Hamel, 2009).

Organizational change as a continuous strategy is also emerging more bottom-up, as the agility and speed required by the environment demands this capacity to avoid bottlenecks (By, 2005) and to encourage contributors at lower levels into strategic thinking (Liedtka, 2000; Miles et al., 1978). Hamel and Zanini (2016) also advocate the advantages of duplicating the ratio of employees to managers and administrators, to boost innovation, flexibility and productivity. These emerging approaches can lead us to more individualistic or self-centered organizations, favoring individual growth over group performance and challenging the existence of a collective culture (E.H. Schein & P.A. Schein, 2018), but from such conflicts and divergences results can also lead us to progress and development of other useful capabilities.

Just like there is no unique formula for organizational design, there is also no universal management philosophy or style that could be effective across all forms (Mintzberg, 2023). However, understanding the core differences in the forms and the role of different elements can be used by Managers to build more functional and resistant organizations (Fiss, 2007). Managers also coordinate most of the planning and decision-making required to orchestrate the strategy, by guiding staff responsible for its implementation as discussed in the next chapter.

5.5.1 Management role in Pharma

In the pharmaceutical industry, especially considering the core complex tasks performed by scientifical and medical functions, highly specialized professionals need to be supported through overseeing coordination to meet quality standards and regulatory compliance. Consequently, top management often comprises R&D experts (Miles et al., 1978) and Line Managers are often specialized on those same tasks as part of their technical background. As they advance into management positions, typically maintain a reduced span of control to support the expert professionals and to ensure quality outcomes (Carucci, 2019). In efforts to increase productivity in R&D and reduce new product development costs, pharmaceutical industry leaders as Merck consider the need to reduce bureaucracy imposed by management layers and inefficient coordination processes to foster more risk-taking innovations (Herper, 2013; Hamel & Zanini, 2016). This innovative capacity is key not only to ensure higher profitability but also to fulfil the social mission of

delivering medical products and treatments at a more affordable cost and accessible also in lower income countries (Santos et al., 2015). Thus, managing in Pharma entails understanding this complementarity between business results and social purpose, creating a structure to deal with continuous innovation and flexibility while optimizing operational efficiency. Else, it means Managers in Pharma have to face numerous challenges that emerge not only from organizational design but also from the strategy.

5.6 Linking Organizational Design and Strategy

Porter (1996) describes strategy as a sustainable competitive advantage achieved through a unique combination of activities and their execution to deliver value. Overall strategies are influenced by industry, business model and value proposition and should be shared by the members of an organization (Mintzberg, 1987). To maintain a sustainable strategy, some degree of adaptation is required over time. This view of strategy as unique reinforces the need to customize design, processes and management to serve that purpose and to build distinctive capabilities in the long run aligned with the context (Porter, 2008).

Organizational forms are deeply connected with the strategy development piece, with each influencing the other. Mintzberg (2023) links each organizational form to a preferred strategy either deliberate or emerging from actions and learning. Similarly, Miles et al. (1978) argued in favor of aligning design and strategy and

identified three main strategic approaches based on a unique combination of structure, technology and processes. *Defenders*, like Bureaucracies, usually operate in stable environments and focus on efficiency. *Prospectors, as adhocracies,* navigate dynamic contexts by anticipating change. In between, *Analyzers* seek a balance between risk and new opportunities. This latter type can be linked with a hybrid strategy known as exploit and explore that splits the organization into units with separated organizational design, processes, recruitment and training needs to enable different organizational cultures aligned with distinctive strategies (O'Reilly & Tushman, 2004).

Organizational design serves also as a vehicle for leaders to define and execute a strategy. Liedtka (2000) advocates the application of design thinking principles to define attainable strategies to face a dynamic and unpredictable context. Monteiro (2021) similarly defends strategy as the outcome of a design process, involving continuous learning and enhanced collaboration leading to change in processes and organizational transformations. Magistretti et al. (2021) reinforce the validity of design thinking and agile methodologies applied in the pharmaceutical industry, demonstrated by Johnson & Jonhson recent breakthrough projects in new product development, packaging and go-to-market strategies. All these are consolidated by Mintzberg (2023) who views strategy as the outcome of a craft and art process, emerging

from the combination of planning, patterns and learning. The combination of structure, environment and activities leading to an organizational configuration forms the baseline for any strategy (Fiss, 2007). So, strategy should integrate and synthesize all elements connecting past, present and future (Liedtka, 2000).

Despite variations in organizational forms, strategy normally remains centralized at the higher layers of the organization (Martela, 2019). Advantages of concentrating decision-making power at the top management are still well reflected in modern organizational forms, as demonstrated by ambidextrous organizations that adopt as part of their innovation strategy the creation of separated business units to explore new projects while reporting into the same leadership and thus are connected to obtain resources and competitive advantages as key drivers for succeeding. Moreover, new approaches to strategy as design sprints are shifting from creating the best strategy to prioritize faster implementation that enable multiple iterations and continuous learning, which is a key also in the pharmaceutical industry (Agrawal et al., 2019). This can be achieved using a 3T model (team, time and tools) based on strong internal and external collaboration for fast experimentation and risks mitigation (Magistretti et al., 2021). In these emerging theories, the role of top management is shifting from solely defining strategy to creating the conditions for adaptative and emergent strategies to be applied (Hamel, 2009). Ensuring a consistent leadership across strategy, resources and culture is key to enable organizational transformation as explored in the following chapters (Beeson, 2014).

5.6.1 Organizational Strategy in Pharma

The generic strategy in pharma seeks the development of innovative products efficiently, reducing development time and costs associated while ensuring high quality standards (Agrawal et al., 2019). To achieve this outcome operating either in sets or webs, key contributions to the strategy come frequently from the highly specialized professionals and not just from management. The unpredictable outcomes and impacts of innovation, alongside external context, raise the risk of strategic turnarounds (Mintzberg, 2023). Linking Miles et al. (1978) research model to the pharmaceutical industry, larger companies often adapt either a *Prospector* strategy to lead in product and market innovation and address unmet needs in life sciences or alternatively take an *Analyzer* approach to explore new opportunities from external discoveries while investing on their current products and technologies. Examples of this exploit and explore approach applied in the pharma industry are Novartis spin-off units in the 90's (O'Reilly & Tushman, 2004) or the GSK development of Centers of Excellence in Drug Discovery in 2011 (Birkinshaw et al., 2016).

Adopting a *Defender* in such an innovative and technologically advanced industry can be risky in the long-term, as unprotected patents can rapidly reduce revenues endangering the organization size, structure and

staff. In parallel, pharma companies act as market hybrids due to the dual nature of their business since the development and distribution of life-saving products generates positive externalities for society (Santos et al., 2015). This side effect reinforces the strategic importance of these organizations and the relevance of studying how to support their development and change over time for continued prosperity.

5.7 Organizational Change and Development

"*Good organization designs are not monuments to the ages*" (Yokoyama, 1992, p.127).

Change is inherent to organizational design concept as already demonstrated before. Given the absence of a single method to anticipate all the outcomes from design, it requires experimentation and continuous adjustment. Change management, the continuous process involving organizational strategy, structure and capabilities, is key to ensure organizational success and competitiveness over time, being in addition a skill required from Managers as change leaders (By, 2005). Miles et al. (1978) research also supports that top managers are determinant for the organizational structure and behavior development over time.

Organizational structures may evolve into different forms or hybrids across various maturity stages, reflecting the typical life cycle of organizations. Transitions between forms may also occur voluntarily or be caused by unexpected external events (Mintzberg, 2023). Organizational changes or transitions are possible amongst all the existing forms, although some might be more common. Mintzberg (2023) indicates a framework that includes six transition stages:

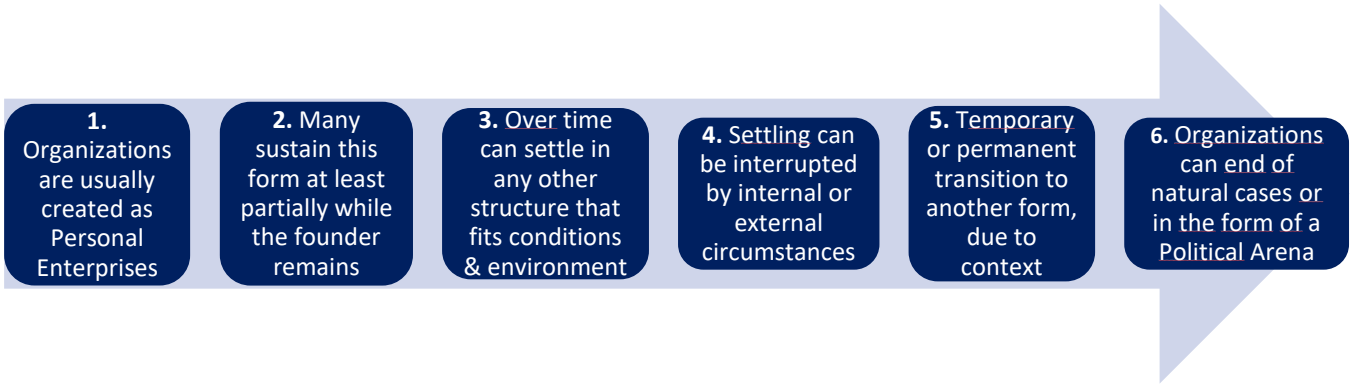


Figure 11 - Life Cycle Model of Organizations, adapted from Mintzberg (2023)

Reorganizations are common in organizations world, to adapt and evolve, and on literature a distinction can be found between restructurings and reconfigurations according to circumstances. Reconfigurations are more frequent and include limited changes within the same structure, while restructurings imply wider changes to fundamental principles of organizational design and are therefore less frequent. Managers can leverage on both mechanisms to ensure alignment between design elements and context, strategy and technological developments. A research study including the top 50 companies of

the U.S. Fortune 500 from 1985 to 2004 shows that reorganizations (continuous change) occurred 27 more times than restructurings (discontinuous change), offering advantages in terms of impact and reduced cost, allowing a faster response and more effective adjustment to dynamic contexts (Girod & Whittington, 2017). This effectiveness is supported by theories that advocate continuous change as required in the current environment to establish new organizational routines proactively to cope with context (By, 2005). The approach chosen for adapting to discontinuous change determines the required dynamic capabilities that the organization must develop at different levels, as a specific skillset to effectively adapt in line with the strategy, culture and talent (Birkinshaw et al., 2016).

Even minor organizational changes require learning and cause resistance (Oreg & Sverdlik, 2011) stressing the importance of creating favorable conditions to tackle learning anxiety and to set psychological safety for the change process following Schein's model of learning and change (Coghlan, 2021).

In today's volatile and uncertain environment, change becomes more reactive and change planning becomes extremely difficult, resulting in unexpected or even dysfunctional changes for organizations (Mintzberg, 2023). To respond effectively, organizations must proactively align structures, strategy, leadership and culture (Chong & Duan, 2022). Hamel (2009) emphasizes the necessity of reducing control, sharing information widely to reduce fear and spread decision-making for faster organizational adaptability.

5.7.1 Organizational Change and Development in Pharma

Reorganizations are also usual within the pharmaceutical industry, as the context is volatile impacted by significant changes in the technologies, components, regulation, healthcare needs and on-going access to medicines. As result, organizational design forms as webs or hybrids that are constantly evolving by nature offer more decentralization and agility to adapt to the industry characteristics.

Organizations operating in these circumstances are thus required to develop specific dynamic capabilities and organizational ambidexterity discussed responds effectively to these competing demands, integrating and managing the resources required to overcome conflicting challenges. *GlaxoSmithKline* (GSK) is one of the largest biopharma companies and one good example of how companies in this industry have to adapt to emerging opportunities in biotechnology. In 2001, the company implemented dedicated centers of excellence in drug discovery to apply different methods from traditional R&D, including new organizational models, modern technologies, smaller cross-functional teams with reinforced autonomy and collaboration to increase responsiveness and accelerate portfolio expansion (Birkinshaw et al., 2016). Moreover, research on such ambidextrous organizations indicates that organizational heritage expressed mainly by its vision, culture and strategic management is fundamental for the change approach adopted.

5.8 Organizational Culture

Culture is defined as the conjunction of shared norms, values and assumptions that influence how organizations are established and function. Initially it was primarily focused on the individuals, until research clarified it as a systemic perspective, considering the role of group norms and their powerful weight. These conclusions highlight the need to consider individuals background and the different occupational communities that are blended with the organization own identity (E.H. Schein, 1996) but ultimately start from the particular to the general, as done to group the different organization elements. Culture is presented in this part, after the internal and external elements, forms, strategy and management chapters because it is somehow influenced and shaped by all of those factors. Inversely, some authors also believe that is culture shaping organizations decisively and for that reason is important to preserve it as a steady variable even during times of organizational change and transformations (Newton, 2023).

Three different types of organizational culture are commonly described in literature as simplifications of reality, including: *Bureaucratic, Supportive and Innovative* (Chong & Duan, 2022). All the forms contain different pros and cons, alongside different characteristics, main forces and coordination mechanisms. Associated with all these, different organizational cultures can flourish and be cultivated not only as result of the form and layers but also as a way to reinforce those. Considering the main forms presented before and the existing theory, chains and hubs are often linked with more bureaucratic cultures, whereas sets and webs tend to be either supportive or more innovative. Notably, this depends not only on the organizational form and culture but also from alignment between management, strategy and context.

Mintzberg (2023) proposes three key stages for the development of a compelling culture: *founding, diffusing and reinforcing*. Creating a compelling culture requires time but can become permanent, almost as the organization' DNA. Similarly, Beeson (2014) defends that organizational cultures are difficult to change, because policies, rules and ways of working are deeply embedded in daily routines. So whenever different outcomes are necessary, a simple organizational design is insufficient. New processes must be installed, including new performance measurement criteria, the skills to be developed in training programs or the profile of the professionals to be recruited. O'Reilly and Tushman (2004) views on organizational culture support this idea that prevailing cultures significantly impact strategy and success. So, their theory on ambidextrous organizations suggests creating separate business units or centers for innovative activities to prevent contamination from the dominant ways of working in the existing culture and also to avoid distracting those operating in traditional units. Management must acknowledge the gap and take decisions that enable the shift towards the desired values and behaviors that endorse new strategies (Newton, 2023).

Even with a compelling culture to pull people together, organizations experience as well conflicts that can pull people apart. So ultimately, culture and conflict coexist in organizations working as complementary forces and a dynamic balance is suggested for constructive organizational development (Mintzberg, 2023). Birkinshaw et al. (2016) demonstrates through different real-world cases how organizations can transform conflicting demands and priorities into positive results. Schein (1996) also explains the existence of conflicts resulting from three cultures of management amongst different groups including Operators, Engineers and Executives. Tensions between operators, who deliver the core operational products or services, and engineers or technocrats who define the rules and systems that impact the work of operators are often escalated for Executives who have limited information on the daily tasks. In the end, organizational cultures that can manage and conciliate these points of view are more successful (E.H. Schein, 1996) and benefit from vaster diversity of options and capabilities (Hamel, 2009).

New challenges and changes in regard to organizational culture are certainly around the corner, as virtual organizations can endanger the natural flow of communications and relationships required for interpersonal collaboration. Emerging topics as artificial intelligence are now blooming in industries around the world with yet uncertain implications on the group and teamwork dynamics at the workplace (E.H Schein & P.A. Schein, 2018). Even if changes can impact culture and values (Chong & Duan, 2022), the organizational learning concept introduced by Schein (1996) to indicate how groups evolve and learn to perform under new environments can be valuable to find new ways of overcoming such challenges.

5.8.1 Organizational Culture in Pharma

Pharmaceutical companies often have a particular organizational culture and behavior, due to their positive social impact that provides a higher feeling of emotional satisfaction and purpose to the workers (Hamel, 2009). This purpose lasts beyond profit and reinforces the organization norms while reducing the risk of internal conflicts (Santos et al., 2015). The ambidextrous model commonly applied in Pharma fosters principles as collaboration, mutual learning and a supportive culture which are required to develop complementary cross-functional teams that can seek alignment from R&D towards commercialization strategy and allocation of funds for continuous reinvestment. Another element to consider on organizational culture in pharma is the impact of multiple mergers and acquisitions inheriting different cultures and management visions. GSK's case is an example, resulting from the integration of four smaller companies in the 1990's, each of them with different capabilities and managerial approaches that shaped the new organizational culture (Birkinshaw et al., 2016).

6. Case Study: Animation plan and resolution proposal

6.1 Animation Plan

The following plan explains the different animation tasks and objectives to present and resolve this case study. The suggested approach involves in-class and at home preparation in groups, to build a constructive presentation in the format of organizational consulting project during approximately one month.

At the end, after resolution proposals are presented in-class, all the groups will receive feedback from the class and professor. The objective is to improve and make further adjustments to later visit in person the company studied and present their ideas and suggestions to the leadership team in Portugal.

The final rating for this work follows a 20-point grading scale as outlined below, to ensure both the professor and students are familiar with the scale. The final grade for each group should be calculated by the sum of professor grade (80% of total) and company leaders rating (20% of total), following the same criteria grid. The suggested criteria are linked with the concept of Learning Agility (Knight & Wong, 2017) measured by five elements with equal importance: self-awareness, people agility, mental agility, change agility and results agility. The suggested criteria aim to pedagogically prepare students for the skills demanded in an agile corporate environment, considering also the case study purpose to bridge academic and business experiences. Professors and company executives in charge of this case assessment should be provided the following scale, learning agility concept and descriptors, as support materials for evaluation.

20-POINT GRADING SCALE	0 to 9	10 to 13	14 to 15	15 to 17	18 to 20
CLASSIFICATION	Insufficient	Sufficient	Good	Very Good	Excellent

Table 2 - Grading scale for Case Study resolution proposals

GRADING SCALE FOR EVALUATION

20-POINT GRADING SCALE			0 to 9	10 to 13	14 to 15	15 to 17	18 to 20	
CLASSIFICATION			Insufficient	Sufficient	Good	Very Good	Excellent	GRADE
CRITERIA	DESCRIPTOR	WEIGHT						
Self-awareness	Being reflective, understanding strengths and weaknesses, seeking feedback and personal insight.	20%						X
People agility	Being open-minded toward others, working easily with a diversity of people, managing communication and interpersonal conflict.	20%						X
Mental agility	Embracing complexity, examining problems in unique ways, making fresh connections and staying curious.	20%						X
Change agility	Willingness to lead change efforts, continuously exploring new options and challenging the existing.	20%						X
Results Agility	Delivering results in tough situations, responding to challenge in a resourceful and inspiring manner.	20%						X
								XX

Source: Adapted from Learning Agility framework from Korn Ferry



Figure 12 - Assessment gridline for the resolution proposals (Professor materials)

EVALUATION CRITERIA

EVALUATION CRITERIA	HOW TO ASSESS
Self-awareness	Are they sensitive of their impact on others? Do they actively seek and respond well to feedback? How often do they admit and learn from mistakes? How do they show they are committed to self development?
People Agility	How do they build constructive relationships with people similar and different from them? How are they politically agile? How do they manage conflict? How do they communicate?
Mental agility	How often do they demonstrate multi-faceted perspectives? How do they deal with difficult concepts? How comfortable are they with ambiguity and complexity? How do they find solutions to tough problems? Are they creative problem solvers and can you give examples? Can you think of examples of how curious and inquisitive they are?
Change Agility	How do they deal with change? How do they push others towards change efforts? How do they manage pressure? How do they lead change? How do they experiment? How do they introduce new perspectives? Do they envision new possibilities, share some examples.
Results Agility	How effectively do they get results through others? How proactively do they push for results and are successfully inspiring others/teams to do so? How driven are they? How do they build high performing teams? How adaptable/flexible are they? How do they show they are resourceful? How have they demonstrated perseverance?

Source: Adapted from Learning Agility framework from Korn Ferry

Figure 13 - Guiding questions for Case Study resolution evaluation (Professor materials)

EVALUATION CRITERIA (Assessment guide)

EVALUATION CRITERIA	LOWER TO INTERMEDIATE GRADES (0-13)	HIGHER GRADES (14-20)
Self-awareness	❑ Pay relative attention to the impact their words and deeds have on others ❑ Might change their behavior when needed if requested ❑ Recognize when a change in approach is needed to be effective	❑ Understand their own personal strengths and limitations ❑ Adapt their approach to meet the needs of the situation and the people involved ❑ Respond to feedback and adjust their behaviour to achieve desired impact and work effectively
People Agility	❑ Work mainly with people who are similar to themselves in perspective and likes ❑ Perform better when roles, responsibilities, and rules of interaction are clearly defined ❑ Prefer working alone and collaborate only when required	❑ Able to relate well to all kinds of people ❑ Understand the strengths and limitations of others and leverage them appropriately ❑ Consider the broad range of others' perspectives ❑ Seek others out for collaboration and feedback
Mental agility	❑ Focus on what is readily apparent ❑ Rely on established solutions ❑ Seek out the one best answer ❑ Prefer things that are proven through data or experience	❑ Dig deeper for what might really be going on ❑ Look at things from all different angles ❑ Explore many new and different solutions ❑ Challenge conventional thinking
Change Agility	❑ Work best when things are stable, consistent and follow established routines ❑ Collect data and analyze to ensure success before stepping into different ways of doing things ❑ Struggle to be structured and process oriented	❑ Able to jump right into leading change ❑ Curious and willingly take risks ❑ Take quick and decisive action in face of new and complex challenges ❑ See problems as an opportunity for change
Results Agility	❑ Prefer to think through and plan before moving into action ❑ Tend to focus on near term goals ❑ Perform best when focused on one set of tasks at a time before moving on to the next ❑ Respond best when the course of action is clear and predictable	❑ Keep all priorities in the forefront, progressing simultaneously ❑ Persevere despite obstacles or changing circumstances ❑ Explore all potential resources and different outcomes ❑ Effectively engage and motivate others to deliver

Source: Adapted from Learning Agility framework from Korn Ferry

Figure 14 – Assessment guide for Case Study resolution grades (Professor materials)

ANIMATION PLAN *(Part I)*

SESSION	ACTION PLAN	OBJECTIVES	TIME
#Lecture 1 (In-Class)	• Previous or following lecture and theories on organizational design and change • Case distribution and contextualization by Professor • Case Reading by students (individually) • Open discussion and Q&A between all • Professor to encourage discussion using introductory animation questions • Professor to ask if students can share other examples of companies facing similar challenges or context	✓ Introduction of the case, initial discussion, Q&A ✓ Link program theories with specific case ✓ Promote interactive conversation in-class ✓ Demonstrate real-word organizational challenges ✓ Encourage students' interest in Pharma industry Key evaluation Criteria: **Self-Awareness**	***1.5 hours***
#2 (*Homework*)	• Students to form working groups (max. 5) to further discuss the case and exchange perspectives • Case in-depth review and analysis guided by professor suggestions on core research areas • Discussion in groups to address case questions based on literature and individual experiences • Prepare the presentation slides for the class, in the form of organizational consulting project for the company • Groups to send their materials in advance for the Professor at least 1day before Lecture 3	✓ Encourage teamwork and collaboration ✓ Suggest additional research and debate ✓ Working groups to prepare resolution proposal ✓ Students to define the presentation tools ✓ Professor to review case and prepare questions Key evaluation Criteria: **People Agility**	***16 hours*** *(Up to to 2 working days)*
#Lecture 2 (In-Class)	• Working groups presentations with case resolution proposal (20 min each) • Class Q&A moment after each presentation and ratings to be given to the group • Professor to ask additional questions and comment on ideas, linking case and theoretical content of the course • Professor to summarize at the end and showcase different perspectives and interpretations for the same theories • Identification of recommendations and gaps existing on available literature to address organizational needs	✓ Critical thinking to select key points ✓ Discussion about organizational design elements ✓ Demonstrate that organizations can have different design and development needs depending on key variables as strategy, management and culture Key evaluation Criteria: **Mental Agility**	***1.5 hours*** *(1 week later #Lecture 1)*

ANIMATION PLAN *(Part II)*

SESSION	ACTION PLAN	OBJECTIVES	DURATION
#4 (*Homework*)	• Working groups to review and finalize their case study resolution proposal, incorporate comments and feedback provided by professor and classmates. • Update presentation slides for the company with a professional outlook. • Elaborate the required support materials and agree on key speakers for the final presentation.	✓ Enlarge own perspective by collecting and incorporating peers and professor feedback ✓ Prepare Company visit and adapt to context Key evaluation Criteria: **Change Agility**	***Aprox. 8 hours***
#5 Final Presentation (In-Company Visit)	• Professor and working groups to visit the company and present their proposals to the executive team in Portugal • Possibility of dual Q&A at the end, between students and executives to foster mutual learning • After-session informal coffee-break for networking. E.g discussion about the company departments, projects and different careers paths in pharmaceutical industry	✓ Promotion of dialogue cooperation between academic and corporate ✓ Proximity of the workplace for the students, within a global pharmaceutical company ✓ Provide insights for the company executives to take real action Key evaluation Criteria: **Results Agility**	***2 hours*** *(2 weeks later #Lecture 2)*

Figure 15 - Animation Plan (Part I & Part II)

6.2 Animation Questions

The following animation questions can be used by the professor to introduce the case context and launch the main discussion points, also to guide students' reflection using relevant literature background.

1. What might be the organizational design of an innovative multinational pharmaceutical company?
2. How can the company maintain an organizational design that is aligned with a growth strategy?
3. What is the role of management and how can they support organization development and change?
4. What are the advantages and disadvantages of creating a new CoE in Portugal for this company?

6.3 Case Study Resolution Proposal

In this section is presented a resolution proposal for the case study questions listed before in 2.3. The proposed resolution is not exhaustive nor the single possible answer, as these are open questions subject to different perspectives and discussion. As demonstrated during literature review, organizational design and development alongside strategy and management practices are open and evolutive fields, depending largely on the interactions between different elements and context and therefore encompassing multiple possibilities. Nonetheless, the solutions here presented result from analysis and interpretations of the information provided in research and also from the case context and company details. Hypothetical assumptions or reasonable personal inferences beyond the information provided in the case, as well as learnings based on similar organizational environments can also be considered valid.

1. After reading the case, describe what reasons can influence a large multinational pharmaceutical towards organizational change with the creation of a new center of excellence (CoE) as explained.

- Over time organizations evolve and settle in different structures to fit the external environment, especially when operating in a dynamic context (Mintzberg, 2023).
- Reorganizations are often required to deal with context, and in this case a limited reconfiguration within the existing structure was implemented to enable a more effective adjustment to the dynamic changes in context (Girod & Whittington, 2017).
- Considering the characteristics of the company, this biopharmaceutical group is in expansion and committed to develop and apply new technologies and integrate innovative medicines. To do so, the company must invest on shaping its structure, departments, systems and resources to increase effectiveness from research to distribution. The new Center of Excellence aims to integrate and streamline internal tools and processes, contributing for the corporate strategy by enabling growth, product delivery and accessibility at global level (Porter, 2008).
- Opportunity to improve organizational efficiency, moving towards a center of excellence that provides transparent, compliant and unified ways of working. Enable global decision making to scale and grow at global level (Iveroth, 2010).

• In the literature review one can find numerous examples of different large corporations in the pharmaceutical industry where change and adaptation has been necessary, as demonstrated by Novartis spin-off (O'Reilly, C.A. & Tushman, 2004), GSK creation of discovery centers of excellence (Birkinshaw et al., 2016) and more recently by Johnson & Jonhson design sprint methodologies (Magistretti et al. 2021).

1.1 Explain the main characteristics of a Center of Excellence (CoE) as an organization.

• The concept of a CoE in literature can be defined through four key characteristics (Frost et al., 2002): physical presence, specific know-how or capabilities, strategic recognition and managed as a CoE to obtain value by developing new products, technologies, or intangible knowledge transfer.

• Initially the CoE is a receiver of knowledge and resources although it is expected to convert into a sender of expertise and intangible assets for the company once it is successfully established.

• Implement four C's model: cost, control, consistency and competencies (Iveroth, 2010).

1.2 Explain in a SWOT analysis what can be the organizational change impacts for this company resulting from the implementation of a CoE in Portugal, as an external advisor.

Strengths	Weaknesses	Opportunities	Threats
• Organizational adaptation to context requirements developing technology, skills and efficiency for competitive advantage. • Implement ambidextrous strategy without disruption on existing team and structure. • PESTLE analysis contains positive indicators to set-up of the new CoE in PT.	• New CoE requires time, resources and investment from leadership. High fixed-costs (tangible assets). • Risks of misfit with the initial organizational design, structure and new teams. • Uncertainty about the organizational performance and development of the CoE. • Lack of recognition and awareness as employer in the Portuguese labor market.	• Greenfield organization from scratch allows managerial decisions without legacy. • Build different capabilities across the organization. • Potential to contribute with innovation and service delivery for the organization at global level. • Learning and internal knowledge transfer (intangible assets).	• Potential conflicts with existing culture and leadership. • Decentralization and decision-making power distance between new CoE and HQ. • Matrix organizations create several managerial challenges. • PESTLE analysis demonstrates a highly dynamic and competitive labor market in PT. • New CoE settled during Covid-19 pandemic lockdown.

Figure 16 - SWOT analysis

1.3 Discuss why Portugal was selected as a preferred option to establish the new CoE.

• Several indicators contained in the PESTLE (Political, Economic, Social, Technological, Legal and Environmental) analysis demonstrate why Portugal was elected as a suitable option in this case.

- Political and economic stability, education and technological advancements were key factors.
- Elaborate on Portugal's competitive advantages as a qualified workforce at a competitive cost and potential to scale-up organizational development if required. Local skills and capabilities are amongst the most valuable resources of the host country for a CoE to generate innovation (Frost et al., 2002), alongside the prevalence of the specific industry in that location which is also the emerging case for Portugal as per the examples provided in the case linked with Pharma companies.
- Portugal is also located in a time zone close to the corporate HQ and in between other geographies as Americas and Asia, allowing remote collaboration and flexibility from an operational perspective.

2. **Identify and describe the key elements that should have been considered in this new organization design according to literature. Provide your opinion about the process and steps outlined.**

- Pharmaceutical companies present the need to constantly rethink organizational design and development, alongside alliances, partnerships and mergers and acquisitions (Baral, 2024).
- Amongst organizational elements required to define the new CoE, below are identified some of the core highlighted by Mintzberg (2023):

Elements of Design	Description of the context and decision-making in the new CoE
Scope	Positions in the new structure were initially defined with broader scope, allowing also for adjustment and redefinition according to the needs of the new teams and ways of working.
Formalization	The new positions required high autonomy, also due to the set-up of the CoE in a different location from the HQ in remote work, implying matrix reporting lines with relatively low formalization also due to the high training and education level of the new teams formed.
Training	Over 80% of the new roles required some university degree and advanced level of on-the-job training. In the CoE structure main areas of expertise as technologies require permanent training and refreshment and that often requires external providers as a pharmaceutical company does not own this specific knowledge. During the set-up of a new structure there is less availability for training, influencing the requirements of the professionals to be hired in the short-term.
Grouping	Global and local structures were grouped by function based on what they do (Mintzberg, 2023). Formal direct supervision exists as a coordination mechanism but can be less effective at distance an in the new CoE top management and first line managers were often based in HQ. Therefore, mutual adjustment was mainly required for communication and cooperation.
Sizing	Teams sizing is widely depending on each functional structure and needs, leading to higher span of control very often beyond the regional limits especially in areas like IT. Because the formal manager is sometimes in a different location, some informal mid-level leadership emerged at the new CoE due to individuals experience and skills.

Centralization	Company ownership at group level is centralized on the founder's family, however the management and coordination power are decentralized at operational level and distributed across layers, functions and regions. In the case of the CoE, strategic decision-making was partially taken at HQ level but involving local teams and then delegated vertically for local adaptation and implementation by a dedicated management team in the new CoE or at functional level. Some activities are more centralized as those impacting the new structure costs.
Systems of Planning and Control	Top-down systems and planning including the company vision and strategy on the long-term were materialized by the functional scorecards that originate the annual goals per team and then the individual contribution for those, measured and controlled by objective metrics and annual performance results. For greater alignment between the new CoE and HQ, it was key to adopt similar processes, methods and follow the global practices and same calendar also at local level for activities as budgeting, goal setting, performance review and annual bonus payout.
Information Technology (IT)	New technologies often demand a new structure, renovated processes and different ways of coordination and control (Miles et al., 1978). This element was in the genesis of the new CoE, focused on developing and implementing new systems and applications to scale-up at global level for greater efficiency and competitiveness. The focus has now shifted from accommodating the changes introduced by IT, to the need to create or reorganize a structure considering the technological impacts on the other elements of design.

Table 3 - Elements of Design in the new CoE (Case Study)

3. At the initial set-up stage, what organizational design form could have been more likely to succeed in this company? Justify and elaborate on advantages and downsides of your options in comparison with other forms.

- State that organizations are not born with a design. Instead, an organization transitions into the forms over time and as result of consolidation of the elements and their interaction with management and context (Miles et al., 1978).
- In this case the form adopted for the new CoE structure can be described as hybrid to deal simultaneously with the formalization required in this type of industry while also adjusting to the changing context in terms of systems, processes, ways of working and teams under construction.
- This hybrid form includes the characteristics of a meritocracy (set/professional) as different functions were operating independently under the same structure, but also as an adhocracy (web/project) as within each function coordination and work was assigned by projects in smaller workgroups. This aims to streamline agility and faster outcomes to avoid bottlenecks (Todnem By, 2005) and to encourage contributors at lower levels into strategic thinking (Liedtka, 2000).
- These two forms are aligned with HR management theories that contributed to distribute responsibility and value-added roles across different organizational layers (Miles et al., 1978).
- Additionally, decentralization and autonomy also fit the strategy of the new organization as CoEs within global companies are expected to develop capabilities beyond local level (Frost et al., 2002).

• Other organizational forms as personal structures don't fit so naturally, as the centralization in one individual can delay and impact the transformation process, relying mainly on direct supervision for coordination and less effective on large scale organizations (Mintzberg, 2023).

• Finally, the programmed structure is more indicated for performing repetitive activities in stable environments, which is not the case when innovating and changing ways of working in a dynamic context with a highly qualified workforce that is also seeking less top-down control and more flexibility to innovate as also required by the pharmaceutical industry.

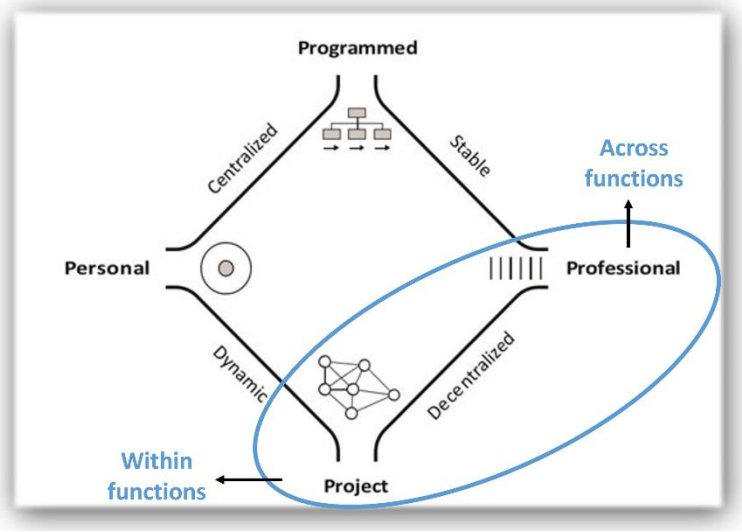


Figure 17 - Organization Design Forms (Case Study)

3.1 What type of management and coordination mechanisms could be more suitable in this proposed form, also knowing the new CoE is located in a different country from the HQ?

• Professional and project forms are less hierarchical than others, resulting in more decentralized power and monitoring at distance with more individual autonomy (Mintzberg, 2023). This is particularly important in organizations with highly levels of education and expertise (Yokoyama, 1992) as in Pharmaceuticals demanding less direct supervision from management due to standardization of skills within each function and mutual adjustment across functions.

• These coordination mechanisms are also impacted by the matrix structure in place, as different management layers are spread between the new CoE and other geographies dealing or managing the activities performed in the CoE, often with more than one reporting line to promote collaboration over individual results.

• Despite this decentralized management approach, across hybrid organizations and ambidextrous strategies top management is particularly important to ensure alignment, knowledge transfer and to link backward and forward looking (O'Reilly & Tushman, 2004).

• Management role is key to build the synergies and to take decisions that enable the shift towards the desired values and the new organizational culture (Newton, 2023).

3.2 What are the potential effects of this form on local HR strategy including hiring and training?

Literature indicates that structures who provide more autonomy and less direct supervision also require more responsibility and self-management from the individuals (Drucker, 1988), which is seen as a key competitive requirement for organizations to succeed in the modern competitive world (Hamel, 2014) especially in industries driven by high technology where quick reconfigurations may be required to address unforeseen opportunities (Hamel, 2009).

• As result, from an HR strategy in this new CoE set-up it was required to hire more senior and autonomous professionals, able to perform in this context and with their training and knowledge already consolidated, rather that recruiting junior professionals for in-house training since these would require more management support, different coordination mechanisms and different performance expectations.

4. **What could be considered the most relevant elements of external environment in the case provided, considering the moment of design and implementation of the new organization?**

• Organizational design is shaped by different elements of the context, starting by organization maturity and dimension and also including industry, technology, environment and external agents. Context plays a role on design but also on constant redesign and organizational change (By, 2005). These could be considered the most relevant challenges in the initial set-up stage, in this case:

→ Age and Size: despite integrated in a larger and formalized company, the new CoE was created from scratch in a location without existing teams or structure. This created numerous challenges in terms of resources, expertise and internal alignment required. As stated by Mintzberg (2023), with time and experience organizations tend to become more predictable following consistent patterns in decision making, which was not possible in this case demanding more judgement and individual experience from managers and teams.

→ Environment: Several environmental circumstances could be pointed, as the pharmaceutical industry innovation requirements or the increasing global competition for talent. However, as

detailed in the case, the set-up of this new CoE back in 2021 was particularly challenged by the Covid-19 pandemic with two major impacts: 1) Global uncertainty context at social and economic level, raise of risk adverse workforce as a major liability for a new organization totally dependent on the successful attraction of new hires; 2) Due to the existing restrictions in the working spaces, all local activities had to be started in a fully remote working environment, creating additional difficulties on communication, collaboration, organizational culture and managing at distance.

5. How can organizational design be suited to create a structure that is adaptable and flexible for the long-term, able to cope with organizational development and change over time?

- Organization design is an outcome rather than a simple choice. The need of and effective alignment between environment and internal elements is key as organizations change over time as result from the consolidation of the internal elements and their interaction with context (Miles et al., 1978). Management plays a fundamental role on enabling change by heading adaptative organizations through the structure, strategy and culture promoted (Birkinshaw et al., 2016).

5.1 Present and describe the key internal drivers of change in this case.

a) Structure: The hybrid form as presented before in this case results from the combination of different characteristics and enables a flexible design by default, which is suitable for transitions associated with organizational development. Literature demonstrates that existing forms can be adapted to respond effectively to new context, and so new structures or design are not always required (Obel & Gurkov, 2023) especially when already operating in a form with lower resistance to change as hybrids. Frequent reconfigurations can be used to introduce limited changes within the same organizational structure as a continuous adaptation mechanism to deal with dynamic contexts (Girod & Whittington, 2017).

b) Management: In the case of the new center of excellence created in Lisbon, motivated by needs of new technologies to support business growth, it was fundamental to ensure connection and linkage with the company headquarters and maintain also a common top management to connect and allocate the resources and knowledge to create synergies from the new structure, as described in ambidextrous organizations (O'Reilly & Tushman, 2004). This also reinforces the need of adopting mutual adjustment as coordination mechanism, more suitable to deal with a volatile environment associated with a new organization. Technology systems and tools are nowadays essential also for managing with efficacy, even more to manage at distance.

c) Culture: Even if inheriting some common principles and behaviors from the HQ, an emerging organizational culture suited to the local context is necessary to promote workforce attraction, engagement and collaboration. It must be implemented to support the organization strategy and performance also at global level. Ultimately, conflicts between existing ways or working and the changes to be introduced by the new CoE can also contribute for new capabilities and group dynamics as explained by Schein (1996). Following theories on ambidextrous organizations, this alignment can be achieved with a common leadership that breaks the silos and ensures the required resources to promote an independent culture organically. The culture established in the new CoE is simultaneously supportive and collaborative, as determined the organizational forms adopted and responding to the context and strategy adopted.

d) Strategy: The ambidextrous model and strategy adopted for the creation of the new CoE, as detailed below in the following question, can be considered essential to reinforce the structure and culture adopted as it encourages and demands some basic principles as collaboration, mutual learning and supportive culture to promote cross-functional teams and alignment. This is also consistent with the hybrid form adopted and external volatile context.

6. What might be the most suitable organizational strategy for the company to continue investing in R&D to discover new medicines while also adopting organizational change for internal efficiency?

- According to Porter (1996), ensuring a sustainable strategy over time requires repositioning or adaptation to strengthen the organization differentiating factors as it was the case with the new CoE.
- Organizational design can also be used to define and execute a strategy (Beeson, 2014), and the decision to implement a new Center of Excellence is an example of a strategic decision taken by the company top management.
- A new organization set-up requires adaptations and a learning process. Team members at local and global level can contribute to craft a collective strategy (Mintzberg, 2023).
- Considering the theoretical framework proposed by Miles et al. (1978), this company could be considered more as an Analyzer looking for opportunities to continue maximizing the existing resources and medicines, while also investing to discover new drugs and simultaneously working also to improve operational efficiency.
- This perspective indicates a dual focus, as part of a hybrid strategy designated by exploit and explore that splits the organization into units with differentiated organizational design and capabilities to create different also distinct cultures that reinforce such strategies. This ambidextrous organizational is

frequently adopted in the large pharma companies, as seen by the cases of Novartis (O'Reilly & Tushman, 2004) or GSK (Birkinshaw et al., 2016) and it can be explained by the fast changing and hyper competitive context, as when main patents become unprotected the revenues tend to decrease what can endanger the long-term sustainability. To address these competing demands and manage the available resources between present and future needs, ambidextrous strategies are particularly suitable to launch new innovative units with different scope and purpose from core activities.

- Different organizational strategies are thus at some point independent but designed for greater synergies, as the new CoE that is settled as an autonomous unit requires a differentiated skillset and organizational culture but aims to introduce new ways of working and develop know-how for the group on the long-term.
- This corporate strategy is also demonstrated in this case by the fact that the company studied has research and development centers in 10 countries and manufacturing facilities in 10 countries, looking for segmented competitive advantages that can be integrated at the top-management level as suggested by literature on ambidextrous organizations.

6.1 How can that strategy be reinforced by the organization design in this case?

- Organizational forms are connected with the strategy and processes, management and coordination, level of decentralization, training requirements and communication needs (Mintzberg, 2023). Therefore, the hypothetical impacts resulting from the interaction between these internal elements and the external context are considerable.
- An ambidextrous strategy requires versatile managers who have this comprehensive capacity to link and manage (O'Reilly & Tushman, 2004), but also requires the recruitment of professionals who are knowledgeable and autonomous to perform and deliver in such context where decentralization and training requirements are high.
- Communication workflows are critical for the success of this strategy and for the organizational design to be effective managers must be able to navigate complexity and ambiguity as matrixial structures demand more coordination and time for alignment (Martela, 2019). As response to that, Managers play a key role in dealing with outside and linking inside of the organization, communicating more than controlling and also balancing proficiency with collaboration for an effective organizational design (Mintzberg, 2023).
- According to research, ambidextrous organizations are linked with the formation of dynamic capabilities that enable and support effective organizational adaptation and development

(Birkinshaw et al., 2016), which can continuously generate also changes on organizational design. Examples resulting from these new capabilities can be the creation of a new center of excellence, as in the case study presented, or the adoption of new concepts and methodologies at organizational level as demonstrated by Magistretti et al. (2021) with the successful application of design thinking principles at Johnson & Jonhson projects in new product development, packaging and go to market strategies.

- In these emerging examples, the role of top management seems to be moving from defining a strategy to allowing flexibility to support adaptative strategies (Hamel, 2009), to involve employees at all layers on strategy and design (Liedtka, 2000).

7. What recommendations can you provide to the HR and leadership team of this company considering challenges and workplace trends for continuous talent attraction, development and retention in the new CoE.

- Consolidate core capabilities which were initially linked to the objectives for the new CoE and leverage on those to build internal impact and performance for the rest of the organization. (Frost et al., 2002). Demonstrate learning agility, flexibility and change readiness to be a preferred location when required to implement further reorganizations to deal with continuous or discontinuous changes in context. Perform as internal change agent, aligning company strategy with the necessary adjustments in structure, systems and processes according to context (By, 2005).
- Considering new projects and future scale-up, embrace new working methodologies as an Agile approach that combines multiple inputs from internal and external stakeholders into iterative operating models which can provide fast change with greater internal alignment (Agrawal et al., 2019). To consolidate new change projects, define the same model used to set-up the CoE as common ground to facilitate coordination and internal readiness for change (Iveroth, 2010).
- New models as self-managed organizations, where technology and information take over an essential piece of decision-making, are also supported by Drucker (1988) conducting to greater interrogations on how managers and leaders of tomorrow can be prepared if the traditional positions that would enable their learning curve through management careers are reduced. Other theories can respond to that by addressing the evolving role of management, indicating that best practices will change from having single leaders to a greater focus on group leadership. In this scenario, whomever has the capacity to deliver better solutions will emerge as the natural leader for each moment also reinforcing a culture of flexibility and psychological safety for individuals to speak-up at all levels regardless of

hierarchy and design (E.H. Schein and P.A. Schein, 2018). These theories defend moving from single and stable structures to multiple and dynamic hierarchies, determined by individual expertise and based on contribution over position. Management roles and skills might also change as result in order to support and retrain leaders in this transition (Hamel, 2009).

6.4 Case Study Resolution Slides





1. After reading the case, describe what reasons can influence a large multinational pharmaceutical towards organizational change with the creation of a new Center of Excellence (CoE) as explained.

INTERNAL	EXTERNAL
• Internal reorganizations (restructurings or reconfigurations) • Organizational Strategy: new processes and tecnhologies • Leadership Vision • Organizational efficiency • Expand skills and capabilities at global level	• Fit dynamic environment • Industry practices and requirements • Market response and competitiveness • Address new technologies, innovative therapeuticals and regulatory framework

References: (Mintzberg, 2023); (Girod and Whittington, 2017); (Porter, 2008); (Iveroth, 2010); (O'Reilly, C.A. and Thusman, 2004); (Magistretti et al. 2021).



1.1 Explain the main characteristics of a Center of Excellence as an Organization.

- Physical presence
- Specific know-how or Capabilities
- Strategic internal recognition
- Managed as a CoE to generate future value

Reference: Frost et al. 2002.



1.2 Explain in a SWOT analysis what can be the organizational change impacts for this company resulting from the implementation of a CoE in Portugal, as an external advisor.

Strengths	Weaknesses	Opportunities	Threats
• Organizational adaptation to context requirements developing technology, skills and efficiency for competitive advantage. • Implement ambidextrous strategy without disruption on existing team and structure. • PESTLE analysis contains positive indicators to set-up of the new CoE in PT.	• New CoE requires time, resources and investment from leadership. High fixed-costs (tangible assets). • Risks of misfit with the initial organizational design, structure and new teams. • Uncertainty about the organizational performance and development of the CoE. • Lack of recognition and awareness as employer in the Portuguese labor market.	• Greenfield organization from scratch allows managerial decisions without legacy. • Build different capabilities across the organization. • Potential to contribute with innovation and service delivery for the organization at global level. • Learning and internal knowledge transfer (intangible assets).	• Potential conflicts with existing culture and leadership. • Decentralization and decision-making power distance between new CoE and HQ. • Matrix organizations create several managerial challenges. • PESTLE analysis demonstrates a highly dynamic and competitive labor market in PT. • New CoE settled during Covid-19 pandemic lockdown.

1.3 Discuss why Portugal was selected as a preferred option to establish the new CoE.








POLITICAL ECONOMIC SOCIAL TECHNOLOGICAL LEGAL ENVINRONMENTAL



Reference: Frost et al. 2002.

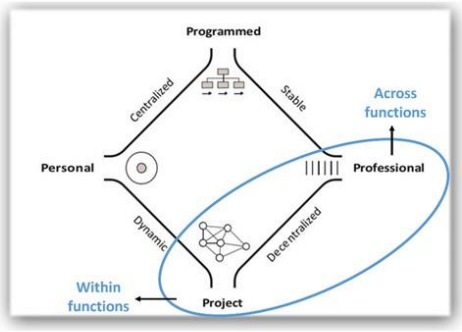
2. Identify and describe the key elements that should have been considered in this new organization design according to literature. Provide your opinion about the process and steps outlined.



Reference: Mintzberg 2023.

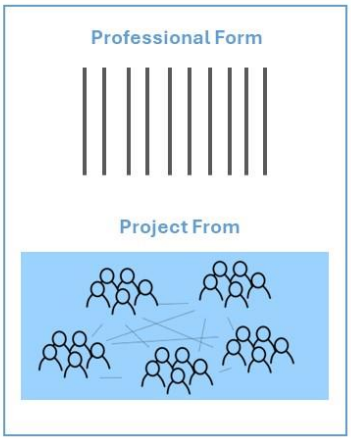
3. At the initial set-up stage, what organizational design form could have been more likely to succeed in this company? Justify and elaborate on advantages and downsides of your options in comparison with other forms.

- Organizations transition into the forms over time
- New CoE structure required a hybrid design
- Hybrid: Professional sets across functions + Project hubs within
- Other forms lack decentralization and agility to innovate



References: (Mintzberg 2023); (Liedtka and Mintzberg, 2006); (Miles et al., 1978).

3.1 What type of management and coordination mechanisms could be more suitable in this proposed form, also knowing the new CoE is located in a different country from the HQ?



Top Management across hybrid organizations ensures link and alignment, knowledge transfer and strategic forward looking.

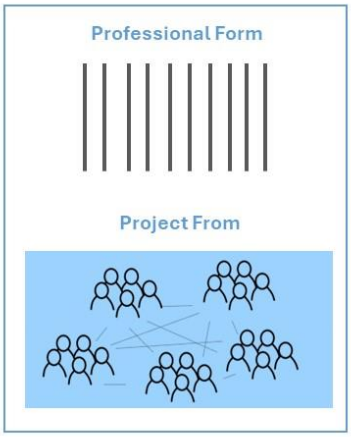
Management layers - professional and project forms are less hierarchical, resulting in more decentralized power and monitoring at distance with individual autonomy.

Matrix structure in place with management layers spread between the new CoE and other geographies, often with more than one functional reporting line to promote collaboration.

Pharmaceutical industry demands less direct supervision due to standardization of skills (within each function) and mutual adjustment across functions.

Reference: Mintzberg 2023.

3.2 What are the impacts of this organizational form on local HR strategy including hiring and training?



- Decentralized matrix structure (individual autonomy)
- Self-Management
- High technology
- Dynamic context
- Quick reconfigurations
- High Regulation and responsibility

HR Strategy

Recruit senior and fully autonomous experts, able to perform and manage change

Training and know-how consolidated (managing at distance)

References: (Mintzberg, 2023); (Drucker, 1988); (Hamel 2009; 2014).

4. What could be considered the most relevant elements of external environment in the case provided, considering the moment of design and implementation of the new organization?

AGE & SIZE	ENVIRONMENT
• New structure/workplace • Resources and expertise (new capabilities) • Internal alignment • Managing at distance • Decision making patterns	• Pharmaceutical industry innovation requirements • Global competition for talent • Covid-19 pandemic: uncertainty and fully remote working for new teams

Context plays a role on design, also on constant redesign and change (By, 2005)

References: (Mintzberg 2023); (By, 2005).



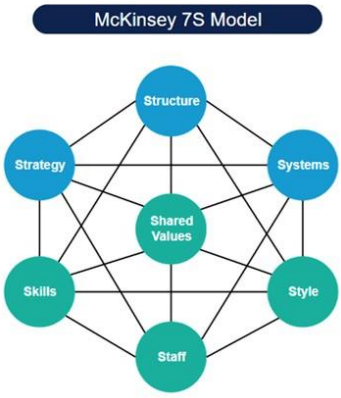
5. How can organizational design be suited to create a structure that is adaptable and flexible for the long-term, able to cope with organizational development and change over time?

- ❑ **Organization design is an outcome rather than a simple choice.**
- ❑ **Effective alignment between environment and internal elements is key.**
- ❑ **Organizations change as result of interactions between internal elements and environment.**
- ❑ **Management plays a fundamental role on enabling change.**
- ❑ **Develop adaptative organizations through the structure, strategy and culture.**

References: (Miles et al., 1978); (Birkinshaw et al., 2016).



5.1 Present and describe the key internal drivers of change in this case.



Structure: hybrid form as presented before in this case combines different characteristics and enables a flexible design suitable for organizational development with lower resistance.

Strategy: ambidextrous model and strategy consistent with hybrid form to reinforce the structure and principles as collaboration, mutual learning and supportive culture.

Management: key to ensure connection and linkage with the company headquarters and to allocate resources and knowledge that create synergies for the new structure.

Culture: emerging culture suited to the local context to promote workforce attraction, engagement and collaboration. Supportive to reinforce the organization strategy and performance.

References: (Obel and Gurkov, 2023); (Girod and Whittington, 2017); (O'Reilly and Tushman, 2004), Schein (1996).

6. What might be the most suitable organizational strategy for the company to continue investing in R&D to discover new medicines while also adopting organizational change for internal efficiency?



Analyzer strategy:
Looking for opportunities to continue maximizing the existing resources and medicines, while also investing to discover new drugs and simultaneously working also to improve operational efficiency (Miles et al., 1978).

Hybrid Strategy:
Exploit and explore the organization into different units with separated organizational design and capabilities to create distinct cultures that reinforce multiple strategies (O'Reilly and Tushman, 2004).

References: (O'Reilly and Tushman, 2004); (Miles et al., 1978); (Mintzberg, 2023); (Birkinshaw et al., 2016).

6.1 How can that strategy be reinforced by the organization design in this case?

- **A sustainable strategy** over time requires repositioning the organization differentiating factors including design.
- **Ambidextrous strategies** are particularly suitable to launch new innovative units with different scope and namely to obtain greater synergies, as the new CoE.
- **The new CoE** is settled as an autonomous unit that requires a differentiated skillset and organizational culture but aims to introduce new ways of working and develop integrated know-how for the group on the long-term.
- **Ambidextrous organizations** are also linked with emerging dynamic capabilities that enable and support effective organizational adaptation and development with continuous changes on organizational design.



References: (Liedtka, 2000); (Porter, 1996); (O'Reilly and Tushman, 2004); (Mintzberg, 2023); (Birkinshaw et al., 2016); Magistretti et al. (2021).

7. What recommendations can you provide to the HR and leadership team of this company considering challenges and workplace trends for continuous talent attraction, development and retention in the new CoE.

Build core capabilities to deliver performance for the rest of the organization.

Demonstrate learning agility, flexibility and change readiness as internal change agent.

Align company strategy with changes in structure, systems and processes.

Embrace new working methodologies as Agile WoW for faster change.

Become a pilot model to be used as common ground to facilitate internal change.

Adapt to new models as self-managed organizations.

Address the evolving role of management.

Reinforce a culture of flexibility and psychological safety for individuals.



References: (Frost et al., 2002); (By, 2005); (Agrawal et al., 2019); (Iveroth, 2010); (Drucker, 1988); (Schein and Schein, 2018).

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7. Conclusion

7.1 Theoretical Contributions

Whereas in the past, organizational design was normally associated with the need for restructuring, it is becoming more recurring and strategic nowadays, also as part of the growth strategy and competitiveness to ensure efficiency in a challenging environment at multiple dimensions (Beeson, 2014).

Post-case, practical results of the design and strategy implemented in-company can provide additional contributions for theory on organizations developing in similar context. Vast literature and other cases have studied specific outlooks in the pharmaceutical industry across large corporations. However, this case aggregates a wide array of organizational and management literature, attending the pharmaceutical context and the characteristics and objectives of Centers of Excellence in particular. Consequently, this case offers a qualitative work in a context of rapid organizational and technological change that is shaping organizations globally. The elements and outcomes shared can be useful to review or update applicable frameworks and models to guide organization design and development forward, potentially contributing to strengthen the relevance of this strategic industry in our economy (Guedelha, 2021).

This work can also address previous research from authors as By (2005), who identified the need to carry studies to elaborate on existing frameworks to manage change. Following a retrospective approach, the case elaborates on the set-up of a new organization after 2020 therefore providing a fresh and relevant example of the post pandemic landscape. Moreover, the case considers past evidence but also challenges for the future that can result from the complementary questions raised throughout resolution proposals. Theory-building from case study research can be especially relevant in complex and dynamic realities, either to address emerging needs as new ways of organizing work and management or to complement existing knowledge with fresh perspectives (Eisenhardt, 1989). Hence, this work can assist research on organizational response to discontinuous change, by reviewing traditional organizational forms as the ones presented by Mintzberg (2023) and demonstrating their applicability in a volatile real-word scenario. Likewise, this case illustrates the need to align design with strategy reinforcing theories on ambidextrous organizations and dynamic capabilities for organizational development (Birkinshaw et al., 2016).

7.2 Practical Contributions for the Company

Literature indicates that centers of excellence that achieve a positive performance and contribution for the whole organization can receive additional recognition and investment for further expansion (Frost et al., 2002). Therefore, by showcasing the success of this CoE set-up in Portugal, this case provides insights for

sustained organizational growth. The fast-paced set-up left insufficient time for thorough analysis, so this research can be helpful for decision makers in this organization as *post-mortem* for continuous change.

The case systematizes past decisions alongside emerging organizational trends that can be relevant for further development and stabilization of this company as a reference employer with positive impact for the employees' wellbeing and performance. The theorical models and theories explored in this case study can be used by the company to create management tools supported by structure, strategy and culture. In the event of redesign or expansion of this CoE in the future, with different functional scope or location, this work can also support managerial decisions to drive a successful transformation process. Research demonstrates that with increased skills and capabilities over time the original scope of a CoE must be reviewed to incorporate more complex added-value tasks to maximize resources potential (Oshri, 2012). For instance, the new technological advancements resulting from the data-driven architecture enabled by the new ERP can accelerate opportunities in automation, artificial intelligence and digitalization that can increase the CoE based teams' contribution for the core pharmaceutical activities (Agrawal et al., 2019).

Looking forward, the company should adapt to the fluctuating context as pharmaceutical companies must deal with industry-specific challenges (Ural, 2024). Major impacts resulting from geopolitical crisis, continuity of hybrid working models and a workforce lead by millennials now integrating even more digital natives from Gen Z and Alpha. Agile working methodologies can also grow along with increased autonomy for individuals, including decisions requiring business accountability as hiring, onboarding and development initiatives especially in organizations with a highly trained workforce (Durth et al., 2022).

Finally, this case study can streamline collaboration between academic and corporate professionals. The proposed animation plan suggests that groups of students have the chance to interact with executives and provide suggestions to the company, which can be further explored after this case study is published.

Additionally, the positive outlook of this case can contribute for the Portuguese labor market and attract a more diverse pool of organizations while also developing more skilled professionals that can also drive further investment and implementation of added-value competencies and business communities in Portugal, expanding the existing expertise in the pharmaceutical industry as a strategic sector (Porter, 1990).

7.3 Limitations and Future Research

Resulting from the case and literature associated, additional work can be developed to consolidate and provide a more structured framework to design new organizations, especially if operating in similar context as centers of excellence or applicable to new subsidiaries in the pharmaceutical industry.

As a limitation, this case does not include quantitative methods. Measuring the success of organizational design is complex and highly dependent from the specific context and individuals leading the structure design and strategy execution. Traditional quantitative methods, as linear regression, consider only a limited number of variables and potential configurations within organizational design, oversimplifying the complexity of the relationships between different components. Cluster analysis could be used as an alternative, but it still falls short in isolating and interpreting the contribution of each element. Instead, research suggests set-theoretic methods to explore causal relationships between various elements and their combinations, identifying common factors that consistently contribute to positive outcomes (Fiss, 2007). Alternatively, common metrics or indicators could be established in the organizational theory to evaluate organization design success and compare outcomes in a consistent manner.

Additionally, as a limitation this case considers different global pharma transformations but focus on one specific case in Portugal. Given the increasing number of global pharmaceuticals CoEs in Portugal, future research might analyze different set-up and designs for further insights on challenges and commonalities. Also, to monitor capabilities developed over time and their contribution for organizational performance and results. This could include either interviews, questionaries, or quantitative data methods for a refined analysis of the key elements impacting design, development and performance of these CoEs.

Complementary fields for investigation can emerge from management theories and new workplace habits. Future research can further explore how innovative working models as design thinking and agile methodologies can be effectively implemented within regulated industries as pharma and biotechnology, as a solution to optimize decisions and collaboration that can speed up the development of new medicines without risking quality and compliance or clashing with the installed organizational culture. Such open and flexible work methodologies will likely continue to break silos towards more hybrid and fluid organizational designs, supporting the increasing pharmaceutical need to allocate resources to the high-priority projects according to potential risk and return for the company (Agrawal et al., 2019; Magistretti et al., 2021).

In this context, organizational charts, titles and hierarchies seem to become less relevant, and skills or capabilities are taking over as core differentiators and career accelerators as advocated by Hamel (2009) and Schein and Schein (2018). This will likely demand a fresh mindset from leadership and HR operating models to redesign objectives, performance, recognition and incentives based on qualitative contributions. Ultimately, recruiting and training must fill the organizational gaps and provide the right talent to perform in such a context with increased autonomy and informal coordination mechanisms. Regardless of all the changes yet to come, environmental and technological progress will continue to be change drivers and organizational design and development will remain tied up to management, strategy and culture.

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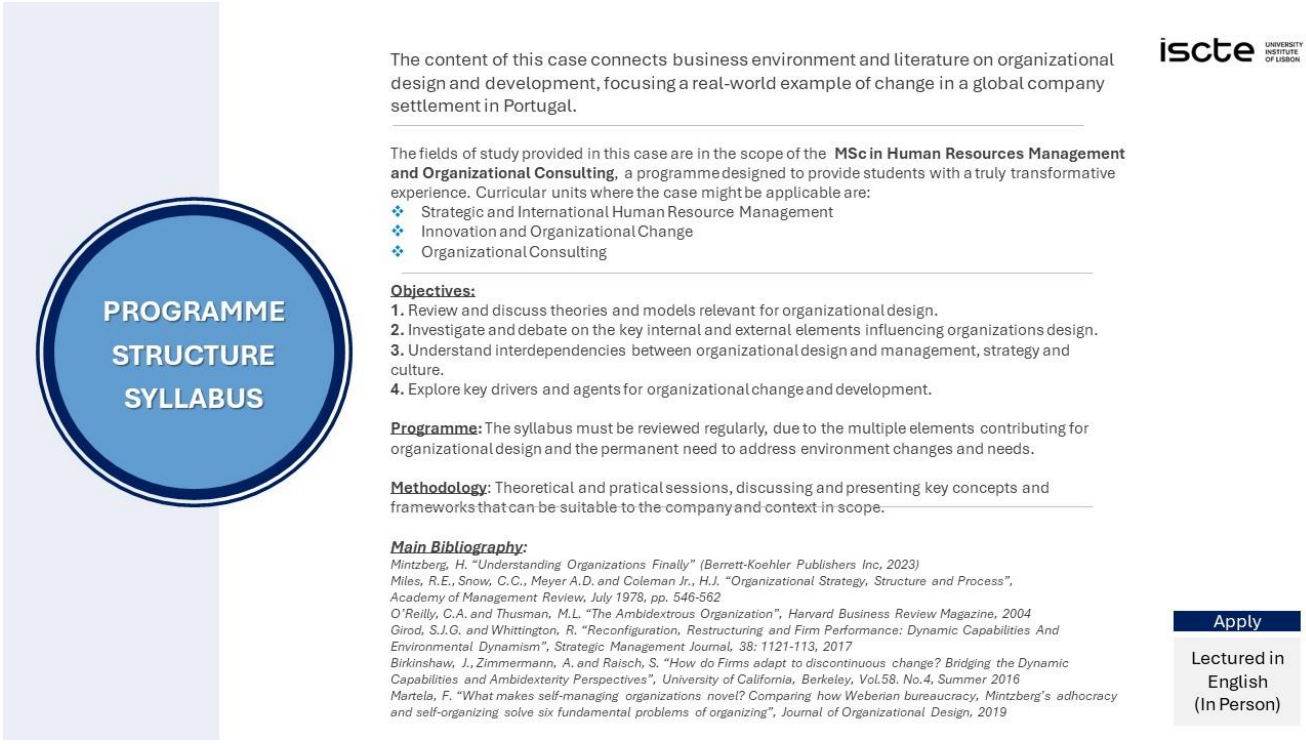
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9. Annexes

Appendix A – Draft of curricular syllabus and objectives using the Case Study content (Professor materials)



Appendix B – Animation Plan timeline for the Case Study resolution proposal (Professor materials)

