Human resources at the European Southern Observatory: A closer look to a European funded organization

Internship Report

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Human resources at the European Southern Observatory: A closer look to a European funded organization

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Internship report submitted as partial requirement for obtaining the degree of Master of Science in Economics and Business, with specialization in Human Resources Management

RESUMO

O presente relatório de estágio tem como objetivo a obtenção do grau de Mestre em Ciências Económicas e Empresariais, com especialização em Gestão de Recursos Humanos, na Universidade dos Açores.

O estágio, cujo tema principal é a gestão de recursos humanos numa organização intergovernamental, ocorreu na *European Southern Observatory (ESO)*, organização esta que tem como principal objetivo manter a sua posição de liderança no campo da exploração astronómica.

O relatório inicia-se com um enquadramento na área dos Recursos Humanos, explicando a sua importância, história e evolução. Após esta introdução ao tema, é feita uma caracterização aprofundada da organização, mencionando toda a sua infraestrutura, níveis hierárquicos e distribuição das várias tarefas pelos diversos departamentos.

Ao longo do relatório, são destacadas as as atividades realizadas durante o estágio, com especial foco nas que tiveram maior acompanhamento da minha parte. São estas atividades todo o processo administrativo existente no departamento de recursos humanos, a elaboração complete do processamento salarial de todos os colaboradores da ESO e a preparação para a Grande Conferência e Workshop, organizado pela ESO.

Relativamente à análise crítica realizada ao estágio tenho um feedback bastante positivo. Isto deve-se, primeiramente, ao excelente acolhimento que tive por parte da empresa, quer em termos profissionais, quer em termos pessoais, apoiando-me ao máximo enquanto estagiária deslocada do meu país.

Quanto à análise crítica realizada às atividades desenvolvidas durante o estágio, a minha opinião positive mantem-se por inúmeras razões, sendo as mais importantes, o acolhimento por parte da equipa e a prontidão e disponibilidade em ensinar durante todo o estágio e em todas as funções executadas e também, toda a experiência incrível e os conhecimentos que adquiri, servindo como uma base bastante sólida para o futuro profissional.

Palavras-chave: Astronomia; European Southern Observatory; Excelência; Cultura organizacional; Recursos Humanos.

ABSTRACT

The purpose of this internship report is to obtain a Master's degree in Economic and Business Sciences, with a specialization in Human Resources Management, from the University of the Azores.

The internship, whose main theme is human resource management in an intergovernmental organization, took place at the European Southern Observatory (ESO), an organization whose main objective is to maintain its leading position in the field of astronomical exploration.

The report begins with a framework of Human Resources, explaining its importance, history, and evolution. After this introduction to the subject, it presents a detailed characterization of the organization, mentioning its entire infrastructure, hierarchical levels, and the distribution of the various tasks among the different departments.

Throughout the report, the activities carried out during the internship are highlighted, with a special focus on those that I was most closely involved with. These activities include the entire administrative process in the human resources department, the complete salary processing of all ESO employees, and the preparation for the Big Conference and Workshop hosted by ESO.

Concerning the critical analysis of the internship, I have very positive feedback. This is due, firstly, to the excellent welcome I received from the company, both in professional and personal terms, which supported me as much as possible as an intern out of my home country.

As for the critical analysis of the activities carried out during the internship, my positive opinion remains for several reasons, the most important being the welcome from the team and the enthusiasm and willingness to teach throughout the internship and in all the functions carried out, as well as all the incredible experience and knowledge I acquired, serving as a very solid foundation for the future professional.

Keywords: Astronomy; European Southern Observatory; Excellence; Human Resources; Organization culture.

ACKNOWLEDGMENTS

This report symbolizes the end of another important stage of my academic career that was only possible with the help and collaboration of loved ones who accompanied me along this path and contributed to my personal and professional growth.

To my father for encouraging me to take a brave step and venture to Germany to learn about a completely different culture;

To my mother for all the support, especially during the most difficult phases, for the affection and love she gave me throughout the internship even though I was far away;

To my aunt, Elisabete, who also supported me a lot and always showed great pride in talking about her "foreign" niece;

To my best friend, Beatriz, who accompanied me daily even though she was far away, listening to all my outbursts and celebrating all my achievements as if they were her own;

To Nathalie, my supervisor on behalf of ESO, who from day one was always very dedicated and enthusiastic about having an intern to share her knowledge with;

To Katjuscha, my teammate, who welcomed me almost like a daughter, helping professionally but also personally, advising me to explore Germany and make the most of what the country has to offer;

To all the other members of the team, who made me feel part of the ESO family from start to finish and who were sad when the internship came to an end;

To my girlfriend, Laura, who was one of my biggest incentives not to give up and to give my best throughout the preparation of this internship report. Who encouraged me to write whenever I could and helped me relieve stress when I needed it most.

A big thank you to all of you who allowed me to complete this stage in my academic life which was also a dream.

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LIST OF ABBREVIATIONS

ALMA – Atacama Large Millimeter/Submillimeter Array
APEX – Atacama Pathfinder Experiment
BAD – Medical Examination
CAO – Conference of Associated Organisatons
CIPD - Chartered Institute of Personnel And Development
CP – Contracts and Procurement Department
DG – Director General
DoA – Directorate Of Administration
DoE – Directorate Of Engineering
DoO – Directorate Of Operations
DoP – Directorate Of Programmes
DSC – Directorate Of Science
DT – Director's Team
EASC – Eso Alma Support Centre
ERP – Enterprise Resources Planning Services
ESO – European Southern Observatory
FIN – Finance Department
FLT – Facility, Logistics, and Transport Department
HR – Human Resources
HRM – Human Resources Management
ISM – International Staff Members
IT – Information Technology
LPO – La Silla Paranal Observatory
ODG – Office of The Director General
PA – Paid Associates
STC – Scientific Technical Committee
STC – Scientific Technical Committee
SWOT – Strengths, Weaknesses, Opportunities, Threats
VLT – Very Large Telescope
VLTI – Very Large Telescope Interferometer
WRAP – Workshop on Remunerations, Allowances And Pensions

CHAPTER I - INTRODUCTION

This report is based on an internship at the European Organisation for Astronomical Research in the Southern Hemisphere, or as it is known, the European Southern Observatory (ESO), as part of completing my master's degree. From 16th August to the 16th December 2022, I was at the Garching site in Munich, Germany, with Nathalie Kastelyn as my internship Tutor from the organization and Professor Flavio Tiago as the Tutor from Azores University.

This report aims to show a closer look at the European Southern Observatory as a European-funded organization and describe a day-by-day at the Human Resources Directorate.

For a first and good understanding of this division, it is important to be aware of its different perceptions and know its real meaning. I believe that the HR Directorate, or as it starts to be known as well as the Talent Management Directorate, makes an organization work smoothly and in the best way possible. Although you need investment for a company to succeed and reach goals, we should not forget that any company is built with people: they are the ones making the success of any organization possible.

The following report is divided into six chapters. Succeeding the introduction, the second chapter starts with a characterization of the organization where I proceed to describe its history and structure and describe all the Directorates. Besides that, it will also present a critical analysis of the European Southern Observatory as well as its Vision, Mission, Values, and Strategy.

The third chapter is about the human resources operations team, since is the Directorate where the internship happened. It is made a fully detailed description of the team members' duties and how they work together with their colleagues from Chile. Being a public and international organization is not the only challenge that ESO faces; having two working bases – Europe and South America – makes it very interesting in a way that the same organization has different ways of getting their work done.

In the fourth chapter, I will describe what happened during the internship and present all the responsibilities I had. It will also be explained in a detailed way how the tasks were carried out and their importance for the good functioning of the organization. The fifth chapter will be about a critical analysis of the internship itself and the way the organization works. Besides that, I will be pointing out the most important themes I

learned as a dislocated intern and relating to the knowledge gained by all my academic years.

Finally, at the conclusion, I will present the final considerations of the report and how this internship, together with my master's degree, is a crucial tool of preparation for the professional world.

CHAPTER II – THEORETICAL FRAMEWORK OF HUMAN RESOURCES

This chapter defines Human Resources, its importance, and a few ideas of the origin of this crucial department. Besides that, it describes the Human Resources evolution, and how they work in an Intergovernmental Organization, in this case at the European Southern Observatory.

2.1. What we know about Human Resources

The personnel administration department can be traced back to the 18th century. However, it was only in 1920 that we got a clearer definition of what Human Resources are. Back in the day, this department was all about hiring, dismissing, training, compensating employees, and a few more tasks; this was considered a staff function in many companies (Colby, 2020).

After World War II people realized that humans played a huge role in the success of the companies and Ford Motors were one of the pioneers to prove it, transforming the "no ending working days" into 8 hours workday.

According to new research by the Head of Strategy Development of the (CIPD), Ruth Stuart said: work matters, people matter, and professionalism matters. We understand that work is a force of good for people as individuals and as societies. As was already said, these people are fundamental for a company to succeed; therefore, they need a good environment and healthy workplace. Professionalism is important as well and we should always "act with integrity and champion better work and working lives in everything we do" (*HR Fundamentals – Online Management Course*, n.d.).

A very interesting point that the Head of Strategy Development of CIPD also made was that "by applying these principles, we can achieve better outcomes for business (…) and this is particularly important as the world of work continues to evolve with all the complexities involved." (*HR Fundamentals – Online Management Course*, n.d.).

For many years, Germany had a very strict idea of Human Resources Management (HRM), creating a not-so-good idea for this department. According to Wever (1995, as cited by Giardini et al., 2005), the German business system used to be highly institutionalized, in other words, high bureaucratization and reduced initiative. Although it was not well perceived, the implementation of the HRM was important and eventually accepted in the German market.

2.2. The development and expansion of the importance of Human Resources

Nowadays people management is one of the areas with the greatest impact on strategy and the achievement of business objectives. It also provides companies with added competitive value in today's market. A company's ability to involve people in the corporate mission, values, and goals, as well as the ability to know people's strengths and weaknesses to develop their existing potential, makes a difference and generates competitive advantages.

As companies continue to change and adapt, the value of HR professionals has become increasingly essential. By fostering a positive and productive work environment, HR teams can help employees feel supported and valued. This, in turn, can lead to improved productivity and stronger commitment from all employees.

The Human Resources Department has the main goal of contributing to faster and more effective achievement of the goals proposed by the organization, as well as maximizing the importance of employees in an organizational context to boost human capital (Gestão de Talentos Humanos | Dicas e exemplos, n.d). it is a very challenging area, as it involves knowledge of all sectors of an organization to moderate conflicts and create a work environment conducive to personal and professional development, as well as the development and success of the organization itself (MeuSucesso.com, 2014).

Currently, human resources are responsible for numerous tasks, the most crucial ones: Recruiting, Attracting, and Retaining Talent. According to Chiavenato (1989), "Recruitment is the process by which an organization attracts candidates in the Human Resources Market (HRM) to supply its process. Recruitment works as a communication process: the organization advertises and offers job opportunities to the HRM.". The most important thing in recruiting someone is to make sure that not only do we bring someone new to the organization, but we also ensure that they are attracted in the long term.

Talent attraction refers to any procedure carried out by an organization to attract and create an employment relationship with qualified workers who can respond positively to the organization's objectives (O que Significa Captação de Pessoas? n.d.).

As Vasconcelos (2022) wrote, "Talent retention becomes a set of actions carried out by the HR sector in order to maintain motivation at work.". All the steps mentioned

above – Recruitment, Attracting, and Retaining – are crucial, however, attraction plays a huge role since it is what will allow an organization to keep the best talent and always motivated, long term.

2.3. Human Resources at ESO: a diverse and multicultural environment

ESO, or the European Southern Observatory, operates in a highly diverse and multicultural environment. With staff members from different parts of the world, managing human resources in ESO requires a deep understanding of cultural diversity, language barriers, and legal complexities.

One of the key strategies employed by ESO in talent cultivation is the promotion of cultural diversity and inclusion. Recognizing the value of diverse perspectives, ESO actively seeks to attract and retain employees from different cultural backgrounds. This not only enriches the organization's workforce but also fosters a more inclusive and innovative work environment.

However, managing cultural diversity also presents challenges. According to a study from *HULT – International Business School*, diversity in an organization can cause conflicting working styles across teams due to different methods of cooperation and teamwork. Countries like Asia and Central America, prioritize reaching a common agreement while striving for a common goal; on the other hand, Germany and America value the autonomy of the individual (Reynolds, 2019). Also, from the point of view of Reynolds, K. (2019), the focus on structure and precision in the work environment as opposed to adaptability and impulsiveness can also mirror the fundamental cultural beliefs.

At ESO, one of the biggest challenges is the language barrier with the risk of affecting the communication and collaboration among staff members. ESO addresses this challenge by providing language training programs – available to all employees – and encouraging the English language, for example, as a working language. This is a big help to fill the gap in communication and ensures that all employees can effectively contribute to the organization's goals.

Another challenge in managing human resources within ESO is navigating the varying legal frameworks across different countries. As each country has its laws and labor practices, ESO needs to ensure that all legal aspects are compliant and conflict-free.

This requires a team with extensive legal knowledge and the ability to adapt and adjust laws and practices to suit all cultures.

Despite these challenges, ESO has been able to attract top talent worldwide. This pool of expertise has contributed to groundbreaking astronomical research and advancements on a global scale. ESO's success in managing human resources has not only strengthened the organization but also positioned it as a leader in the field of astronomy.

In conclusion, the human resources landscape within ESO is complex and multifaceted. Cultural diversity, varying legal frameworks, and language barriers all play a significant role in shaping the organization's talent cultivation strategies. For this reason, ESO requires a great team with very important roles, so that, with all the differences and challenges, is still able to reach success.

CHAPTER III – EUROPEAN SOUTHERN OBSERVATORY: THE HISTORY

This chapter presents a characterization of the organization, mentioning the day it was founded, its idea, and its location. Since the European Southern Observatory has more than one physical base, I will proceed to describe and mention each of their locations as well as the different duties they have. Concerning the organization's history, it is mentioned important dates like its creation, when it started working, and the construction of the observatories.

It also presented the organizational structure of the organization, and the organigram and mentioned all the Directorates that constitute ESO. The organization's vision, mission, values, and strategy will be mentioned as well.

3.1 The history behind the name

Since the mid-1950s, European astronomy has witnessed a concerted effort to consolidate national human and financial resources towards the establishment of institutions and facilities surpassing the capacities of individual European nations. Exemplifying this endeavor is the European Southern Observatory (ESO), which oversees the preeminent Very Large Telescope (VLT) optical observatory situated in Paranal, Chile, and concurrently serves as the European participant in the global ALMA radio telescope initiative (Andersen, 2011).

The genesis of a pan-European observatory tasked with spearheading astronomical research across the continent can be traced back to Walter Baade's proposal in 1953, in collaboration with Jan Oort, both esteemed figures within European astronomy. Their vision aimed at fostering collaborative astronomical inquiry among the member states, as articulated by van der Lann (1992), who delineated the essence of the idea as promoting astronomical research within the European community.

Subsequently, in 1954, a group of twelve astronomers convened to formalize this visionary pursuit, culminating in a seminal declaration for the establishment of a joint observatory, initially earmarked for South Africa. Although South Africa did not ultimately host the observatory, this endeavor marked the nascent stages of European collaboration in astronomy, as noted by Blaauw (1991). Ultimately, the project was

relocated to South America, driven partly by the superior atmospheric conditions conducive to astronomical observation.

Formalization of the initiative materialized in 1962, with the signing of the convention marking the inception of the European Southern Observatory as the foremost intergovernmental entity in astronomy. Initially founded by France, Germany, Netherlands, Sweden, and Belgium, the organization has since expanded to encompass sixteen member states, with Australia assuming the role of a strategic partner since 2017. Noteworthy is the pivotal agreement between ESO and Chile in 1963, facilitating the construction of the organization's inaugural observatory in La Silla.

By 2022, ESO had garnered approximately 243 million euros in financial contributions and boasted a workforce of over 700 personnel from diverse global backgrounds.

Regarded by many as a premier astronomical facility as the twentieth century ended, the European Southern Observatory, situated in northern Chile, was a culmination of meticulous scientific planning and resolute advocacy by prominent European astronomers. Notably, Walter Baade, renowned for his seminal contributions to galactic and extra-galactic research, proposed the establishment of a southern hemisphere observatory during his sojourn at Leiden Observatory in 1953. Subsequent discussions among leading astronomers culminated in a formal meeting in January 1954, where a declaration was endorsed, outlining the significance of the initiative and soliciting governmental support. This catalyzed efforts to secure funding, including a pivotal grant of 1.0 million dollars from the Ford Foundation, instrumental in ESO's establishment.

A crucial milestone occurred on February 11th, 1954, when Jan Oort corresponded with Otto Struve, seeking potential support from the Ford Foundation. Struve's esteemed background in astronomy rendered his insights invaluable, as he had previously held key positions at leading observatories in the United States. Oort's missive underscored the collaborative ethos underlying the Western European Project and its significance in advancing astronomical research.

3.2. The different sites of the organization

This subchapter mentions all the different sites of the organization and what are the biggest responsibilities of the teams working there, together with some history of the places and why they were chosen.

3.2.1. La Silla Observatory and Paranal Observatory

Walter Baade and Jan Oort, prominent astronomers, projected a collaborative observatory in the southern hemisphere to complement the existing facilities in the northern hemisphere (Blaauw, 1991). This vision ultimately led to the formal establishment of ESO and the selection of La Silla as its inaugural observatory site.

Located in the Atacama Desert in Chile, the La Silla observatory serves as a testament to ESO's unwavering dedication to the exploration of the universe. With its establishment dating back to 1969, La Silla marks the beginning of ESO's astronomical pursuits, ushering in a new era of scientific discovery in the southern hemisphere.

La Silla presents a diverse collection of telescopes and instruments, strategically placed to uncover the enigmatic secrets of the universe. It is crucial to recognize the remarkable scientific progress achieved at La Silla such as the discovery of exoplanets, the study of faraway galaxies, and the exploration of the cosmic microwave background.

Somewhere in a mountain in northern Chile, is located the Paranal Observatory, serving as a symbol of technological advancements and scientific excellence. Adriaan Blaauw sheds light on the evolutionary path of Paranal, tracing its origins back to the visionary efforts of ESO's founding members (Blaauw, 1991). The annual report published by ESO emphasizes the crucial role played by Paranal as the home of the Very Large Telescope (VLT), a state-of-the-art facility consisting of four optical telescopes equipped with advanced instruments. Additionally, the Paranal Observatory accommodates the VLT Interferometer (VLTI), an outstanding system that merges the light captured by multiple telescopes to attain unparalleled angular resolution.

Paranal Observatory embodies ESO's unwavering dedication to pushing the boundaries of observational astronomy, as demonstrated by the groundbreaking discoveries from its telescopes. From investigating the atmospheres of exoplanets to unraveling the intricacies of supermassive black holes, Paranal continually redefines our comprehension of the cosmos. Paranal's position is defined as a center for international collaboration, attracting astronomers from across the globe who converge to hardness its unparalleled observational capabilities (Barcons, 2022).

To summarize, the La Silla and Paranal observatories serve as timeless representations of a diverse range of scientific exploration and technological advancements.

3.2.2. Alma Observatory

Alma Observatory, located on the Chajnantor Plateau in the Atacama Desert of northern Chile, hosts the Atacama Large Millimeter/submillimeter Array – therefore the site's name is ALMA – an international radio telescope observatory operated by ESO, along with international partners. This special observatory consists of 66 high-precision antennas that work together to capture millimeter and submillimeter wavelengths of light, allowing scientists to explore some of the coldest and most distant regions of the universe.

ALMA's observations of interstellar space have allowed astronomers to revolutionize our understanding of some of the most fundamental questions in astrophysics (Barcons, 2022).

3.2.3. APEX Observatory

Located on the Chajnantor Plateau in the Atacama Desert, the Atacama Pathfinder Experiment (APEX) serves as a pivotal asset in ESO's astronomical arsenal. A collaboration between ESO, the Max Planck Institute for Radio Astronomy, and the Onsala Space Observatory, APEX boasts a 12-meter diameter submillimeter telescope that operates at the forefront of observational astrophysics (Barcons, 2022).

APEX's primary function lies in its capacity to observe the universe at submillimeter wavelengths, a domain inaccessible to optical and infrared telescopes, complementing the capabilities of ALMA (Barcons, 2022). Its main purpose is to investigate a diverse range of astrophysical singularities, like the properties of galaxies located far away.

APEX plays a vital role in advancing our understanding of the cosmos. Its strategic location at the Chajnantor Plateau, positions APEX as a key player in the global pursuit of astronomical discovery (Barcons, 2022).

3.2.4. Garching Headquarters

The ESO Headquarters is in Garching, Germany, and it was where happened the internship. It is the place responsible for administrative, technical, and scientific matters and where the personnel are constantly developing projects for the personnel on the observatories in Chile to carry out.

The history of the ESO Headquarters in Germany traces back to the late 1950s when astronomers and politicians recognized the potential of establishing a collaborative observatory to connect the vast astronomical resources of the Southern Hemisphere. Inspired by this vision, ESO was officially founded in 1962, marking the beginning of its journey towards becoming a global leader in astronomical research (Blaauw, 1991).

The Headquarters has transformed into a dynamic center of scientific activity, accommodating a varied group of professionals devoted to enhancing our comprehension of the universe. The Headquarters employs a diverse team of astronomers, engineers, technicians, administrative personnel, and support staff (Barcons, 2022). Each team member contributes significantly to ESO's mission and to achieve its operational goals.

Astronomers are deeply involved in various tasks such as conducting observational research, analyzing data, and developing theoretical models. On the other hand, engineers and technicians are responsible for the design, construction, and maintenance of the telescopes and instruments, ensuring their optimal performance. The administrative staff plays a crucial role in providing essential support services, including financial management, human resources, and logistical coordination, to ensure the smooth functioning of the institution.

The Headquarters has a crucial function in promoting collaboration and knowledge exchange within the global astronomical community (Barcons, 2022). Serving as the main host for international partnerships, it hosts workshops and conferences, bringing together some of the biggest scientists all around the world.

Having a very diverse workforce and an exceptional commitment to advancing astronomical research, the headquarters plays a pivotal role in expanding humanity's understanding of the vast space but also, the importance of motivated and diverse teams.

3.3. ESO's governing bodies

ESO operates under the oversight of multiple governing bodies, each assigned with specific functions aimed at guiding the strategic direction, policy formulation, and decision-making processes of the organization.

The Council, as the highest decision-making body within ESO, is responsible for establishing the overall strategy and policies of the organization. Comprised of representatives from ESO's member states, the Council assembles regularly to discuss and deliberate on various matters, including budget allocation and the approval of new

projects and initiatives. The "ESO Annual Report" (2022) emphasizes the Council's crucial role in ensuring effective management and governance of ESO's activities, as well as fostering collaboration among member states and stakeholders.

In addition to the Council, ESO also operates under the oversight of other governing bodies, such as the Executive Board, the Scientific Technical Committee (STC), the Finance Committee, and the Users Committee, each with its specific functions and responsibilities.

The Executive Board, composed of high-level representatives from member states, provides guidance and oversight on the implementation of ESO's strategic objectives and policies.

The Scientific Technical Committee, on the other hand, is responsible for advising ESO on scientific and technical matters, ensuring that the organization's activities align with the latest advancements in the field of astronomy and astrophysics.

The Finance Committee takes care of ESO's financial affairs, including budget planning, expense monitoring, and financial reporting. With a team of financial experts and representatives from member states, this Committee, working closely with ESO's management, will ensure fiscal responsibility and transparency in the organization's operations. As stated in the "ESO Annual Report" (2022), the Finance Committee plays a vital role in safeguarding ESO's financial stability and sustainability.

A very important Committee also present at ESO is the Users Committee, which represents the interests of ESO's scientific community, advocating for their needs and priorities in the planning and operating of ESO's facilities. This Committee provides feedback on observing conditions, instrument performance, and data access policies, facilitating a productive and collaborative environment for astronomical research. The Users Committee serves as a crucial bridge between ESO's management and the scientific community, ensuring that ESO's facilities remain responsive to the evolving needs of all astronomers (Barcons, 2022).

Together, these governing bodies work to shape the organization's strategic direction, financial management, and scientific matters, while also promoting collaboration and cooperation among member states and stakeholders.

3.4. ESO high-level organization structure

At the European Southern Observatory (ESO), effective leadership and strategic direction are possible due to a strong organizational structure and governance framework. The Director General (DG) Xavier Barcons, appointed by the ESO Council, assumes a pivotal role as the leadership of ESO, together with ESO's main organizational and operational units known as Directorates (Hucke, 2020).

Presently, there are five Directorates – that together with the DG form the Director's Team (DT) – within ESO: Administration, Operations, Engineering, Programmes, and Science. The DT is tasked with establishing the most important priorities of the Organization, both in the short and long term. This includes setting organizational goals and strategies for approval by the Council, as well as creating and approving policies and procedures at the organization level. (Hucke, 2020). The DT is also responsible for managing the internal control environment, proposing new programs to the Council, and suggesting structural changes that may impact the entire Organization.

Additionally, the DT ensures that the necessary documentation and approval processes are in place for the Council and its auxiliary bodies (such as the Finance Committee, Scientific Technical Committee, Observing Programmes Committee, and Users Committee), and supervises the implementation of approved decisions as needed. In this chapter, it's mentioned all the directorates that are part of the ESO high-level structure, with a special detailed explanation of the Directorate of Administration, as it was the one where occurred the internship.

3.4.1. Directorate of Administration (DoA)

The Directorate of Administration (DoA) is a crucial department within the organization that provides comprehensive assistance and support in various key areas such as guidance in human resources, financial management, contracts and procurement, facility, logistics and transport, site safety responsibility in Garching and Santiago, and Enterprise Resources Planning Services (ERP). One of the primary functions of the DoA is to manage and oversee human resources and includes, as mentioned above, the Administration Office, the Contracts and Procurement Department, the Facility, Logistics, Transport Department, the Finance Department, the Human Resources Department, and the Infrastructure Chile.

The **Administration Office** consists of various groups and tasks such as the ERP Team. This team is responsible for maintaining and updating the ERP system, implementing new business processes as needed, and providing user support. Another very important responsibility is the Safety at ESO Headquarters Graching, Vitacura, and the Guesthouse, covering all aspects of occupational health and safety – including the safety of equipment, installations, and operational matters -, and environmental protection. The sustainable and continuous improvement process at the site is an integral management goal to ensure a safe and healthy work environment for everybody (Hucke, 2020). The third responsibility included in the Administration Office is the Insurances, which is responsible for developing ESO's insurance strategy, monitoring the insurance portfolio, and providing guidance and direction on insurance matters to ESO's employees. (Hucke, 2020).

Also, part of the DoA is the **Contracts and Procurement Department (CP),** being delegated with the execution of procurement operations and serving as the primary contact between the Organization and external suppliers in matters of commerce. The CP ensures that all procurement activities obey to the Organization's policies and regulations (Hucke, 2020). They handle the process of acquiring goods and services for the organization. This includes drafting and negotiating contracts, managing vendor relationships, and ensuring compliance with procurement regulations.

The **Facility, Logistics, and Transport Department (FLT)** is responsible for the organization, management, and development of ESO's facilities and infrastructures at the Garching site (Hucke, 2020). ESO Headquarters can guarantee a secure working environment for employees, students, and visitors, due to all the caring and maintenance of all ESO facilities. This team manages the transportation and reception of goods, supervising the arrangement of deliveries between Europe and Chile, managing inventory, and optimizing transportation routes.

The **Finance Department (FIN)** plays a critical role in certifying the appropriate use of financial resources in line with the regulations set by ESO's governing bodies (Hucke, 2020). FIN's diverse portfolio of tasks includes budgeting and controlling, accounting, payroll, invoice verification, and treasury functions. This department ensures that all the financial resources are allocated efficiently and accordingly to all policies from ESO.

The **Human Resources Department (HR),** the department where the internship occurred**,** includes tasks such as recruitment, employee onboarding, performance,

training, and development management. The contracts process, remuneration, pension, and health services for more than 700 employees – including, staff, fellows, and students – are also part of the responsibility of the Human Resources Department (Hucke, 2020). It's thanks to this department that the organization can present the most skilled and motivated teams to achieve ESO's goals.

Last but not least, there is **Infrastructure Chile**, led by the Deputy of Administration. Its main objective is to carefully maintain and manage ESO's facilities, which includes tasks such as maintenance, renovation, and safety monitoring (Hucke,2020). These efforts are made to ensure that Vitacura's facilities operate optimally and meet safety standards. In addition, the department oversees the management and operations of Santiago's guesthouse, which are key to providing accommodations for employees and visitors. In addition, this Infrastructure plays a huge role in supporting employee mobility and coordinating travel logistics. This includes working along with travel agencies, securing car insurance for Chilean employees, and organizing events to foster a sense of community at the Vitacura facilities. Importation and exportation are also part of the duties of the infrastructure ((Hucke, 2020).

Overall, the Directorate of Administration plays a crucial role in supporting the organization in various areas as mentioned above. Their expertise and assistance ensure the smooth functioning and efficiency of the organization's operations.

3.4.2. Directorate of Engineering (DoE)

The Directorate of Engineering (DoE) provides engineering services and solutions for the design, manufacture, installation, corrective maintenance, and support of telescopes, instruments, and auxiliary equipment. It also provides advice and assistance in project design activities and oversees contract administration, including the preparation of plans, specifications, and budgets. The Engineering Department's main collaborators include the Projects Department, the Operations Department, and the Science Department. In addition to engineering support, the Energy Department provides general IT (information technology) services for the entire organization through the ITS division.

The Engineering Department includes the Projects Department, the Operations Department, and the Science Department. In addition to engineering support, the Energy Department provides general IT (information technology) services for the entire organization through the ITS division. The Director of Engineering heads the Energy

Department and reports to the Director General. The Energy Department has eight organic units, namely: the Energy Management Department, the Information Technology Department, the Software and Control Engineering Department, the Electronic Engineering Department, the Mechanical Engineering Department, the Optical Engineering Department, the Software and Computer Science Department, and the Computer Science Department.

3.4.3. Directorate of Operations (DoO)

The Directorate of Operations serves as the key player in astronomical observation activities, guiding all the scientific and operational logistics in order to facilitate pioneering research. As mentioned by Hucke, J. (2020), "the DoO shoulders the responsibility for all science operations-related activities, about the entire lifecycle of observing programs, from preparation to execution". Besides that, this department also oversees the operations of ESO's observatories, including the La Silla Paranal Observatory (LPO) and the ESO ALMA Support Centre (EASC), ensuring all the support to scientific research.

The DoO is essential to ESO's scientific matters, serving as the main leading center for overseeing observational projects and ensuring the smooth observation of its observatories. With strategic planning and a strong commitment to scientific excellence, the Department of Operations is very important to achieve ESO's goals, promoting groundbreaking discoveries, and deepening our understanding of the universe.

3.4.4. Directorate of Programmes (DoP)

ESO's Directorate of Programmes manages and executes construction programs and projects, overseeing the ELT Construction Program, the ELT New Technologies Program, the Armazones Instrument Program, and the Paranal Instrument Program. The DoP also commands technological development programs (Hucke, 2020). The programs in each project are carefully planned and executed to achieve goals within the established deadlines and budgets.

The Directorate of Programmes plays a pivotal position in contributing to ESO's mission of expanding scientific knowledge in astronomy.

3.4.5. Directorate for Science (DSC)

The ESO Directorate for Science is responsible for monitoring ESO's student and fellowship programs, contributing to the training of the next generation of astronomers.

The DSC is managed by the Director, Deputy Director, heads of department, and program scientists. This team guides the organization's strategy and ensures the smooth running of scientific programs and initiatives, playing a huge role in organizing the meetings of the Scientific Technical Committee (STC) and its subcommittees (Hucke, 2020). The meetings act as platforms for scientific debate and decision-making, influencing ESO's research agenda and encouraging collaboration between astronomers and researchers. In short, the Department of Scientific Oversight is the foundation of ESO's scientific activities, offering support to facilitate innovative discoveries and advances in the field of astronomy.

3.4.6. Office of the Director General (ODG)

The Office of the Director General is responsible for executive management and strategic decision-making. It supports the DG in monitoring ESO's mission and objectives and works together with the Executive Office, the Department of Communication, and the Internal Audit Office (Hucke, 2020). This department has various functions like external relations, organization governance, and policy development.

The ODG will represent ESO in external engagements, build partnerships, and coordinate governance activities with the organization's objectives. Besides that, it also facilitates communication and collaboration among ESO's governing entities, like the ESO Council and all the committees, to enable the best decisions and uphold transparency within the organization.

3.5. The different categories of ESO's employees

The European Southern Observatory's success, or any other organization, is mainly due to the workforce. Because ESO has such a diverse and multicultural organization, each of the employees contributes uniquely to the organization's mission.

There are various employee categories, each with their roles, duties, and powers. From International Staff Members (ISM) to Paid Associates (PA), and passionate

students, each member plays a crucial role in shaping the direction of astronomical discovery at ESO.

As mentioned above, one of the employee categories at ESO is the **International Staff Members (ISM)**. The ISM are employees with three-year duration contracts, with the possibility to renew it or make it indefinite. They work at the forefront of innovative research projects, spearheading groundbreaking studies and discoveries in the field of astronomy. They can be in the astronomical or administrative areas. The ISM bring their expertise and knowledge to ESO, pushing the boundaries of scientific exploration and contributing to the advancement of our understanding of the universe.

The **Fellows** are another type of contract. Normally researchers are selected for a one-year contract, with the possibility to renew it twice. Their responsibilities include leading autonomous research and collaborating on astronomical projects. They use the opportunity to work at ESO to enhance their knowledge and get professional development.

Paid Associates (PA) are employees at ESO for one year, with the possibility of having one more year contract, and are recruited for special assignments. Their responsibilities include assisting in scientific research, technical projects, or administrative duties. Additionally, they contribute to tasks such as data analysis, software development, or instrument calibration.

The **Students** have the same contract conditions as the PA. These students are enrolled in educational programs and engaged in internships or work assignments at ESO in order to get experience in their area of study. Their main role at ESO is to participate in astronomical projects and create scientific publications for ESO.

Each employee category serves a unique purpose in advancing the organization’s goal of exploring and sharing astronomy mysteries all around the world.

3.6. Mission-Vision-Values-Strategy of the European Southern Observatory

The European Southern Observatory has a pivotal role in astronomical research, nurturing collaboration and pushing the boundaries of the Human understanding of the universe.

To have such an important role, the organization needs to be guided by a very linear and inspiring mission; the same goes for the definition of the vision and values.

ESO’s mission is about designing, building, and operating advanced observatories, and fostering international collaboration for astronomy

(information@eso.org, n.d.-a). The primary objective of ESO is to solve the enigmas of the Universe using the best observational astronomy. Its goal is to equip astronomers with facilities and instruments, empowering them to engage in pioneering research in diverse areas of astrophysics. ESO's initiatives go beyond exploration; they are dedicated to being inspirational and diving in the knowledge among the general public, cultivating a profound admiration for the universe's enigmas.

As stated at Information@eso.org, "ESO's Vision is to advance humanity's understanding of the universe by working with and for the astronomy community, providing it with world-leading facilities". The idea behind the creation of the European Southern Observatory was to have a great impact on the field of astrophysics, creating a sense of wonder and curiosity among all scientists to connect several cultures and generations in a shared trip of discovery.

ESO's values stand on several pillars, as demonstrated in Figure 1. It goes from nurturing excellence, through sustainability, and ends in personal values like respect and collaboration.

Figure 1. ESO's Values

Source: European Southern Observatory (Mission-Vision-Values-Strategy | ESO)

ESO's mission is driven by the commitment to excellence. Innovation serves as the foundation for the organization's pursuit of knowledge in the field of astronomy. ESO is proud to have such a diverse and inclusive community of astronomers, researchers, and the public, because is crucial for fostering innovation and also cultivating a vibrant intellectual community. These values, together with the recognition of the importance of sustainability, are an example of concern to secure the future in all fields.

To achieve the accomplishment of all these values, it is fundamental that the organization works with a community of personal values like respect, commitment, and

clear and open communication. By doing that, ESO can ensure it always thrives aligned with the mission and inspire humanity's curiosity.

Besides a vision, mission, and values, it is crucial to present ESO's strategy. The latest strategy adopted by ESO demonstrates the more rational and operational side of the organization, showing goals and challenges that ESO is confident of achieving.

As cited by Waelkens et al. (2021) the ESO's strategy has adopted four strategic indicators: "Implement and operate the ELT as the world-leading extremely large telescope; Ensure that the current facilities remain at the forefront of astronomical investigations; Ensure that the Organization is prepared for future projects when financial projections so permit; and Retain ESO's leadership role in astronomy".

CHAPTER IV – INTERNSHIP ACTIVITIES

This chapter aims to outline the activities conducted throughout the internship as part of the human resources team. It mentions the Human Resources team and organigram, describing their tasks, and the duties I was proudly involved. Some of these tasks include onboarding assisting, payroll, pension and benefits, and assisting with the organization of the Compensation & Benefits Conference hosted by ESO, among other interesting activities.

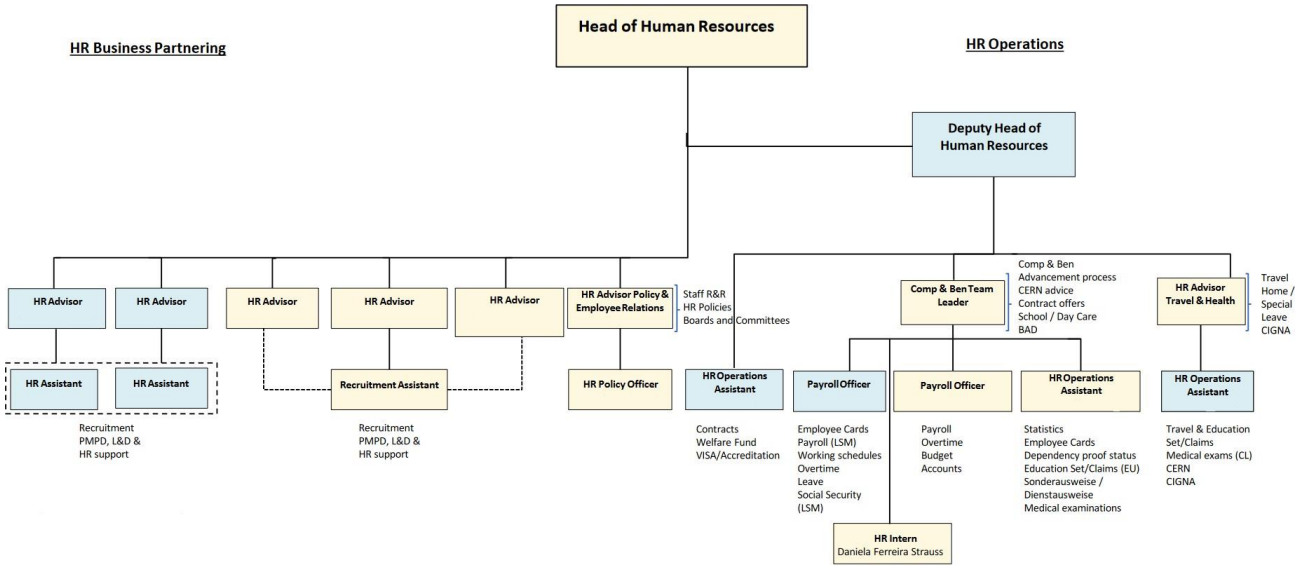
Important to say that HR professionals are responsible for ensuring that every employee feels valued and supported. For this reason, we'll dive into the human resources team at ESO and understand how they can navigate the world of modern business.

4.1. Compensation and Benefits Team – assisting as an intern

The European Southern Observatory relies heavily on its Human Resources team to successfully manage personnel-related functions and ensure the well-being and productivity of its employees.

With a team of 19 experts plus a motivated intern, the Human Resources are working from the two sites, Germany and Chile. As shown in Figure 2, the HR organizational structure is divided into HR Operations and HR Business Partnering. It is led by the Deputy Head of Human Resources and the Head of Human Resources.

Figure 2. Human Resources organizational structure



Source: Adapted from the human resources department's legal and internal documentation (October 2022)

The Human Resources Operations Team, also known as the ESO Compensation and Benefits Team, was where the internship took place and was responsible for several duties such as salary, allowances, benefits related to staff rules and regulations, and other entitlements that staff members may have.

One of the main responsibilities of the Compensation and Benefits Team is Policy Development. This task is in charge of creating and enforcing policies related to employee incentives. These policies establish guidelines for salary structures, bonus schemes, and other forms of compensation, ensuring fairness across the organization. It can be said that this obligation goes together with Compliance since in some parts they touch on the policies and adjust as needed to remain in compliance and, of course, fair among all the employees.

The Compliance, as the name itself says, will ensure that all laws, regulations, and internal policies are in line with legal requirements like, labor standards, and tax regulations. It is important to note that these laws and regulations will comply not only with ESO's general regulations but also with all legal obligations, considering the cultural diversity that exists in the organization.

The Benefits Administration is another part of the team's duties, which includes the managing of health insurance, retirement plans, paid time off, and other incentives. Their main goal is to make sure that all the benefits and entitlements are in line with ESO's values and are cost-effective.

The Compensation Management is, of course, part of this team's obligations. This includes the creation and execution of methods to establish fair and competitive salary structures for ESO employees. The team carries out regular analyses to evaluate the organization's compensation plans in comparison with organizations in the same field, making the necessary adjustments to attract and retain the best talent.

Another important duty of the Compensation and Benefits Team is Employee Communication and Education. By offering educational sessions and workshops, the team helps all ESO members to make decisions aligned with their individual needs and goals. When clear and accessible information is available to the employees, they can better understand what rewards are available and of course, it leads to engagement and retention, as well as a more positive workplace culture.

Performance Management Support is also quite important and goes along with the benefits since the performance evaluations may lead to salary increases, bonuses, or other forms of recognition.

ESO's compensation and benefits package reflects its commitment to supporting the well-being and satisfaction of its employees, encompassing various aspects of leave entitlements, remote work options, financial security, and health coverage. By prioritizing the needs of its workforce, ESO fosters a positive work environment where employees can succeed both personally and professionally.

4.1.1 Contracts at ESO

The working conditions and contracts at the European Southern Observatory (ESO) are structured to provide a fair and supportive environment for its staff members, fellows, students, and paid associates.

ESO International Staff Members are typically offered fixed-term contracts lasting three years, subject to successful pre-employment medical examination and the conclusion of a probation period of six months. Contract extensions and the possibility of transitioning to indefinite contracts may occur under certain circumstances, based on individual performance and organizational needs.

Fellows in Garching have contracts for one year with the possibility of two one-year extensions, while fellows in Chile have contracts for one year with the possibility of annual renewals. Students and Paid Associates initially have one-year contracts, which may be extended once. ESO Staff Members work a standard 40-hour week and are paid monthly for 12 months.

The process of offering a contract to a new employee at ESO starts with the preparation of the documentation way before they enter the organization. The contract is sent by post so that the new member has time to read and check again the working conditions. On the first day, the new employee goes to the HR Department to speak to the colleagues and ask any questions they might have. The BAD – medical examination – is also booked by the organization for the first time. On the second-year contracts, staff members must make the booking themselves, with the help of HR, if needed.

4.1.2. Annual, family and special leave, and other allowances

Employees at ESO benefit from a generous annual leave entitlement, allowing them to take time off for rest. With an allocation of 20 hours (equivalent to 2.5 leave days) per month worked staff have the flexibility to manage their work-life balance effectively. Additionally, expatriated employees and their dependents are provided with home leave return trips, ensuring they can reconnect with their home country. These trips occur once every two years in Garching and annually in Chile, starting from the 1st day of the 2nd year of service, demonstrating ESO's commitment to supporting its international workforce.

In terms of family leave, ESO offers comprehensive provisions to accommodate various life events. Maternity and adoption leave are extended for 18 weeks, with exceptions made for multiple births or premature deliveries, where the entitlement is increased to 21 weeks.

Paternity leave, from 10 days, provides fathers with the opportunity to bond with their newborns or support their partners during the early stages of parenthood. Furthermore, parental leave is available until the child reaches three years of age, with the first six months paid at 65% of the employee's last monthly basic salary, up to a maximum of 1,956€. This arrangement allows parents to prioritize their family responsibilities without compromising their financial security.

Additionally, special leave is granted to employees for significant family events such as marriages or the loss of a loved one, ensuring they have the necessary support during challenging times.

For staff members that are dislocated from their home country/city, ESO offers an Expatriation allowance, typically starting from grade 7, step 5, depending on family status and location (Garching or Chile). The expatriation allowance may be reduced gradually over time for staff members with indefinite contracts exceeding 12 years. This allowance also shows the care from ESO for its employees.

4.1.3. Working remotely for work-life balance

ESO recognizes the importance of flexibility in the modern workplace and has implemented initiatives to support remote work arrangements. The Mobile Working Scheme enables employees to work remotely on a regular or occasional basis, providing

them with the flexibility to manage their workloads effectively while accommodating personal commitments. Similarly, flexible working hours allow employees to adjust their arrival and departure times within specified windows, ensuring they can balance their professional and personal obligations seamlessly.

In acknowledgment of the dedication and hard work of its employees, ESO operates a Reward and Recognition Programme. This program serves as a platform for expressing appreciation for staff contributions through various rewards, including monetary incentives, non-monetary benefits, and expressions of gratitude. Whether it's recognizing individual achievements or team accomplishments, ESO ensures that staff feel valued and appreciated for their efforts.

4.1.4. Financial security and related entitlements

ESO prioritizes the long-term financial security of its employees through participation in the **CERN Pension Fund**. This fund offers retirement pensions, survivor pensions, disability coverage, and other benefits, providing employees with peace of mind and financial stability as they plan for the future. Social security and health insurance contributions further complement this offering, ensuring comprehensive coverage for employees and their dependents.

The Pension Scheme is attributed to staff members and fellows after they reach five years of service and with a retirement age of sixty-five or sixty-seven, depending on if they entered the company before or after 2012.

Contributions are made towards the pension scheme, and various benefits are provided, including retirement pension, pension for surviving spouse, pension for surviving beneficiary, orphans' pension, disability pension, and partly disability pension. Besides the CERN Pension Fund, ESO offers a **Health Insurance Scheme (CIGNA).** This insurance is for all staff members and includes coverage for the employee himself and the dependents as well.

These pension and insurance schemes ensure that ESO staff members and fellows receive comprehensive coverage and support for themselves and their families throughout their employment tenure. Although the pension and health schemes are offered by companies working with ESO, the HR Department always makes sure that everything is in order and, if the employee ever needs help, they will be fully informed and supported.

4.1.5. ESO's salary structure and payroll

ESO staff members are compensated through a structured salary scheme that includes a base salary, allowances, and social security benefits. All the payroll process is made in Garching, meaning that the ESO Headquarters is the place to process the salaries from the more than 700 employees that are in Germany and Chile.

The salary structure at ESO, being tax-free in member states, is designed to provide fair compensation and progression opportunities for employees. It consists of grades ranging from 2 to 14, each with multiple steps. The basic salary is determined based on your grade, and step, as well as your qualifications and experience. Because it is so important to value the growth and development of ESO's employees, the organization has annual advancement processes in place that can lead to step advancements, promotions, or even changes in the career path. Besides that, the organization offers annual salary adjustments, so that the salary can keep up with the growing costs of living and remains competitive in the world of work.

The salary process, or payroll as ESO calls it, is calculated with a specific program HR is working with, called Navision. This program not only gathers all the employees' personal information but is also able to give data from the basic salary, bonuses, and all the allowances that everyone has. All this information is extracted to a file, later transformed into Excel, to be checked by the payroll Specialist. It is part of the procedure to compare the differences in the amount from the last month's salary to the coming one, checking if the entitlements are well attributed and correctly justified.

After all this correction, the Excel is sent to Chile where the other payroll Specialist will approve and submit to the accounting department.

4.1.6. Process of digitalization

The European Southern Observatory is part of the process of digitalization for numerous reasons such as the care for the environment, the accessibility and security for sensitive information, and continuous innovation in the digital era (Whitman & Mattord, 2016). This process is part of all departments' responsibilities and, of course, human resources too.

The implementation of digitalized information systems at ESO has resulted in greater efficiency and productivity. By restructuring processes and reducing manual errors, digitalization has saved valuable time by providing quick access to data and

resources. This has been particularly beneficial in managing the vast astronomical datasets at ESO, facilitating efficient observation planning, data analysis, and scientific research (Barcons, 2022).

Another advantage gained for ESO is the improvement in collaboration and communication. The numerous digital communication tools are a way to connect astronomers, engineers, and scientists, regardless of their locations. A big example of the effectiveness of the digital process is the collaboration in the Extremely Large Telescope (ELT) project, since it allows all the involved experts to work together, even working from different, sites, countries, and time zones.

Besides the reasons mentioned above, digitalization has also fostered adaptability and innovation within ESO's values. The continuous exploration of innovative digital solutions allows ESO to enhance its research capabilities. This includes the development of advanced data processing algorithms and simulation tools, enabling ESO to push the boundaries of astronomical research (Blaauw, 1991).

In the human resources department, one of the biggest benefits of the digitalization process is data accessibility and security. Advanced data management systems are made to store and safeguard the vast amount of astronomical data collected from ESO's observatories, but also all the personal information from all employees. By maintaining robust security measures, ESO ensures the confidentiality and integrity of sensitive information (Barcons, 2022). With two physical archives with all current and formal employees, ESO is working on digitalizing all the information so that it can be safer and with easier access when this information is needed.

4.1.7. Conference of Associated Organizations (CAO) and Workshop on Remunerations, Allowances and Pensions (WRAP)

The biggest task at ESO during the internship was, undoubtedly, the preparation for the Conference of Associated Organizations (CAO) and the Workshop on Remunerations, Allowances, and Pensions (WRAP) hosted by ESO, in Garching, in October. From the invitation to the logistics, the catering, and all the coordination, all was prepared by the human resources department.

The planning process starts several months before the event, involving the selection of themes, potential speakers, and participants and, later, sending all the information to comprehend the event agenda, goals, and logistic details.

In the logistics theme, there is the need to select the best auditorium from ESO's site, and together with the IT (Information Technologies), to make sure that all technological matters will be prepared like audiovisual equipment and internet connection.

Since the event invite is sent to several participants all around the world, a very important matter is the accommodation, making sure of the availability of the closest hotels and how to go to the event and back.

Transportation is also ensured from the hotel to the event and back, and to the restaurants chosen to have dinner. The list of taxis is prepared and informed from the event so that any shuttle services for other not prepared places, could be guaranteed.

Something interesting is the information passed to the emergency numbers and professionals so that, if anything happens, they are prepared to rescue or help in any case.

The Catering is also prepared by contacting several catering companies and comparing price-quality relations. Catering arrangements are made to offer meals, snacks, and beverages to participants throughout the event. The menu is designed to cater to various dietary preferences and restrictions, with options for lunch, coffee breaks, and receptions according to the event's agenda.

Administrative support was also guaranteed starting with the registration of all accepted invites, the preparation of the event materials like the agenda, important contacts, and a welcome kit so that participants could write all their thoughts and ideas during the event. The badges with the name, function, and company the participants are from were also prepared, including the design, the printing, and the distribution on the days of the Conference and Workshop.

After all these preparations, ESO is ready to host the participants in the big events. Of course, besides all that planning, during the events, the team was well-informed and ready to take care of any matters that could unexpectedly happen. ESO made sure that the conference and the workshops would be a big success, as it was.

CHAPTER V – CRITICAL ANALYSIS OF THE INTERNSHIP

On this chapter, it is provided an examination of the internship experience and the procedures of the organization, together with a SWOT analysis of ESO. Additionally, it is highlighted the key concepts I acquired as a displaced intern, and established connections to the knowledge accumulated throughout my academic journey.

5.1. Critical analysis of the organization

This internship at the European Southern Observatory provided me with the opportunity to immerse myself in a different professional world, out of my home country, with a different language, culture, and challenges. It was an amazing experience in an international environment that allowed me to make deep connections between the human resources department and tasks and my master's degree.

Initially, to familiarize myself with the team I would be collaborating with for several months, I had the opportunity to meet the human resources team (from Garching) during a casual dinner. The entire team showed a genuine willingness and happiness to meet me, an enthusiastic intern. Not only did I have the chance to be introduced to current employees, but retired colleagues also joined in the gathering to welcome the newest employee that ESO would be welcoming.

Right from the beginning, I received exceptional support from my ESO supervisor, Nathalie Kastelyn, as well as from all the team members. I was given a tour of the entire infrastructure that would serve as my "home" for the next months, and I was introduced to my colleagues who were already working there.

One aspect that particularly fascinated me was my supervisor's effort to introduce me to almost every Portuguese employee at ESO, ensuring that I always felt connected to my home country. This experience made me realize the organization's commitment to ensuring the well-being and motivation of all its employees. Thanks to all of this, I was able to integrate quickly and felt warmly welcomed by ESO.

A SWOT analysis is a valuable tool for organizations to evaluate their current position in the market and identify areas for improvement. Keller and Kotler (2012) and Teixeira (2019) provide guidelines for conducting a comprehensive SWOT analysis that encompasses both internal and external factors.

Firstly, organizations can assess their internal strengths, which are the unique capabilities and resources they own. This includes analysing their core competencies, such as technological expertise or skilled workforce. By identifying these strengths, companies can leverage them to gain a competitive advantage and differentiate themselves from competitors.

On the other hand, organizations must also evaluate their internal weaknesses, which are areas that need improvement. This could include outdated technology or a lack of skilled employees. By recognizing these weaknesses, companies can develop strategies to address them and enhance their overall performance.

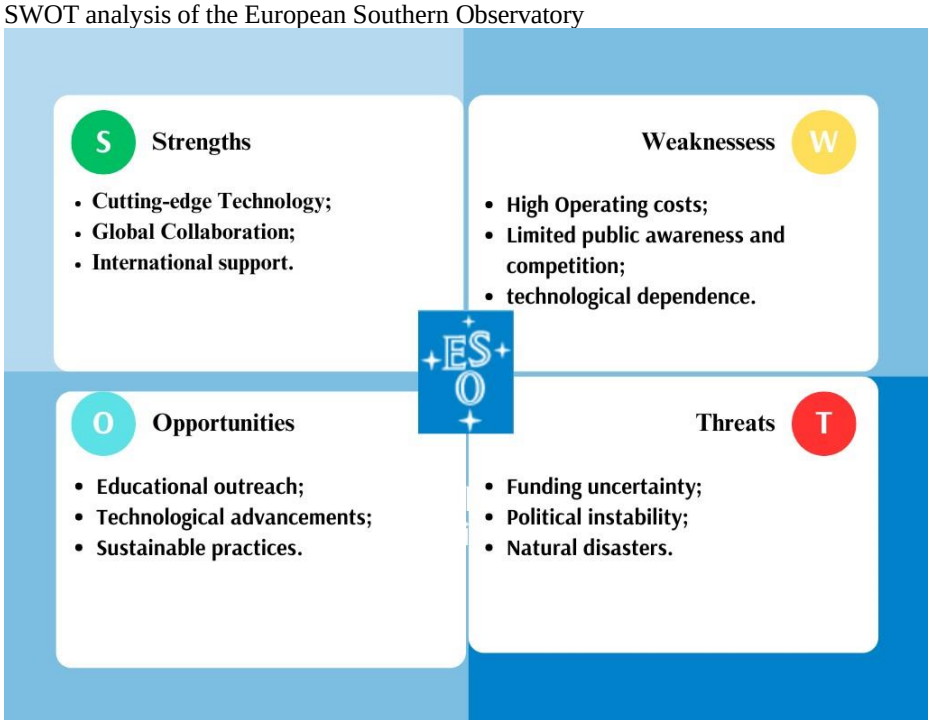
In addition to internal factors, organizations must also consider external opportunities. These are favourable conditions in the market that can be used to achieve growth and success. This could include emerging markets or advancements in technology. By identifying these opportunities, companies can develop strategies to exploit them and expand their market share.

Lastly, organizations need to be aware of external threats, which are factors that could potentially harm their business. This could include intense competition or economic downturns. By understanding these threats, companies can develop plans and strategies to mitigate their impact and protect their business.

By conducting a SWOT analysis and leveraging the insights gained, organizations can develop strategic initiatives and effectively assess their internal strengths and weaknesses, as well as external opportunities and threats.

Figure 3. presents the SWOT analysis from the European Southern Observatory, with the presentation of the principal factors of the organization that can be strengths or opportunities, but also weaknesses and threats.

Figure 3. SWOT analysis of the European Southern Observatory



One of ESO's strengths is, undoubtedly, the leading-edge technology used. The organization works with some of the most advanced telescopes and astronomical instruments in the world, enabling revolutionary scientific discoveries. Another strength is the global collaboration. Since it is an international organization, ESO nurtures collaboration among astronomers, scientists, and institutions from all around the world, allowing the diversity of knowledge and resources to lead to excellence.

Additionally, one of the biggest strengths is, of course, international support. Besides being international, ESO is also an intergovernmental organization, meaning that it receives funding and support from numerous countries, ensuring financial stability and success to continue.

Because ESO works with high-level technology – and this being also a strength – it is also a weakness since it requires high operation costs. To maintain and operate all the telescopes and astronomical instruments, it is necessary big investments and a lot of challenges when preparing the organization's budget. With all the high-level technology to obtain the results the organizations need to continue in the leader position, it makes ESO fully dependent on technology and vulnerable to technical failures, which is another weakness.

Despite ESO's scientific successes, ESO has one of the biggest weaknesses, present in all companies and organizations: competition. Although it is a well-known

organization, it is very important to keep up with its mission and contributions to humanity since it is this that will distinguish ESO from all the other competitors in the astronomy field.

Being in all points of ESO's SWOT analysis is the technology theme. As an opportunity, the progressions in astronomical technology allow ESO to boost its observational competencies and outputs.

Another opportunity is the educational outreach. Working with students is already a big step toward expanding educational initiatives and also, fostering interest in the astronomy field by engaging the next generation of scientists. Since the importance of caring for the environment is growing more and more, adopting sustainable practices is also a great opportunity for ESO to boost success, by promoting responsible actions with natural resources. The digitalization process is already a big step towards this opportunity.

All organizations suffer from threats and ESO is no different. Being an intergovernmental organization makes it fully dependent on external funding and policy updates. Since ESO has governing bodies from several countries, it is a big risk that any policy change or fluctuations in the funding could seriously impact ESO's operations.

A threat that could also put at risk all of ESO astronomical research is the Natural conditions. ESO's observatories in Chile are vulnerable to natural disasters like volcanic eruptions, which could bring down all the work and of course all the infrastructures too.

With all that, ESO can still maintain its leadership position in the astronomical field if it maximizes the strengths, works on the weaknesses, grabs the opportunities, and manages threats effectively.

5.2. Critical analysis of the tasks during the internship

This subchapter provides a critical analysis of the tasks carried out during the internship. To ensure the achievement of all goals with success, I maintained a high level of dedication and commitment in completing all assigned tasks, building a bridge with the knowledge gained from my academic journey.

While some tasks were more engaging than others, each one contributed to my overall growth and understanding in different areas. It is important to highlight the support provided by the team, who were always available to help me do my best and to grow personally and professionally.

Although I was involved in a lot of tasks and got in contact with several areas besides human resources, I will particularly mention the tasks that became part of my routine, and I was more engaged.

5.2.1. Critical Analysis of HR Administration

This specific chore is part of administration duties, such as managing employee records, keeping databases updated, handling HR-related paperwork, and a more specific task at ESO, the process of digitalization of personnel information.

The transition from traditional paperwork to digital platforms is made to improve the efficiency and accessibility of employee data within HR processes. This responsibility posed challenges in terms of time management and prioritization. While it is crucial for modernizing HR practices, the task requires a substantial time commitment, which sometimes takes time from more stimulating projects. However, my team demonstrated a proactive approach to address this challenge and ensure that digitalization did not overshadow other important objectives.

One strategy implemented by my team involved providing me with flexibility in structuring my daily routine. This enabled me to allocate time between administrative tasks, such as digitalization, and more intellectually stimulating projects that aligned with my professional development aspirations. By working on a balance between routine administrative responsibilities and engaging assignments, I was able to develop a bigger understanding of HR operations while also capitalizing on opportunities for personal and professional growth.

5.2.2. Critical Analysis of Payroll Process

Assisting in the payroll procedure as an intern at ESO was a great opportunity to acquire valuable knowledge about the financial activities of an intergovernmental organization.

This very important duty, allowed me to get deeper information about payroll management, emphasizing their strengths, weaknesses, and potential areas for enhancement.

This crucial duty gave me an overview of payroll systems and procedures, allowing me to acquire practical knowledge of how employee compensation is calculated, processed, and distributed. As it is an organization with lots of allowances and

entitlements and with over 700 employees, it makes the process even more stimulating and challenging.

I was involved in all types of tasks related to data management, including data entry, verification, and the veracity of all allowances and entitlements each employee has submitted. This responsibility improves skills in data management and especially meticulous attention to detail. Has a recent intern with no professional experience in the financial area, it became a job with even greater responsibility. Attention to detail was tripled compared to the experienced colleague, and knowledge of procedures, timings, and exceptions would not be so immediate.

However, a big advantage of being part of this process was the opportunity to improve my interpersonal skills and teamwork competencies. This was possible since the payroll process involves interacting with other HR colleagues, the Finance Department, and even external professionals to ensure the accuracy and precision of processing the payroll.

Despite all the challenges and the lack of professional experience in this field, the colleague responsible for salary processing was always available and accompanied my entire involvement in this task. Initially, he supervised me from start to finish and, gradually, I acquired the necessary knowledge to carry out this task more autonomously.

5.2.3. Critical Analysis of the Preparation of the Conference and Workshop

Events preparation and management is a very enriching experience for numerous reasons. This allowed me to improve my skills in communication, and sense of urgency, and even prepare for unexpected situations.

Concerning the coordination of the events, I played a very active role in organizing the venue, planning all aspects of logistics, and the catering service. This planning activity allowed me to improve my communication skills and increase my ability to work more as part of a team.

It was also a great opportunity to be more agile when it comes to solving problems and issues that may arise unexpectedly. This task was carried out more autonomously due to taking on such a big responsibility, although I was always accompanied by my supervisor, who was always around when I faced a challenge.

With this experience, I gained practical experience in event management, which contributes to my professional advancement and skill enhancement.

5.3. Implementation of knowledge acquired during bachelor's and master's degree

During the internship at the European Southern Observatory (ESO), the knowledge gained from both the bachelor's and master's degrees in human resources management proved to be vital. I was able to put into practice my strategic planning skills acquired during my bachelor's degree to understand the larger goals and objectives of the organization at ESO. This understanding allowed me to align the internship tasks with the strategic priorities of the organization, ensuring that all my contributions were meaningful and in line with ESO's mission.

Additionally, the comprehensive understanding of HR principles, policies, and practices gained from the master's degree in human resources management was the knowledge was fundamental to apply during the internship.

I was able to assist in various HR-related tasks such as payroll processing, personnel record management, event coordination, and many other interesting duties. Applying concepts such as employee relations, talent acquisition, and performance management, allowed me to effectively handle real-world scenarios at ESO.

Due to my academic background and all the knowledge, I've gained such as organizational culture, and leadership dynamics, enabled me to participate in projects that fostered a positive work environment and drove organizational success at ESO.

Additionally, the internship at ESO also allowed me to put my communication and collaboration skills into practice. These skills, which were emphasized throughout both academic degrees, proved to be essential in daily interactions with colleagues, and external partners. Whether it was drafting reports, coordinating with vendors, or presenting solutions to the Board, my ability to communicate clearly and collaborate effectively played a crucial role in my internship success.

In summary, the implementation of knowledge acquired from the bachelor's and master's degrees in business management and human Resources Management greatly enhanced the internship experience at ESO. Applying theoretical concepts to real-world challenges, not only allowed me to make meaningful contributions to the organization but also further developed my skills and expertise in the field of HR management.

CHAPTER VI – CONCLUSION

My internship at the Human Resources Department of the European Southern Observatory has been an incredibly enlightening and transformative experience. Starting with the fact that I had to move and live abroad, was the first step to an enormous adventure.

During my academic journey, I immersed myself in the theoretical foundations and practical applications of HR management, learning about talent, strategic HR planning, and employee relations. I gained a comprehensive understanding of the complexities involved in managing human capital in modern organizations.

The internship at ESO provided me with a unique opportunity to translate this academic knowledge into real-life experiences. Throughout the internship, I actively participated in various HR functions, such as payroll processing, personnel record management, event coordination, and employee relations.

By gaining hands-on experience, I was able to bridge the gap between theory and practice, while also refining my analytical, problem-solving, and decision-making skills. Moreover, the internship served as a platform for me to deepen my understanding of the distinct challenges and opportunities that arise in HR management within a scientific research organization like ESO. Being exposed to the organization's global collaborations, diverse and multicultural workforce, and commitment to scientific excellence provided me with valuable perceptions of HR management and organizational culture.

Reflecting on my internship at ESO, I am deeply grateful for the significant learning experiences, personal growth, and career development it has provided. The fact that I was integrated into a great team, also made this whole experience unique.

I am confident that the knowledge, skills, and experiences acquired during my internship at ESO, in conjunction with my bachelor’s in business management and master’s in human resources management, will establish a strong foundation for my professional future. I am excited to use all my knowledge and skills to make impactful contributions to organizations, promote positive change, and cultivate a culture of excellence in HR management.

In conclusion, the supportive and collaborative atmosphere at ESO has played a pivotal role in my professional advancement. Collaborating with experienced HR

professionals has allowed me to acquire valuable insights, benefit from their guidance, and develop crucial skills such as communication, leadership, and adaptability.

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