



Department of Business and Management

Course of Organization Design

Change management and sustainability: how companies can permeate the concept into the corporate culture: the ENAV case study

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LIST OF ACRONYMS

AENA: Aeropuertos Españoles y Navegación Aérea S.A

ANSP: Air Navigation Service Provider

ATM: Air traffic Control

CSR: Corporate Social Responsibility

DFS: Deutsche Flugsicherung GmbH

ENAC: Ente Nazionale per l'Aviazione Civile

ENAV: Ente Nazionale per l'Assistenza al volo

ESG: Environmental, social, and corporate governance

FEP: Flight Efficiency Plan

FRAIT: Free Route Airspace Italy

GDP: Gross Domestic Product

GHG: Greenhouse Gas Emissions

HR: Human Resources

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IPCC: Intergovernmental Panel on Climate Change

KPI: Key Performance Indicators

MBO: Management by Objectives

MEF: Ministero dell'Economia e delle Finanze

MIT: Ministero delle infrastrutture e dei trasporti

NATS: National Air Traffic Services

SBTI: Science-Based Target Initiative

SDG: Sustainable Development Goals

SQ: Status Quo

UN: United Nations

ABSTRACT

This study attempts to provide a comprehensive review of the most prominent findings in organizational change literature and the change dynamics in the internal structure of a company and the relationship with the external boundaries.

The paper has been organized in a funnel fashion, starting from a more general point of view on organizational change, after a thorough literature review on the main change management issues, its possible evolutions, and impacts on the organizations and on the individuals were analyzed.

Lastly, through a real-life case of the ENAV Group (an acronym for “Ente Nazionale per l’Assistenza al Volo”), a change management program centered on sustainability, the most important challenge of our present time, was studied, and the concepts explained in the first chapters will be analyzed and practically detailed, moving from theory to practice, focusing on how through an increasing attention to sustainability issues the firm is trying to permeate the concept of sustainability in the corporate culture.

The last chapter contains the experimental part of this study as well, characterized by a qualitative analysis carried out in the form of a survey for a sample of employees, selected and identified together with the company. Along with this internal study, interviews were also developed with actors in the CSR (Corporate Social Responsibility) universe, to which ENAV belongs, to obtain a holistic view of the state of the art of the change program, its strengths, things to improve, and possible future trends.

CHAPTER 1

The phenomenon of organizational change, from an extraordinary event, has today become a cyclical process often used by firms, and it is mainly aimed at increasing the competitive potential and at maximizing profits.

Change management is a term utilized to describe processes, activities, and approaches implemented to help individuals, teams, and organizations in the organizational change process. Many are the possible approaches possible, depending on the necessities of the firm. However, the results of the change programs are often not encouraging.

Change is a phenomenon that characterizes any type of organism: from companies, groups, and individuals.

A change management model can be used as a guideline to help or drive change efforts by defining the processes and actions to take, displaying the numerous elements that influence change, or by outlining the tools that can be utilized to reach the best performance in the change management process.

According to Parry et al , there are two kinds of change management models processual and descriptive models. A descriptive model studies the primary elements impacting organizational transformation, while processual models display the essential stages shaping the company through the intended changes.

The most prominent processual model is Lewin's model of change, idealized on three stages: the *unfreeze stage*, where there is a shock of the *status quo* (SQ), the *move phase* where the company stops following the usual behaviors and focuses on the new ones to adopt and the *refreeze stage* where the firm adjusts finally to the newly introduced behaviors.

The Lewinian model has influenced another processual model, the Weick and Quinn model, also known as the "continuous change model", where the authors divide change between "episodic change" and "continuous change". The phases of the model are very similar to the ones developed in the Lewinian model (freeze-rebalance-unfreeze).

Another fundamental literature piece categorized under processual model is the Kotter model reported in the 1996 book "Leading change" highlighting eight fundamental steps to run a successful change program : 1) Establish a sense of urgency, 2) Form a guiding coalition, 3) Create a vision and a strategy for change, 4) Communicate the vision of change, 5) Empowering broad-based action, 6) Set short term wins, 7) Consolidate gains and produce more change, 8) Anchoring the new approaches in the corporate culture

Various are also the descriptive models present in the literature, describing the factors and results of the change processes, such as the 7-s model by former Mckinsey consultants Thomas Peters and Robert Waterman, that intercepted seven interrelated factors that contribute to a firm's capacity to change: strategy, structure, systems, staff, style, skill and shared values.

Nadler and Tushman (1980) developed the congruence model, which centers on the transformation process and highlights the relevance of congruence across organizational components in establishing successful patterns of behavior, on the basis of the open systems theory.

This approach aims to describe how four different dimensions of an organization transformation process (work and tasks, persons, formal organizational arrangements, and informal organization)

affect and create organizational attitudes and affect significant change and consequently productivity.

Change necessarily needs to be divided by type, depending on the different categorizations. Authors divide change by rate, stakeholder focus, degree of intervention, identity, and lastly focus of the change.

Change in an organization does not happen without a cause. It is triggered by a multitude of stimuli that cause awareness and subsequently action. These change signals are often generated by the organization's surroundings or by the market.

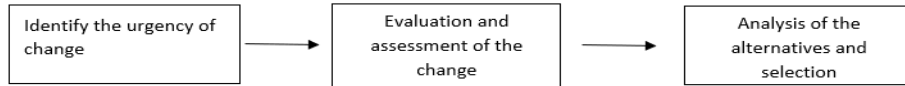
Karl Lewin was one of the first scholars to theorize a model to explain the driving forces behind the change processes, the so-called "force field- analysis", (1951) a tool that can be useful to help organizations recognize the primary drivers of change.

This model depicts organizational behavior as a dynamic balance of forces acting in opposite directions rather than in a static trend. According to this perspective, change happens when there is an asymmetry between the total of the forces against change (Restraining Forces) and the sum of the forces supporting change (Driving Forces). The task of a company that intends to encourage change is to diminish the strength of the restraining forces and to build on the driving forces.

The definition of the strategies is a substantial aspect when designing an organizational change. Objectives and goals must be set to visualize where the company was before the program and where it wants to be after the required transformation. Targets may be measured with performance indicators, employee satisfaction, customers preference and top management orientation.

The change implementation phase is the most important part of the entire process, but it is also the most difficult, as change often involves challenging transformations that may be at times uncomfortable for both management and employees. For these reasons, it is important that those who promote change are aware of the complexity of the process, and that they prepare themselves with appropriate tools to apply.

Change processes are very costly for organizations and failing to comply with one or more aspects of the process can determine the failure of the program. The process should be organized in the smoothest way possible so to serve as an example for possible future change efforts.



PLANNING



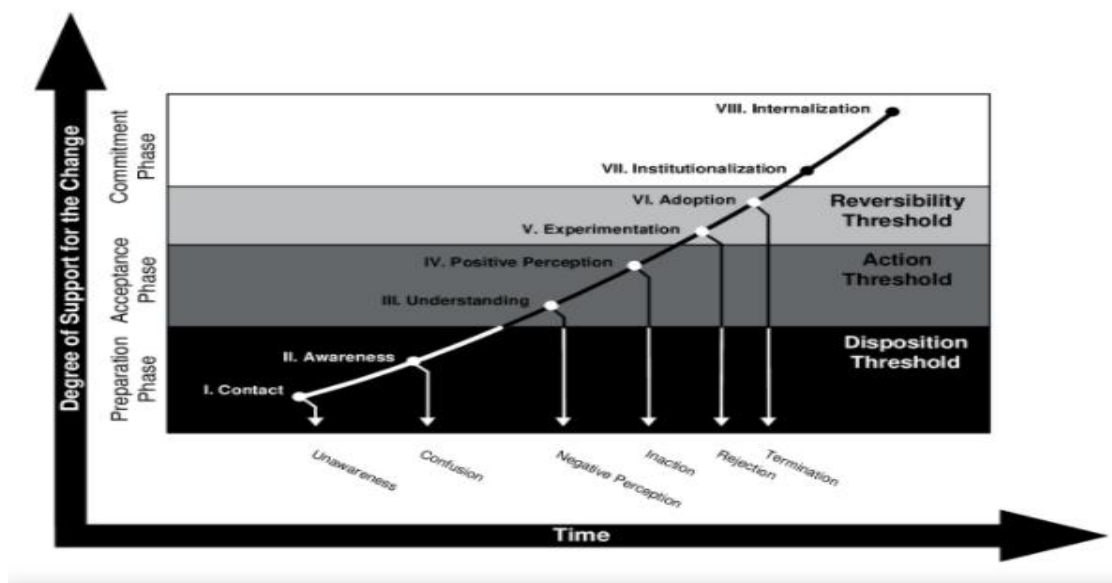
IMPLEMENTATION



REALIZATION

Conner and Patterson in 1982 introduced a model of commitment to change that has served as an important source for organizations to build on their change programs. Commitment is defined as the investment by individuals in time and resources to the firm’s alignment in a specific direction.

During the transformation process, four essential roles are at work: the ability to approve or legitimate change is held by the *change sponsors* or *change-makers*. The *change agents* aid the sponsors in the creation and management of implementation strategies. *Change targets* are the subjects of the change and must transform their behavior and be committed to ensure that the intended outcome is achieved. *Change Advocates* want to be part of the change but lack the legitimacy power to do so and must interface with the sponsors of the initiative.



CHAPTER 2

Resistance to change is a key topic in change management and should be considered as crucial when a company is undergoing a change process.

Organization members may develop psychological resistance, preferring to continue to adopt the same behaviors, feeling comfortable in the “comfort zone”. The biggest concern is the breakdown of patterns and habits consolidated over the years, as there will be less incentive to mutate when individuals are perceiving that those consolidated routines are working well. The loss of status will lead the individual to question what the potential benefits from the reorganization will be, and expectations will likely grow.

Every company has within it the alternation of two opposite mentalities, one that wants stability by not recognizing the necessity of changing out of fear, and the one that realizes that change is necessary to update the company and enhance its competitiveness.

The causes of failures in change management programs or resistance to accept the change are due to reasons internal to the organizations, a good part of which is attributable to the employees of the company and not to the forces of the external pressures that urge for change.

The reasons behind employees' hostility to change are several and can assume different levels of commitment, degree, and cause.

Employees, feel secure in the present, even if the scenario is not the best possible, but there is no certainty in the future or in the reality of the future, which is a major obstacle to change.

Individuals indeed identify with their work forming an emotional bond with it and developing habits and customs that once formed and acquainted are hard to abandon.

On the other hand, people who are interested in change are afraid of making the work experience they have gained over the years meaningless.

In addition, there is the fear of having to start again from scratch, as the majority of organizational changes involve transforming production processes and the way people work. There could be employees that may feel deprived of their jobs and may begin to doubt their identity (loss of status), that may lead to fear of losing their job, because they are not efficient in their new role.

The consequent loss of automation, derived by the job experimentation and experience leads to learning about all facets of one's task, one metabolizes one's work and one creates a series of

automatisms that lead to a decrease in energy and lowering of stress. Changing means leaving this comfort zone and jeopardizing all the benefits obtained over time.

Proposing and pursuing change projects may also lead to dissenting opinions from other members of the organization and to having much of the top management against them. This is a barrier to change, even for those in the top management team. They need motivation and firmness in their choices and determination to continue along the path they have started.

Companies must organize themselves to make the degree of resistance more subtle as possible and reduce the possibility that more people could follow this “movement”.

It is, therefore, necessary to set up a communicative process on the part of the agents of change towards the receptors of change, which allows to make clear the objectives to be achieved.

The practicability of change models is also heavily influenced by the actors who are called upon to make it happen. Strategic leadership is important, as is an active role for key stakeholders.

Stakeholder engagement is a process through which an organization can involve stakeholders in the formulation of business strategies and raise the level of commitment to the desired objective.

If prior to the development of the plan, the firm does not extend its reach beyond internal boundaries, the outlined strategy may risk falling into self-referentiality, succumbing to the internal pressures of the top management, or the individuals that are unwilling to hear from an external point of view the potential validity or not of the change management process.

CHAPTER 3

The “Ente Nazionale Assistenza al Volo” (ENAV S.P.A, from now on “ENAV”) is an Italian air navigation service provider (ANSP) company established in 1981, part of the ENAV Group. Headquartered in Rome ENAV employs more than 4200 professionals. It is owned by the Italian Ministry of Economy and Finance (MEF) that has a 53.3 % stake, while the rest of the company is owned by different entities. The company is managed by the Ministry of Infrastructure and Transport (MIT) and is subject to the supervision of the “Ente Nazionale per l'aviazione Civile” (ENAC), the Italian Civil Aviation Authority, and has the exclusive right of supervision over the Italian skies of the non-military air traffic, ensuring the well-functioning of the air traffic services through the control towers of 45 different Italian airports and 4 control areas over the 732,800 km² of the Italian airspace.

ENAV has represented over the years a financially sound company, however, it has been significantly challenged by a sharp decrease in air traffic due to the pandemic which started in March 2020.

The air traffic industry has been one of the most hit industries in Italy following the imposition of restrictions, with almost zero traffic during the highest peaks of the pandemic. As a total, in 2020 air traffic decreased by more than 60%, with a volume of passengers decreased by more than 70%.

The contraction of business activities has led to a decrease in revenues that had been increasing since 2014, from a record 902 €/Mln in 2019 to the lowest result in 7 years at 771 €/Mln in 2020. Lower costs for operations (560 €/Mln), lead anyway to a decrease in the EBITDA value of 210 €/Mln, down by 30% concerning 2019, also the lowest result of the last 7 years.

The last financial outlook published on September 30th, 2021, presenting the interim financial report with the last nine months report, displays figures in line with the same period in 2020. Revenues amounted at 587 €/Mln, a constant value concerning the same months of last year, and EBITDA of 146 €/Mln, a reduction of 16.4% in comparison to the first nine months of 2020, while operating costs increased at 440 €/Mln, as a consequence of the efforts aimed at revitalizing the air traffic market.

In a highly competitive market such as the airline industry one, that historically has also suffered for low-profit margins, the entry onto the scene of low-cost airlines has disrupted the market and forced largely financially indebted companies to review their business plans to continue to operate.

The pandemic was an exogenous and unpredicted shock that severely undermined the day-by-day operations of the companies and the profitability of the entire market. The whole industry is still suffering due to the consequences of the epidemic and many reports believe unlikely an economic rebound to pre-pandemic numbers in the short term.

The last estimates included in a EuroControl report forecast that the industry will return to normal values at best at the end of 2023 or at the beginning of 2024, while other observers believe that a full recovery of the industry and the return to growth will take longer than expected.

In Italy the outlook does not seem to be brighter, being one of the countries most affected by the pandemic, the national aviation market has surely suffered more than its global counterparts.

Until recently, flying was considered a status symbol, but in the last decade, thanks to the advent of low-cost airlines, flying has become accessible even for families with low incomes. This has meant a big boost for the whole industry and required adjustments for long-haul operators, but in recent

years two other phenomena are forcing actors in the industry to rethink their business models, incorporating sustainable actions to keep up with the market and with customer's preferences.

The social movement Flight Shame ("Flygskam" in Swedish), born in 2018 in Sweden, to dissuade people from flying to reduce carbon emission to fight climate change, was initially not taken seriously by the airlines until in 2019 it was observed that in Sweden there was a decrease in the volume of passengers around 8% which used other types of transportation such as trains that are less pollutive. This phenomenon was a first warning for the entire industry to accelerate in moving towards more sustainable operations, although it must be understood that the airline industry relies heavily on highly polluting fuels to fly planes. The airline industry contributes globally around 3% of the overall CO2 emissions but the sector is the fastest growing in terms of Green House Gas emissions (GHG) emitted. Emissions from international travel rose by more than 75% from 1990 to 2012, two times the normal rate of growth in emissions from all other economic sectors.

However, given the concern of airlines and consequently of the entire industry to lose customers and reduce profits, the whole sector started to discuss more about decarbonization and carbon footprint, as the first pioneer companies launched ambitious initiatives to reduce emissions.

The other driver of change was certainly the outbreak of the Covid 19 pandemic. To get on a plane, people need to trust in that company first. This has brought in a new sense of sustainability seen from a safety point of view, which was already a prerogative of the whole industry, even before the advent of the pandemic.

At the same time, major investment funds and private equity firms have played an important role in the development of sustainability concepts in corporate business strategies. Large investments have been conveyed by financial institutions through direct involvement in environmental projects or by issuing green bonds. Often in today's society, we hear about sustainability, the environment and sustainable development, which over the years has become a ubiquitous paradigm in the social debate, in the agendas of governments and international institutions, but also in those of private companies, as also stressed at the recent COP26 in Glasgow.

Sustainable development is stressed over three diverse dimensions that can at times intertwine: the economic dimension, the social dimension and the environmental one.

These three dimensions reflect into the so-called ESG factors, which stand for Environment, Social and Governance. Environmental factors generally considered include natural resource management, pollution prevention, water conservation, energy efficiency and reduced emissions, and disaster risk analysis. The social aspect refers to the methods and tools that the company puts in

place in addition to legal and/or contractual obligations, towards employees, customers, and suppliers, but also the external relationship with local communities (giveback) and civil society. Governance measures how the company manages internal and external relations by certain ethical parameters such as the independence of the board of directors, shareholders' rights, management remuneration, the purchase of products or services, internal control and audit procedures, the selection of suppliers, and compliance with national and European regulations. These factors are nowadays continuously monitored by companies, evaluating risks and opportunities arising from these areas. ESG strategies are indeed calculated and formulated following a careful study of the potential affecting a company. ESG risks are defined as risks arising from ESG factors related to environmental, social, and governance issues that are material to the company and its stakeholders.

In 2015, with the expiration of the Millennium Development Goals (MDGs), the United Nations identified new objectives, the so-called Sustainable Development Goals (SDGs), 17 objectives with about 169 targets to be achieved by 2030. The SDGs have rapidly become reference points for numerous institutional and corporate sustainability policies.

In the last few years, a new economic model has emerged giving birth to the so-called green economy, a vast concept aiming to an improved environmental impact of business activities. The concept underlying the green economy can be summarized as “doing better with less resources”.

Sustainability will be at the center of strategies of governments and businesses for the post-pandemic economic recovery necessary to lead the way for a society with at its heart not only environmental protection and conservation, but also the optimization of processes and the development of fairer working and living conditions.

ENAV is a company that provides a strategic service for the country ensuring that all air travel takes place in total safety, in airports as well as in Italian airspace. In the concept of sustainability is therefore already reflected the company's mission. In this sense, ENAV's approach is based on two aspects that are considered central to the company's strategic viewpoint: timely and advanced training of all personnel and constant investments in technological innovation.

ENAV developed its sustainability strategies in line with the SDGs set by the UN by building a materiality matrix, listening to the priorities that emerged from meeting with stakeholders. After these steps, ENAV developed a three-year sustainability plan (2018-2020) based on 5 strategic assets: strategy & governance, policies, technological innovation, reporting and communication, and corporate culture, and dedicated projects.

The most important initiative was the Free Route Airspace Italy (FRAIT) a project implemented in 2016, well before the sustainability framework of the company would be established. It features the optimization of airplanes routes for all aircrafts flying over 9000 meters to follow a direct route instead of a specific network of predetermined routes, enabling to save fuel and reduce operating costs and harmful emissions.

In the same direction, the company introduced an ambitious goal to become net-zero by 2022, to meet EU targets ten years before.

The strategy estimates a reduction of emission of 23% in 2021 and over 80% in 2022, compensating the remaining 20% by buying carbon credits through investments in environmental protection projects for the benefit of national and international communities.

In the 2021-2023 sustainability plan, in addition to the goal of achieving net-zero emissions, ENAV pledges the reduction of single-use plastics, the replacement of the car fleet with hybrid or fully electric cars, further developments in the sustainable supply chain, and the increase of consumption efficiency and place technological and operational excellence and digital transformation increasingly at the service of passengers, people, and collective wellbeing, as well as the continuous monitoring of suppliers along the supply chain.

Although the change management program conducted by the company started late in comparison to other private sectors' experiences it was dictated by a major shift in public opinion and stakeholder needs, as well as a moral obligation towards consumers. The public opinion was demanding an adaptation and a commitment by firms to lead by good example, accelerating sustainable development and fostering the use of low emissions practices.

The real goal of the change program was not only to make the company the top priority of the company to become more sustainable but mostly to instill a positive feeling towards this change into the people.

The company has been greatly engaged in the development of an internal change management program because sustainability goals cannot be pursued without a path of internal change management and, therefore, the creation of a corporate culture on sustainability issues.

The path of the ENAV Group began following legislative decree 254/2016, in accordance with the EU regulation n.95/2014, that required the obligation to submit an individual non-financial declaration for large companies that had an average of more than 500 employees during the financial year.

To comply with the legislation, the top management assigned the communication office the task to prepare a non-financial reporting.

The first criticality encountered was the creation of a materiality matrix, to list and group all of the company relevant issues that management and stakeholders considered fundamental to be tackled.

Contextually to this work the company began the study of the non-financial reporting standard, the Global Reporting Initiative (GRI).

To make sure to involve all structures of the company, ENAV developed, in May 2017, a zero number of the non-financial reporting, for internal use only and relied on the expertise of an external consulting company. The zero number of the report was useful to understand the existing criticalities and prepare the work to be started in January 2018.

The document highlighted some interesting aspects of the company. ENAV, being a company that offers a strategic service for the country and that guarantees flight safety not only to its direct clients, i.e., the airlines but indirectly also to all passengers, already had a sustainability approach inherent in its mission. ENAV is a company that puts safety and quality of service before any other business objective. In April 2018, a turning point was proposed to the CEO by the CSR department from which it would be difficult to come back, namely, not limiting at regulatory compliance reporting but developing a path that would focus on value creation through sustainability.

To develop the most appropriate strategy, the company relied on strategic problem solving and balanced scorecards. These analyses resulted in three change strategic objectives: 1) increase commitment; 2) increase staff engagement; 3) move from the past to the future.

Once the objectives had been defined, the strategy had to be developed, that is, the plan of actions that would have made it possible to achieve them.

First of all, involvement had to be increased not only within the company but also externally. To consolidate ENAV's image towards the market, was first necessary to demonstrate internally that the operations being carried out were also appreciated outside the company offices. For this to happen, ENAV took as benchmarks companies that had successfully integrated sustainability in their strategies, meeting them to learn about their experience.

Another of the first initiatives undertaken after the period of study was stakeholder engagement. To define the materiality matrix, the regulations required that all managers had to be directly involved, but the company decided to go even further. Bringing together all stakeholders, it organized a roundtable including airlines, airport management companies, institutions, suppliers, shareholders,

and employees. This meeting provided important evidence that the sensitivity of the airline industry towards sustainability issues was growing. It emerged that stakeholders expected from ENAV not only a service centered on safety, but as well service efficiency and constant updating and professionalism of its people, and an increasing focus on the environment, social issues, diversity, and all non-financial risks.

Subsequently, a Sustainability Committee was created, an initiative that not only made it possible to bring the issues to the attention of the Board of Directors and the Board of Auditors but also represented a very clear message from the top management to the entire company.

At that point, the sustainability structure had to be implemented involving all the corporate structures. To do so, a three-year Sustainability Plan (2018-2020) was drawn up, within which were included more than forty projects concerning five different macro areas.

The success of this first Sustainability Plan has led to the achievement of many objectives, and consequently to a new plan for the three-year period 2021-2023, with the addition of a new dimension, that has been the main environmental concern of the latest years, climate change.

The latest plan, in addition to having been shared with each structure responsible for the projects and with the CEO, has been submitted to the approval of the Board of Directors, to make it even more binding in the corporate structure.

Setting the plan as a starting point, it was then necessary to actively involve the corporate structure, starting with the human resources office that helped to nominate the Sustainability Ambassadors, a group of around thirty professional figures from all the departments and companies of the group, chosen among non-management figures who had already collaborated in calculating the reporting data, with the task of proposing new ideas and also acting as a megaphone within their departments about the initiatives taken. In November 2018, an important step for the company was the launch of the Sustainability Day at the auditorium of Ciampino Airport, with the entire company participating remotely.

At the same time as ENAV moved from non-financial reporting to sustainability reporting, moved from the GRI reference reporting system to the GRI core. In addition to the inclusion of new indicators, this operation has allowed the company, to move from reporting on what was done to what would be done.

The constant evaluation of the internal and external effectiveness of the initiatives implemented was useful to register that in a short time not only the sensitivity of people within the company had

changed, but also how investment funds and private equity were moving along the same path taken by ENAV.

This step deserves further reflection as if it is linked to the development of a change management process and the overcoming of the physiological resistance involved. The process is difficult if you do not find allies for what you want to change, not only inside the company but especially, in this case, outside.

The role of the CFO, which at the beginning was not central to the development of the process, started to become crucial when discussions about integrated budgeting occurred. However, the most important figure in this process has been the CEO. The ESG KPIs, with which they were evaluated, were included in the MBOs (Management by objectives) of the CEO and management, thus, the CEO's variable compensation started depending on the goals achieved.

This research aimed to assess and determine the state of the change management program undertaken by the ENAV Group, with a particular focus on the development of the sustainable practices underlined in the Sustainability Plan. The sustainability actions since coinciding with the change management program, have been considered as the change management program in this framework.

In particular, the research has investigated the level of engagement and the commitment by the employees and how the ENAV program is assessed by the external stakeholders.

The company's aim was to translate the integrated reporting encompassed in the Sustainability Report into an integrated perspective, meaning that sustainability should permeate as one of the main features recognized by employees, both in the mission and vision and in the corporate culture embedded in the day-to-day operations.

The main research question asked to the sample was calibrated on the insights given by the company:

What is the state of the art of the sustainability initiatives (namely the change management program) and the formation of an integrated perspective?

Based on this question, sub-questions were developed, formulated in questionnaire questions that were first bypassed by the ENAV CSR department and then delivered to the selected sample of respondents.

The research was conducted through a double procedure, a sample directed to internal members of the firm (privileged “opinion leaders”) and targeted interviews to external actors from the CSR world surrounding the firm’s network and selected stakeholders (See appendix)

The survey was targeted to the ENAV Sustainability Ambassadors, the employees who oversee the drafting of the non-financial reporting and are responsible for the dissemination of the sustainable strategic planning in the different departments of the company, a group composed of 32 individuals ranging from all departments selected by the human resources department and coordinated by the CSR structure, to suggest new sustainability projects and promote the ESG issues to the entire structure of the company.

The results produced will serve as a tool for the company to understand how the program is developing and if it needs some adjustments, given that the Ambassadors represent the voice of the company on sustainable matters, and may reflect in some way the opinion of the whole population of the firm.

The internal survey consisted of ten different questions to assess the level of commitment and engagement of the employees selected as sponsors of the change and to understand the degree of integrated thinking in the company. The survey was administered through the Qualtrics platform, allowing participants to submit their opinion both voluntarily and anonymously.

The main results of the internal survey and the external actor’s interview are based on the opinions expressed on the path of the firm’s change management program on sustainability.

Out of 32 Ambassadors, 24 were the individuals that were proactive in answering the questions.

The results of the survey highlighted a general satisfaction of the Ambassador regarding the initiatives of the company and the change management program itself.

Compared to what was expected, resistance to change that may have been registered by older employees is minimal.

Aligning a sustainability strategy into a well-established and structured company is not an easy task, as it requires continued monitoring and commitment from both the top management and the employees.

According to the company itself (the CSR department in this sense), what is missing is the creation of an integrated perspective leaning towards sustainability, meaning a more integrated approach that considers the topic as one of the focal points of the corporate strategy. The introduction of non-financial reporting can be considered a step towards this “transition”.

Moving along these lines, ENAV's efforts are in the right direction as besides the low impact on the environment also topics such as diversity, gender equality, and work-life balance that contribute equally to the sustainability of the company are taken into consideration as pivotal points around which to build a sustainable strategy anchored in time and adaptable to a dynamic external context.

As uncovered by the study the employees are understanding the changes being made and are generally in favor of those. The change in place is both adaptive as it responds to needs arising from the external environment and planned as the response coming from the organization has included the preparation of the whole hierarchical structure to adjust to the new status quo.

There is no awareness about the level of resistance to change registered in the passage between the two "modus operandi" but from the results of the study transpires that the level of resistance was low or isolated to a few cases, while a large part of the employees is embracing the changes.

Looking again at the Conner Patterson diagram studied before, we can state how ENAV's change management initiative is positioned in the reversibility threshold, the most delicate phase of the whole model, in which the activities are experimented and adopted in the daily operations by employees but are not yet institutionalized and internalized. This means that although the new behaviors have been assimilated, as evidenced by the appreciation of this experimental study the vast majority of the people interviewed, they have not yet reached a level of familiarity and experience both in workers and in the hierarchical structure. This is not necessarily a negative condition, but highlights, however, how the behaviors introduced so far have been successful but need to be augmented and improved with new ways to engage the employees. Institutionalization and internalization as we stressed before, are phenomena that take time to build, and given that the change program has been adopted in 2018 it can take time to establish.

Nevertheless, in a society like ours where speed has become crucial for business both acting and reacting, some things are worth the wait. In this sense, time must be given to individuals to adjust to new behaviors and wait for their "excitement" for the program to develop. This is not only crucial for the success of the program, but also for the impact the program can have within the company and on the individuals.

The sustainability challenge has represented for ENAV a winding road to find the right angle on how to find the right storytelling both to its shareholders, stakeholders, and employees, but the results achieved so far are an important milestone that are contributing to transform the company into a purpose-driven institution.

The efforts made by the top management are remarkable and aiming in the right direction, especially thinking that in the ATM industry sustainability has not been the main issue since recently and thinking about these issues may not be straightforward even for the external environment when thinking about what ENAV's business is and what the company represents as far as corporate values.

ENAV's mission to make sustainability a core value of the company will depend on the commitment of the top management that must remain as it has been since 2018 and whether a sense of community and pride in being able to work together for a company that cares about the future of the planet and its people will be instilled in employee mindset.

ENAV has been a trailblazer in introducing sustainability concepts in the air transport industry, and its example should be followed by other airlines and airport management companies to create important synergies laying the foundations for a more sustainable sector. The challenge that the company has undertaken is epochal and only through a cohesion of the whole ecosystem and of the industrial network will it be possible to fight it and try to win it, otherwise, the initiatives undertaken could be vain in the long run.

Introduction

As the Greek philosopher Heraclitus (“Eraclito”) once argued, “change is the only constant in life”. This quote is very timely as organizations of all sizes ranging from multinational enterprises (MNE) to small and medium-sized businesses (SMEs) face two enormous challenges of our times such as the digital transformation and the sustainable transformation. The first revolution, (the digital one) can be traced back to the first Industrial Revolution, which took place in the second half of the 18th century; passing successively through the second and third, to our times which, for most experts, represents the fourth and more symptomatic stage, based on the digitalization of products and services, integrated by the collection of data.

Companies, mainly stressed by increasing globalization and the dependency on the global markets, are seeking the answer in technological innovation to remain efficient, to improve job organization and quality of work, and to reduce production costs.

The second revolution, the sustainable one, conversely, has started to be considered starting from the 1960s but it did not raise much attention until the start of this century. Nowadays being sustainable and implementing green practices is for firms a moral obligation.

Firms, indeed, must adjust their strategies on these topics to accommodate the growing expectations of their customers, shareholders, and stakeholders. These adjustments to restructure market strategies have also a direct impact on job organization as a whole and most importantly on the individuals.

The phenomenon of organizational change, from an extraordinary event, has today become a cyclical process that is recurrent for innovative firms, and it is mainly aimed at increasing the competitive potential of the company, and consequently at maximizing profits.

Therefore, companies must act promptly to adapt to any change both coming from the external and the internal environment. Indeed, the business environment we live in today is moving at a tremendous pace and future trends are now more unpredictable than ever. As a result of this turbulent environment, companies must reorganize themselves to intercept the present trends and be able to anticipate possible future trends.

Change management is a term used to describe processes, activities, and approaches implemented to help individuals, teams, and organizations in the organizational change process. In this sense many are the possible approaches possible, depending on the necessities of the firm, the rapidity of the change processes, and the consequent rapidity of the whole business of capturing the undertaken

changes. However, the results of the change programs are often not encouraging. As reported by John Kotter in its management masterpiece “Leading Change”, only 30 percent of the change programs are successful¹(Kotter, 1996). Managing and implementing change is a challenging procedure and risky endeavor.² Most change initiatives fail on their objectives and produce high process costs, which at times exceed the possible benefits of organizational change.

¹ Kotter, J. P. (1996). *Leading change*. Boston, Mass: Harvard Business

² Jacobs, G., van Witteloostuijn, A., & Christe-Zeyse, J. (2013). A theoretical framework of organizational change. *Journal of Organizational Change Management*, 26(5), 772–792.

CHAPTER 1: Change Management Literature Review and Change Phases

1. Organizational change: a theoretical framework

Change is a phenomenon that characterizes any type of organism: from companies, groups, and individuals. The very concept of existence is closely connected with that of mobility, transformation, and change.

For companies, managing organizational change has nowadays become a common practice as change is a constant in every kind of reality, and dealing with and managing change is often a complex, stressful process and in some cases, it can become even unmanageable.

In the literature, studies on change, and in particular on organizational change, have taken their first steps since the 1950s. Numerous disciplines and scholars have tried to understand the change in depth to practice and manage it successfully. The result of these studies has seen the development of various theories and models of organizational change, although none of these theories is exhaustive or substitutive for the others, and they must be utilized complementarily. Each model rests on specific theories of interpretation and focuses attention only on certain dimensions of organizational change.

Some academics have dealt with defining the different types of change, those who have adopted models for the analysis of change, those who have developed rules for the management of the change process, some have dealt with resistance to change and how to cope with it, and others who have linked learning and change at the individual and collective level, who have deepened the leadership of change and the tools to support it.

In the past, the classical organizational literature underestimated the phenomenon of change, considering it as an extremely rational process, where those who governed the company had the task of restoring the optimal balance of the inner organization through the instrumental management of such phenomenon. The change was seen as a phenomenon strongly controllable by the top management.

This formulation was conditioned from the classic economic thought, which, considered change as an exceptional phenomenon, almost like a perturbation, a temporary phase, caused by exogenous events that affect the system, that, in a normal and natural situation, is in equilibrium.

This vision of change was explained by the economic and social state that characterized the 50's, where the processes of transformation of companies were relatively predictable and stable and

therefore managers and experts analyzed only some aspects of the processes of change, neglecting the complex nature of this phenomenon, through a reductionist approach.

From the end of the '50s until the early 70s, the modernist theories emerged, moving criticisms to the rational classic models and introducing a new vision of the interpretation of the relationship organization environment, where the organization becomes an open system, objectively perceptible, separated from the external environment, but strongly influenced by it. Organizational change, in these years, is seen as an additive process, rational, aimed at giving satisfactory responses to the external environment in a continuous change that solicits permanent modifications of the organization's strategy and structure.

From the end of the '70s onwards, a symbolic-interpretative perspective developed that sees the organization as a social construction, where the subjects interact, negotiate with each other, and give a subjective reading OF the whole organizational environment. From here comes the vision of change as the result of a dynamic, continuous process, aimed at maintaining the organizational identity that socially shared values and assumptions have created. Change is the result of the continuous construction and reconstruction that the subjects make of the organization affected by reality.

To cope with the necessity of implementing change programs and to have efficient models that would explain how to manage the process of organizational change and to attempt to create the conditions necessary for change to take place, the Change Management approach gained more and more importance over the years.

This approach encompasses the set of change processes regarding people, culture, structure, and technologies, necessary to achieve the desired organizational structure.

1.1 Literature review on change management

A change management model can be used as a guideline to help or drive change efforts by defining the processes and actions to take, displaying the numerous elements that influence change, or by outlining the tools that can be utilized to reach the best performance in the change management process.

Numerous models have been developed by social scientists, psychologists, sociologists, and managers to understand what are the processes and steps that an organization has to go through to implement a successful change program. Despite the availability of many models, there is still a necessity to deepen the understanding of this topic, as the models cannot examine all the specific variables influencing organizational change, and also because the external and internal climate of the firm is frequently evolving. There are two sorts of change management models³, according to Parry et al⁴: processual and descriptive models. A descriptive model explains the primary elements impacting organizational transformation, whereas a processual model describes the essential stages shaping the company through the desired changes. Various are the models proposed throughout the years, but, in this thesis, for practical matters, only the main ones are reported. An overview of the most important processual and descriptive models proposed by scholars over time is displayed in Figure 1.

Processual models	Descriptive models
1. Kotter's ²⁷ 8-Step Change Model	19. Cummings and Worley's ³¹ change management model
2. Lewin's ²⁶ three step change model	20. Burke and Litwin's ³² model of organizational change
3. Lippitt et al.'s ⁵⁰ change theory	21. Congruence model ³³
4. Bullock and Batten's ⁵¹ change model	22. Change formula of Beckhard and Harris ⁴¹
5. Bridges' ⁵² model of transition	23. Carnall's ⁴² change management model
6. Luecke's ³⁰ seven steps	24. Knoster's ⁴⁴ change model
7. Mento et al.'s ³⁶ change model	25. GE's change acceleration ³⁸
8. Jick's ³⁷ 10 steps model	26. Prosci's ⁵⁹ change management methodology
9. Judson's ⁵³ five-phase model	27. Best practice model for change management ⁶⁰
10. The change leader's roadmap ⁵⁴	28. Change tracking model ²¹
11. ADKAR ⁵⁵	29. Change management body of knowledge ⁶¹
12. Accelerating Implementation Methodology (AIM) ²⁹	30. BCG's change delta ⁶²
13. ACMP's ⁴⁰ Standard for Change Management	31. McKinsey's 7-S ⁶³
14. Whelan-Berry and Somerville ³⁹	32. Armenakis et al. ⁶⁴
15. Kanter et al. ²⁸	33. Greer and Ford ⁶⁵
16. Galpin's ⁵⁶ wheel of nine wedges	34. Cawsey et al. ⁶⁶
17. Model of Fernandez and Rainey ⁵⁷	35. CMI's change Management maturity ⁶⁷
18. Kickert ⁵⁸	36. Fernandez and Rainey ⁵⁷
	37. Change first's model ⁴³

Figure 1: Graphical Representation of the main change management models Source: Errida, A., & Lotfi, B. (2021).

³ Errida, A., & Lotfi, B. (2021). The determinants of organizational change management success: Literature review and case study. *International Journal of Engineering Business Management*.

⁴ Parry, W, Kirsch, C, Carey, P, et al. (2013) Empirical development of a model of performance drivers in organizational change projects. *Journal of Change Management*; 14: 99–125.

1.2 Processual models

Research in change management topics began during the '40s with the psychological and sociological studies by the German American psychologist Kurt Lewin regarding organization development. Lewin's ideas centered on the idea of action research, "comparative research on the conditions and effects of various forms of social action and research leading to social action"⁵. (Lewin, K. 1946, p.35) This rational process should follow "a spiral of steps each of which is composed of a circle of planning, action, and fact-finding about the result of the action". (Lewin, K. 1946, p.35) This methodology of research has been largely applied in social sciences research and contributed significantly to the growth of the organization development field (OD). Along with establishing the theoretical pillars, Lewin described practically the change process as a three-stage process. (Figure 2) The first step, the "*unfreeze*" stage, refers to the phase in which there is a shock of the equilibrium (the so-called "status quo" or SQ). The second step is the "*move*", by which the organization abandons the old behavior and starts focusing on the new one to adopt. The final step concerns the "*refreeze*" stage, where the firm establishes the new pattern as integrated into the business processes.⁶ Cummings et al. (2016)⁷ highlighted that nowadays the three-step change model theorized by Lewin has been remodeled. The research conducted by Lewin was performed at the time in a sociological perspective, rather than with a focus on the organizational sphere. This model has been overly simple-minded, as it does not consider the complexity of the external environment in which actors operate. (Clegg et al. 2005)⁸. The authors noted how the model is not applicable in today's turbulent and uncertain business environment as it was developed in an era where the context was quite certain and less familiar with exogenous shocks. (Robbins and Judge, 2009)⁹. However, the work done by Lewin can certainly be considered as the foundation of change management studies and a source of inspiration for scholars.

⁵ Lewin, K. (1946) Action Research and Minority Problems. *Journal of Social Issues*, 2, 34-46

⁶ Rollinson, D. (2008). *Organisational behaviour and analysis : an integrated approach*. 4th ed. Harlow, England: FT Prentice Hall.

⁷ Cummings, S., Bridgman, T., & Brown, K. G. (2016). Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management. *Human Relations*, 69(1), 33-60.

⁸ Clegg, S. R., Kornberger, M., & Rhodes, C. (2005). Learning/Becoming/Organizing. *Organization*, 12(2), 147-167.

⁹ Robbins, S., & Judge, T. (2009). *Organizational behavior*. Upper Saddle River, N.J.: Pearson Prentice Hall.

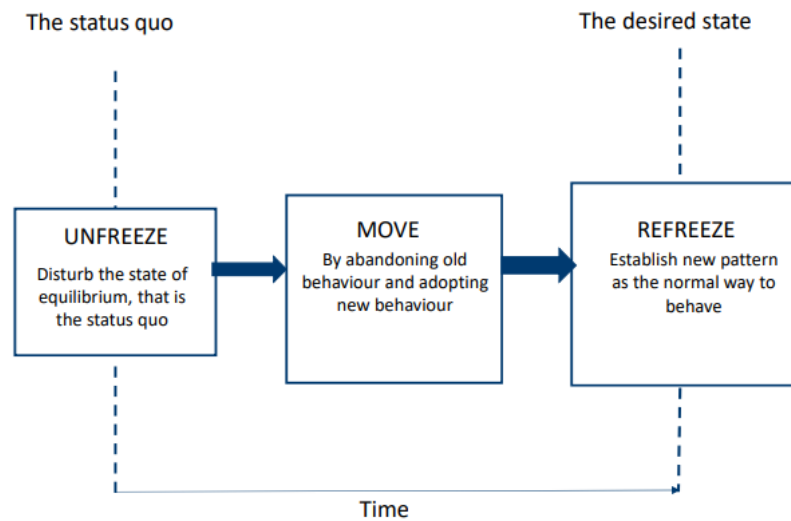


Figure 2 Graphical representation of the Lewin model; Source: Course material

A similar model has been hypothesized by Weick and Quinn in 1999 referred to as the “continuous change model”. The model although differs from Lewin’s theory for the division between “episodic change” and “continuous change”. Episodic change is not frequent, it occurs in times of divergence for the firm when it is moving away from its current status, while continuous change occurs in “emergent, self-organizing organizations [...], where change is constant, evolving, cumulative”¹⁰. (Weick, K. E., & Quinn, R. E. , 1999, p.366). Differently from the episodic change model developed by Lewin, the continuous change model, that is articulated similarly over a 3-step process, starts with the “freeze” step where the firm reinforces the daily patterns, displaying them through graphs, continues with the “rebalance” step where the patterns are interpreted and summarized and ends with the “unfreeze” stage where the change is unleashed, and the company is ready to move towards the new desired state. In this model, the idea of change, even though the necessary steps resemble the ones presented in the Lewinian model, is that change is recurrent, and it is influenced by organizational uncertainty. (Weick, K. E., & Quinn, R. E.,1999)

Along with Lewin and Weick and Quinn’s model the most notable and recognized processual model is the “Eight steps for leading change” model by Harvard professor John Kotter¹¹ (Kotter, 1996). His work consists of eight phases to implement an efficient change program.

The first phase aims to spread a *sense of urgency* and the need for change. The success of a change project presupposes the mobilization of a large part of the organization's members. To achieve this

¹⁰ Weick, K. E., & Quinn, R. E. (1999). Organizational Change and Development. *Annual Review of Psychology*, 50(1), 361–386.

¹¹ Kotter, J. P. (1996). *Leading change*. Boston, Mass: Harvard Business School Press.

mobilization, a sense of urgency must be generated, making people understand that the status quo is unacceptable, and the company must mutate to remain competitive, and it is necessary to make the change right away. Creating a sense of urgency does not just mean showing that the competition is performing better or that the performance is inadequate, but it means for the top management to open up an honest dialogue with the employees, explaining what is happening in the competitive environment, and focusing on what needs to be done to maintain or improve the position of the firm in the market. To do this, management must perform a detailed analysis of the competitive environment, understanding what are the opportunities and threats in the external environment and which future scenarios might be exploited.

Subsequently, the company must form a *guiding coalition* to lead the process of change. The goal for management at this stage is to be able to encourage the whole company to work as a team, to lead and master change together. Top management and leaders in the organization must be compact and row in the same direction, exercising leadership towards the same goal: promote change. In this phase it is crucial the role of those that act as “promoters” of the program, who must be capable to identify the right people with whom creating an alliance, involving them from an emotional point of view, as well as identifying the weak collaborators of the team and ensure that they are not afraid of change. It is very important in this case, in the different teams or departments of the company to assure the right mix of people from different backgrounds and with different expertise to have a heterogeneous group that can consider and understand different points of view.

The third step is to *create a vision and a strategy* for change. This will allow the company to create a very precise guide to implement the process, and to define the future outlook of the company after the transformation. The specific vision for change must be inspired and created ad-hoc depending on the members forming the organization. One strategy and one effective vision must be imaginable and desirable, feasible, focused, flexible, and communicable.

The fourth step is to *communicate the vision of change*. The goal of this phase is to create and apply a communicative strategy that allows the new vision and strategic plan to be effectively communicated throughout the whole organization. The vision must be stated clearly and loudly to achieve a higher level of understanding of the direction taken. To communicate the vision and plan, every available mean must be employed. It is also key to build a proactive communication pattern throughout the process, with the steering coalition serving as a role model for the behavior expected by the employees. Communication is essential for people to understand and accept the change. It is critical that as many individuals as possible comprehend and accept the strategy and the goal, to proceed to the next steps and allow a smooth transition.

The fifth step consists in *empowering broad-based action*. Eliminate barriers to change, modify systems or structures that must be modified before change can occur, and encourage risk-taking and new ideas, activities, and actions are all examples of empowering broad-based action. It is also essential to give individuals the impression that no challenge is too great to conquer when it comes to transformation. All obstacles should be removed to allow people who intend to make the vision a reality to do so.

It is useful to set *short-term objectives or "wins"* for the transition process. These are tangible gains that can be made along the path to the end goal. When a goal is met, it should be acknowledged, rewarded, and perhaps even celebrated. Change takes time, and people become tired of it. People will find it easier to grasp the concepts if the procedure is broken down into smaller steps. It is critical to achieve some obvious and straightforward wins as soon as possible when the transformation process begins, in order to show the rewards of undertaking the change process.

It is fundamental to press harder and quicker towards the final aim after the initial victories, by avoiding strongly any divergence from the initial plan and the development of the idea that change has been already achieved.

The seventh step of the model consists in "*consolidating gains and produce more change*". Credibility is the mean by which the guiding coalition builds on to introduce new changes. An increasing number of people are convinced of the changes undertaken so far and the change process has penetrated the organization. Leaders must be tenacious in implementing change until the end goal becomes a reality. Hiring, promoting, and developing people who can implement the change vision in the organization can help to produce more change and to later anchor organizational and strategic changes in corporate culture, as unveiled in the last stage.

Finally, the last and eight-step of the Kotter model is focused on *anchoring the new approaches in the corporate culture*. Supporting the new methods, embedding them in the organization's culture, and anchoring new approaches and ways of working is indispensable. Following a change process, the organization should develop a completely new culture, as it is critical to maintain the new behavior. The leaders must ensure that the new behaviors are successful. After that, individuals will be capable of replacing the old values with new ones.

1.3 Descriptive models

Various descriptive models are present in the literature, that arose to justify the factors and potential results of the change processes. Each model stresses different aspects of the change process and looks at the whole process from several perspectives.

For example, in the 1970s, two former McKinsey¹² consultants Thomas Peters and Robert Waterman reported in the book “In Search of Excellence: Lessons from America’s best-run companies” the 7-S model intercepting the required changes to allow a smooth organizational process. The authors examined seven interconnected aspects that shape a company’s capacity to change: strategy, structure, systems, staff, style, skill, and shared values. (Figure 3) All of these factors are incredibly important for the success of the change program as the lack of one element will directly influence the other components. The tool was developed both to diagnose how existing corporations operated and to understand which particular element should be changed and how the changes should be aligned with one another.

The model has been divided between “soft “elements, the ones that are extremely difficult to communicate, less palpable, and more directly linked to the corporate culture, and the “hard” elements, easier to be defined and monitored by the management. The three hard “S” were identified as strategy, structure, systems, while staff, style, skills, and shared values were part of the soft S.

Strategy defines the set of activities undertaken by the company to gain a competitive advantage against the competitors and in response to the changes in the external environment. The “structure follows strategy”¹³ days are gone given that strategies and organizations are nowadays adapting to each other, as the external environment becomes increasingly complex. Systems are the processes of the company, ranging from HR systems to risk management processes, to the general infrastructure of the firm and the IT department. The structure can be defined as how a company is organized internally and the relationships between its entities (departments, foreign subsidiaries, controlled companies, etc.). Style could be also defined as culture, and it is quite hard to diagnose as it pays attention to the informal rules of conduct in a company.

¹² McKinsey is a leading strategy consulting company and is part of the so called “Big Three” network, along with Bain and Boston Consulting Group (BCG)

¹³ A.D. Chandler invented the phrase "structure follows strategy" in 1962 to describe how a corporation's organizational structure is built to achieve a firm's goal.

Skills refer to the institutional and individual skills that contribute to the organizational know-how and intellectual resources and have become a major area of focus for companies given that the pressuring globalization has increased job specialization, requiring companies to have broader and diverse sets of skills.

Staff refers to the people working within the company, including the recruitment processes underwent by the human resources department (HR) which aims to select and recruit young talents and expert professionals, and, during the last 25 years, it had to increasingly be aware about diversity and gender policies and issues. The importance of HR synergies is often reiterated as fundamental to the performance of a company because people guarantee the fulfillment of the company's mission and being able to count on the best people on the market is a significant competitive advantage, especially against the competition, and in a context like today's where the competition of the labor market makes talent management a task even more difficult.



Figure 3: Graphical representation of the 7 S Model by McKinsey source: McKinsey & Company Quarterly¹⁴

Nadler and Tushman (1980)¹⁵ developed the congruence model, which centers on the transformation process and highlights the relevance of congruence across organizational components in establishing successful patterns of behavior, on the basis of the open systems theory. This approach aims to describe how four different dimensions of an organization transformation

¹⁴ McKinsey Quarterly Enduring Ideas: The 7-S Framework March 2008 Article

¹⁵ Nadler, D., and Michael Tushman. "A Model for Diagnosing Organizational Behavior." *Organizational Dynamics* 9, no. 2 (autumn 1980): 35–51.

process (work and tasks, persons, formal organizational arrangements, and informal organization) affect and create organizational attitudes and affect significantly change and consequently productivity. However, this model has been criticized for its unilaterality.

The Burke- Litwin organizational change model (1992)¹⁶ analyzes how organizational performance is dependent upon the various factors around the company. This framework analyzes 12 different components that may affect organizational change in the industry in which the company is operating. Organizational characteristics regarded to be the most important are represented by the authors in a diagram of 12 boxes. (Figure 4) The decisions of the included factors were not made in isolation; they were influenced by what other authors had discovered. As a result, precedent research has been followed to a significant extent. For instance, the McKinsey model's 7s (Peters and Waterman), which has been discussed in-depth earlier in this chapter.

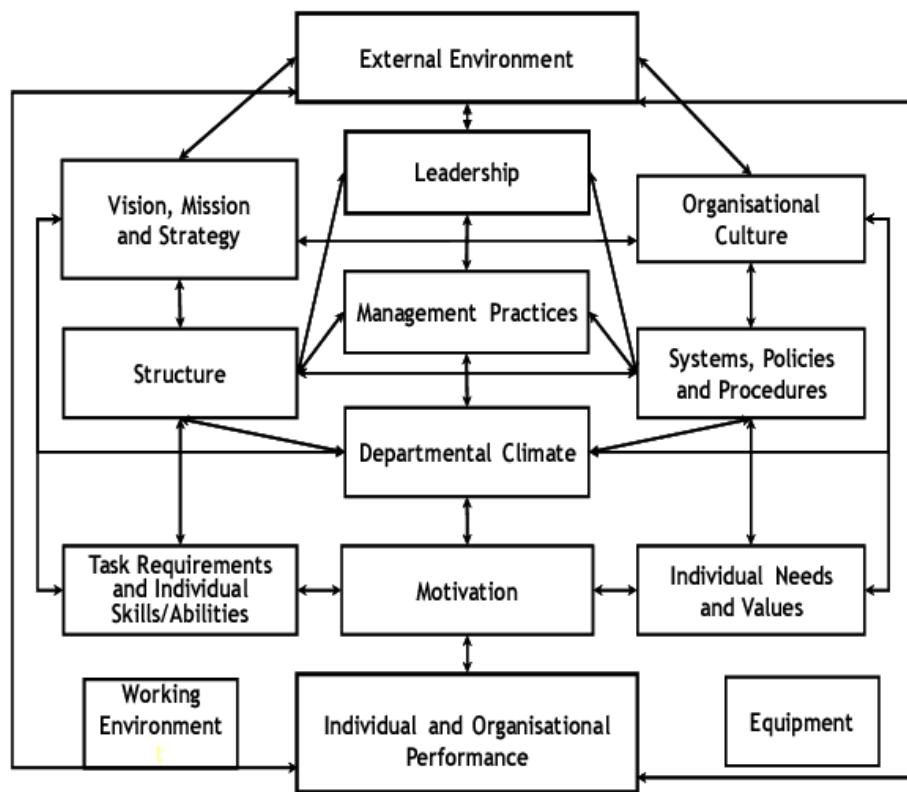


Figure 4: Graphical representation of the Burke-Litwin model source: Martins, Coetzee (2009)

The factors selected were external environment, leadership, mission and strategy, organizational culture, management practices, structure, systems (policies and procedures), work unit climate,

¹⁶ Burke, W. W., & Litwin, G. H. (1992). A causal model of organizational performance and change. *Journal of Management*, 18(3), 523–545

motivation, task requirements and individual skills/abilities, individual needs and values, and individual and organizational performance.

At the top of the model, there is the external environment that forces the need for change. A faltering economy, alterations in societal tendencies, and the introduction of new technologies are all examples of forces that may promote the need for changes to be made.

The Burke-Litwin model goes one step farther than the Congruence Model of organizational performance by integrating the external environment as an input. It is also a more complex model with a lot more aspects covered. Burke and Litwin aimed to achieve a compromise between depicting the true complexity of the real world and generating something that people could easily comprehend and use when constructing their model.

The aspects that are fundamental to an organization's success are known as transformational factors. They constitute an organization's essential structure and in the representation of the model are right below the external environment (leadership, organizational culture, mission, and strategy). If big changes are required to alter an organization and must be aligned to make big changes or even to operate at reasonable levels these elements must be addressed. The arrows depicting the connection among these transformational variables and the transactional components indicated below are directed downwards to show that, while both the upper and lower elements affect each other, the effect is greater downward. Transactional Factors (Structure, systems, management practices, work climate, task and individual skills, individual needs and values, motivation). are the parts of an organization that can be modified more quickly, but they rarely have the same impact on overall performance as the transformative ones. They are significant variables, but unless the three transformational drivers are in place to support the shift, these changes are likely to be transient.

In truth, all the twelve parts of the model have an impact on one another, although the arrows on the diagrams indicate the strongest connections between them. It is straightforward to observe how an adjustment in one aspect can have a big influence across the whole scheme. While any one of these transactional aspects can have an impact on performance, the effect will only persist as long as the underlying transformational variables are in harmony.

For example, before reorganizing its divisions and establishing a cross-functional workforce a company should first tackle the widely held assumption that functional groupings perform best as separate entities, otherwise such a reorganization could be counterproductive for the firm undertaking it.

The effect of the change on performance is the final result of the change model. This is a tool for determining how effective change can be when implemented in an organization. It also has an effect on the outside world, which is what produces the feedback loop. As a result, as the output changes, the input changes, and the factors of change vary as well, illustrating once again that the only constant present in the model is change, as it is recurrent both when the performance of the organization improves or deteriorates and when the impact of the variables on the efficiency of operations.

1.4 Types of change

The key traits that identify the sort and shape of change, as well as the attributes shaping it, can be defined as change type.

Different typologies of change may be found in the literature, which has been characterized by many different categorizations of change. In this study, for length reasons, only some of the most important types of change are discussed.

Authors divide change by rate, stakeholder focus, degree of intervention, identity, and lastly focus of the change.

Change is classified into two types by the rate typology. To begin, there is incremental or evolutionary progress, in which tiny, gradual changes or alterations are made by adaptation. In this typology of change, there is relative stability, and it can lead to wide and long-lasting shifts without much disruption or opposition (Doppelt,2003)¹⁷. The second type is radical change relates that are typically disruptive changes that are typically abrupt and cause substantial adjustments from the status quo (SQ).

According to Freeman (1984)¹⁸, based on stakeholder focus two kinds of transformation are observable: internal change that consists in frequently reevaluating and reshaping goals and strategies that impact or are affected by major stakeholders, and external change, the change that occurs outside of the company's area of control, affecting secondary stakeholders, such as change stemming from political or economic shocks.

Companies may exert greater control mainly on internal adjustments, which enables them to be dynamic, and to possibly anticipate alterations in the external sphere of influence. External changes, instead, if not appropriately anticipated, induce the organization to be reactive, and should be

¹⁷ Doppelt, B., 2003. *Leading change toward sustainability : a change-management guide for business, government and civil society*. Sheffield, UK : Greenleaf Publishing Limited.

¹⁸ Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.

anticipated as much as possible, otherwise, can the market opportunity to adjust the strategy could be narrowed or, in drastic cases, they may cause the organization to vanish.

Regarding intervention, Bennis (1969)¹⁹ noticed three forms of change. First, non-intervention, in line with Adam Smith's 1759 "The Theory of Moral Sentiments", which developed the laissez-faire theory of the 'invisible hand.' It is based on spontaneous transformation, with little or no guidance, where the management does not intervene if not to channel the happening changes on the right path. On the opposite, is the radical intervention, which emphasizes conflict and class struggle and may limit the independence of people or groups. Finally, planned change, "a strategy that utilizes social technology self-consciously and experimentally to assist in the resolution of men's and societies' issues" (Bennis., 1969, p. 2). Planned change has the benefit of some direction without being overly constrictive or too unexpected. Change is planned based on ideals that have been criticized, experience that has been assessed, and research information (Chin & Benne, 1969)²⁰. The efficacy of planned change is frequently connected to the involvement of individuals at several organizational levels in analyzing and diagnosing necessary change, as well as in establishing its goals and objectives (Benne & Bimbaum, 1969)²¹. When we talk about change in this context, we are talking about planned change, as something part of a larger strategy and not of random choices.

Along with planned change, it has been recognized also another typology of change – unplanned change, also known as emergent change. Change is defined as emergent when the transformation comes as a natural response of a need resulting from either the internal or the external environment, that lies outside the manager's eyes.

Stacey's (1993)²² categorization of change is based on identity, as not all the potential results of the change are known i.e., the farther the system goes from equilibrium, the more difficult it is to foresee the impacts of change. There are three kinds recognized under this categorization: closed change, where the system's future behavior is completely foreseeable, contained change, where the future behavior may be anticipated using probability and lastly open-ended change: future behavior is hard to foresee.

¹⁹ Bennis, W. G. (1969). *Organization development: Its nature, origins, and prospects*. Reading, Mass: Addison-Wesley Pub. Co.

²⁰ Bennis, W. G., In Benne, K. D., & In Chin, R. (1969). *The planning of change*. New York: Holt, Rinehart and Winston.

²¹ Benne, Kenneth D. and Max Birnbaum. 1969. "Principles of Changing." In *The Planning of Change*. Eds. Warren G. Bennis, Kenneth D. Benne and Robert Chin. New York: Holt, Rinehart and Winston, 328–335.

²² Stacey, R.D. (1993) *Strategic Management and Organizational Dynamics*, Pitman.

Lorenzi and Riley (2000)²³ suggested four typologies of focus of the change, which are in some circumstances correlated: *operational changes*, which affect how the company's day to day activities are managed, e.g. a restructuring, enlargement, or downsizing of the business functions; *strategic changes*, which impact business path, e.g. transformational or radical changes affecting the way a business runs the company or its subsidiaries; *cultural changes*, which affect organizational concepts by which the business is conducted; e.g. a company that changes its vision in mission in favor of sustainability or diversity or any topic that the company has at heart and; *political changes* in staffing, which occur primarily for political reasons of various kinds such as the insertion of gender quotas or diversity and inclusion focus.

Furthermore, these changes can be First-order, in which there are differences in processes and procedures, but the system remains essentially unaltered; or Second-order, in which there are changes in tactics, sometimes as a result of a crisis. Third-order changes are present when the organization is reacting immediately to external shocks.

1.5 Drivers of change

Change in an organization does not happen without a cause. It is triggered by a multitude of stimuli that cause awareness and subsequently action. These change signals are often generated by the organization's surroundings or by the market. Strong actions by competitors, new technology, or changes in government laws are examples of such signals. Failures in a leader's own organization's performance might also indicate the need for change. Whatever the cause, these occurrences demand a strong and immediate response from the organization.

As for the change management model, Karl Lewin was one of the first scholars to theorize a model to explain the driving forces behind the change processes, the so-called “force field- analysis”, (1951) a tool that can be useful to help organizations to recognize the primary drivers of change. This model depicts organizational behavior as a dynamic balance of forces acting in opposite directions rather than in a static trend. According to this perspective on structured behavior, change happens when there is an asymmetry between the total of the forces against change (*Restraining Forces*) and the sum of the forces supporting change (*Driving Forces*). The combination of driving forces and restraining forces is represented graphically in Figure 5. Anything that boosts an organization's propensity to adopt a specific change program is referred to be a driving force. The severity of the forces varies according to the circumstances of the actual scenario. Some driving forces contribute to

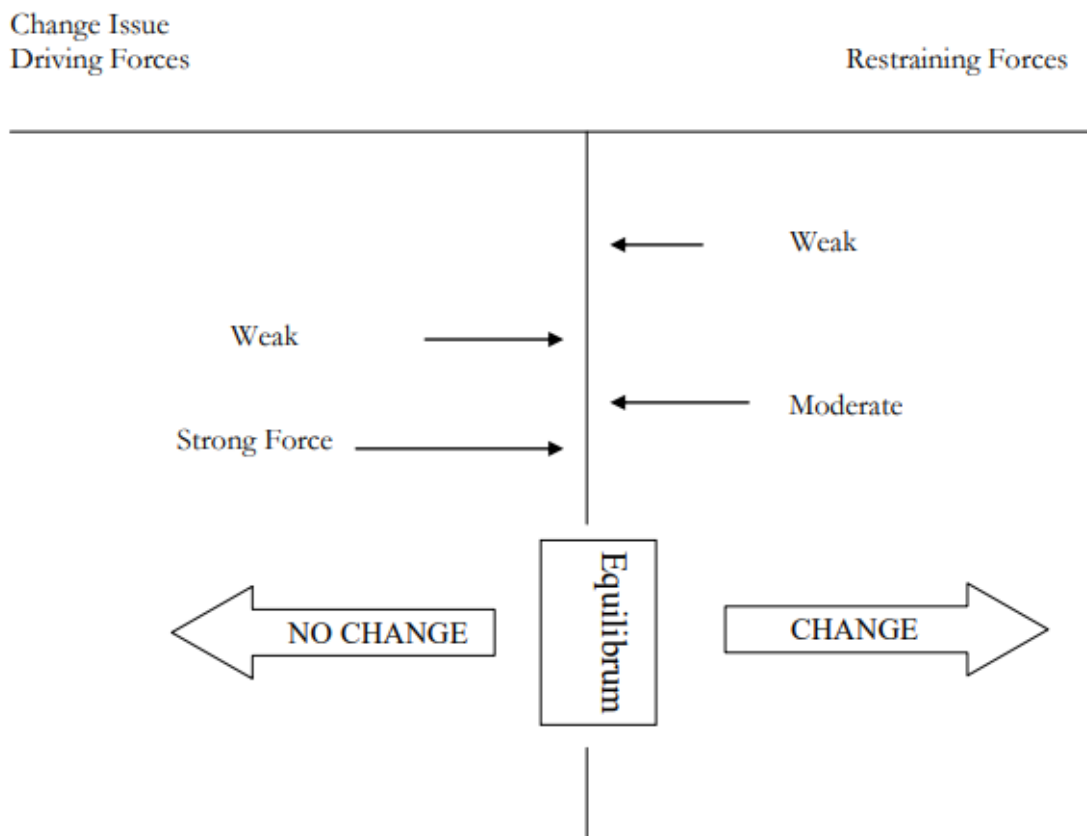
²³ Nancy M. Lorenzi, PhD, Robert T. Riley, PhD, Managing Change: An Overview, Journal of the American Medical Informatics Association, Volume 7, Issue 2, March 2000, Pages 116–124

the creation of a need for a change program or invigorate its implementation; other forces emerge at later stages as the change program progresses, and the organization and individuals get accustomed to it.

The task of a company that intends to encourage change is to diminish the strength of the restraining forces and to build on the driving forces. When the strength of the driving forces is of equal size to the one of the restraining forces, it will result in an equilibrium state where the organization will remain stable, achieving a state named by Lewin as *quasi-stationary equilibrium*. When this situation holds the situation is as represented in the formula below:

$$F(A) + F(B) = 0$$

where $F(A)$ = driving forces, $F(B)$ = restraining forces



Source: (Lewin, 1951)

Figure 5 Force Field Analysis model source: Lewin (1951)

The force field analysis connects with Lewin's three-step theory as you strive to unfreeze the present equilibrium, move towards the desired state, and finally freeze the change at the new level so that a new equilibrium arises preventing future change.

Anderson and Ackerman Anderson (2001)²⁴ suggested a change driver model. (Figure 6) The model depicts a series of triggers to change, where one trigger causes a change in the next, beginning with changes in the environment, followed by changes in the marketplace, then business imperatives, organizational imperatives, cultural imperatives, leader and employee behavior, and finally adjusting the leader and employee mindsets. However, the paradigm is externally centered and is restricted in describing changes that are internally initiated, such as proactive leadership, as described by Morgan's (1997) 'Flux and transformation' metaphor²⁵, which considers firms as closed systems.



Figure 6 Graphical representation of the Anderson- Ackerman Anderson model

Pressure towards change could be internal or external. The company does not have to be only alerted by the internal sphere of influence, but it is usually the external environment that imposes some forces upon it, that are difficult to reduce and impose to companies' organizational changes to remain efficient.

²⁴ Anderson, D. and Ackerman Anderson, L.A. (2001) Beyond Change Management. Jossey-Bass, San Francisco.

²⁵ Morgan, Gareth, 1943-. (1997). Images of organization. Thousand Oaks, Calif. :Sage Publications,

Change dictated by the internal environment might be linked to low productivity between departments, lack of communication, high turnover rates or absenteeism, as well as mismanagement of the company by top managers.

External forces may be linked to new legal frameworks, new products developed by competitors, changes in technology, changes in strategy, expansion to new geographical areas, and, most importantly, to evolving consumer preferences.

In the industry, a business may be obliged by law to embrace new technology to compete effectively, or it may be legally required to change the system mandated by environmental or civil rights law. In the globalized business world, we live in today, international competitiveness and the reduction of trade barriers are probably inducing organizational reforms more than any other external influence.

1.6 Implementing the change

Building on the information gathered on the various dimensions of the change process,²⁶ firms can outline the strategies for achieving the desired changes and the tools to be used to implement the strategies.

The definition of the strategies is a substantial aspect when designing an organizational change. Objectives and goals must be set to visualize where the company was before the program and where it wants to be after the required transformation. Targets may be measured with performance indicators, employee satisfaction, customers preference and top management orientation.

The possibility of carrying out the process of organizational change and therefore of achieving the objectives set is very much conditioned by the ability to outline a strategy that is coherent with the change needs of the organization, with the internal and external context from which these needs originate, and with the content of the transformation that needs has to be implemented.

Before embarking on the journey of organizational change, the management must analyze in detail the current state of the entire organization. In particular, must be analyzed the existing critical issues, strengths and weaknesses of the business, investment opportunities, threats arising from competitors, and areas of concern and growth of the sector, such as technological innovation or sustainable development.

With this purpose, before a change program can be started, the company must detect what is the need for a change and what are the reasons moving it. Managers' or leaders' perception that something is

²⁶ Consiglio S., (2007) Il cambiamento organizzativo, in MERCURIO R., TESTA F., Organizzazione assetto e relazioni nel sistema di business, Giappichelli, Torino

not in equilibrium or there is room for improvement must be the first sign that the status quo is unacceptable as it is. Top management perceptions that something must be modified, should be transmitted throughout the company so that the company will move together across all stages and employees will not be unaware of the undergoing processes.

After recognizing that something is not going in the right direction, it is crucial to quantify the size of the problem, through the collection of informational data, both “hard “ and operational. The derived data analysis will allow management to understand the urgency, size, shape, length of the actions to enact.

The company must consider which direction wants to go and what objectives wants to pursue through the change process highlighting possible risks and benefits generated by the transformation. It is fundamental to note that the possible success or failure of the transformation ‘ is highly dependent on the fit between the inner values of the organization and the dominant values of the program undertaken.

The change implementation phase is the most important part of the entire process, but it is also the most difficult, as change often involves challenging transformations that may be at times uncomfortable for both management and employees. For these reasons, it is important that those who promote change are aware of the complexity of the process, and that they prepare themselves with appropriate tools to apply.

Change processes are very costly for organizations and failing to comply with one or more aspect of the process can determine the failure of the program. The process should be organized in the smoothest way possible so to serve as an example for possible future change efforts.²⁷

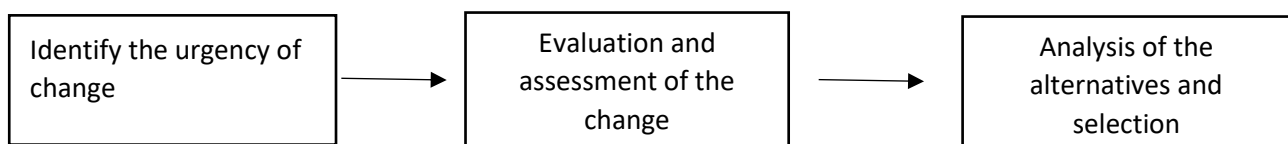
Another critical aspect to decide is whether to give more emphasis to organizational goals or individual goals. Often the ones promoting change programs, are the top management or the board of directors that must show improved efficiency and subsequently profitability. Thus, change efforts may be directly linked to managers’ aspiration to consolidate their role, and therefore the changes do not have a comprehensive outcome on all of the company’s dimensions.

The approach to the change process should be clearly defined by the top management in a board of directors’ meeting and successively communicated to the employees, following a top-down approach. In this phase, it is also critical to clarify the different roles to diminish uncertainty issues that may arise. Role clarification is important because it could be the first touchpoint where employees will

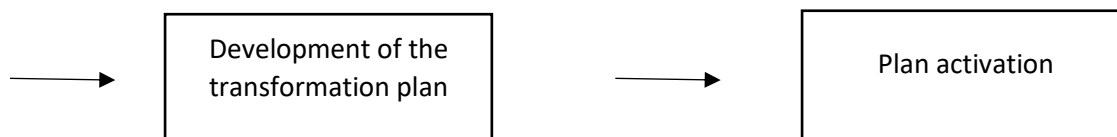
²⁷ Bain & Company “Change Management Programs”- Management tools

encounter modifications in the company’s structure, as external consultants may be brought in to perform extraordinary work to assess and outline the change program. Being a process, an organizational change program is composed of different stages. Phases can be divided into three different macro-areas; planning, implementation, and realization²⁸ (Figure 7). The planning part of the process comprehends the phase where the company identifies the urgency of change, a phase of evaluation and assessment of the change, and a phase of analysis of the impact of alternative and program selection. Implementation includes a phase of development of the transformation plan and a plan activation phase. The realization phase consists in a transition management phase and a phase where the company will monitor the results as we will see in the next paragraph.

As already stressed, the importance of advocating the urgency of change is crucial for the success of the program. The company must carefully pick individuals at every level of the organization that will serve as the leaders of the change, also known as “advocates of change”. They are the face of the program and have the task of sponsoring the initiative to influence as many employees as possible to adopt the new behaviors.



PLANNING



IMPLEMENTATION



REALIZATION

Figure 7 Own representation of the organizational change stages for the company

²⁸ This model is a representation of the author

Another very common simplification when it comes to change is the thought that to change a company you need not only to have all employees accept it but even align them with the corporate way of thinking, as only in this way individuals will be capable of understanding and adopting the new behaviors independently. This view recognizes the fundamental need of involving people in a change process, without which any project would be doomed to fail. However, the only way to overcome this impasse is to address the issue in an articulated way, considering learning, not as a sum of individual changes, but thinking of the company not as a collection of individuals but as a set of relationships between elements (individuals, groups, structures, technologies, information) that are interdependent.

Until now we have looked at the implementation phase through the eyes of the firm but is impossible to fully grasp the whole picture, by looking at this issue unilaterally, thus looking at this process from the employees' side will add the point of view of the true protagonist of the program.

Conner and Patterson in 1982²⁹ introduced a model of commitment to change that has served as an important source for organizations to build on their change programs. Commitment is defined as the investment by individuals in time and resources to the firm's alignment in a specific direction.

On the vertical axis of the model (see Figure 8) is displayed the degree of support for the change, while the horizontal axis represents the time during which the process is articulated. The model is made of three different developmental stages – the preparation phase, the acceptance, and the commitment phase. Every stage is a critical point for the development of the commitment to change. Transitioning through a stage is the basis for individuals to move on to the subsequent stage.

During the transformation process, four essential roles are at work: the ability to approve or legitimate change is held by the *change sponsors or change-makers*. The *change agents* aid the sponsors in the creation and management of implementation strategies. *Change targets* are the subjects of the change and must transform their behavior and be committed to ensure that the intended outcome is achieved. *Change Advocates* want to be part of the change but lack the legitimacy power to do so and must interface with the sponsors of the initiative.

The first step is the preparation phase and lays the groundwork for the continued development of both support and opposition to the change. It is divided into two stages: contact and awareness.

²⁹ Conner, D. R., & Patterson, R. W. (1982). Building commitment to organizational change. *Training & Development Journal*.

The first stage is “Contact”, which refers to when the individual is confronted for the first time with the notion that a change is affecting the organization, and it may need an adjustment. Employees become committed to organizational change as they pass through the Contact Stage.

The initial contact message can be sent in a variety of ways. There are several methods available, including emails, staff meetings, personal connections, and other means. Regardless of the approach used, the goal of this initial stage in the commitment process is to raise the awareness that a transformation has happened or is expected to happen very soon. However, contact activities do not all the time result in increased awareness. Sponsors and change agents are frequently disappointed when, after several meetings and communications about a change effort, a portion of the recipients are either unprepared or react in a completely unexpected way when the change begins to impact them.

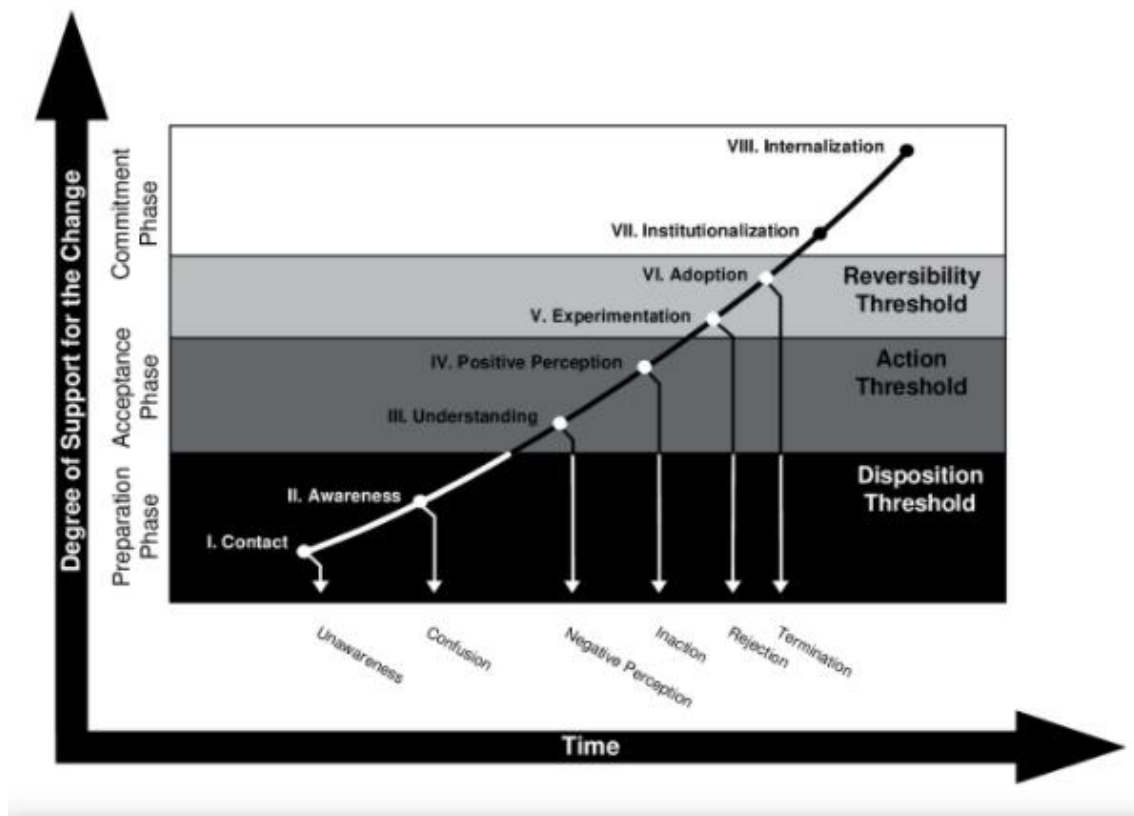


Figure 8 Graphical Representation of Change commitment phases source: Conner, D. R., & Patterson, R. W. (1982).

The Contact Stage outcomes are either: Awareness—which improves the preparation process; or Unawareness—which results in no readiness for commitment.

Employees in Stage II are aware that a change is being proposed or executed. Awareness is successfully developed when employees recognize that changes impacting the organization's operations have happened or are imminent. To obtain this purpose, it is necessary that first

communications regarding the change touch the intended audience members and convey the information clearly. This awareness, however, does not imply that employees fully comprehend how the change would benefit them. The following are the outcomes for the Awareness Stage: Understanding, which moves the process forward to the Acceptance Phase; or Confusion, which limits and prevents preparedness.

The Acceptance Phase denotes crossing the Disposition Threshold. This is a significant turning point; people's perceptions of the change move from "being there" to "personally relevant." This viewpoint helps people to make judgments about whether or not to embrace their role in the change process.

The Acceptance Phase is divided into two stages: Understand the Change and Positive Perception.

People in Stage III should have gathered some understanding of the form and objective of the change and what it would imply for them in terms of role and behavior. They will learn more about the project and the role they will be covering after the process as time goes on and begin to realize how the change will affect their job and how it will affect them individually as these perceptions enable people to weigh benefits and disadvantages for the first time.

It is not frequent that individuals achieve comprehensive knowledge earlier in the process because the entire repercussions of a change are rarely totally evident to everyone at the start of the program.

Company members make decisions depending on the knowledge that is made accessible to them. As additional information becomes available, they may reconsider their assessment of the change and move to a lower position on the Commitment Curve.

Positive perception—which shows a commitment to support the change—or negative perception—which reflects a choice not to endorse the change—are the outputs at the Understanding Stage.

Employees establish plans to encourage or resist the change in Stage IV. The potential benefits and costs of the transformation are often weighed against the costs and advantages of other solutions, including not moving from the status quo. Ideally, the advantages of a change to a person should outweigh the benefits of any other strategy that there should be no doubts to proceed. This is not always the case, though. In many organizational transformation scenarios, the advantages of proceeding are marginally greater than the benefits of the best alternative available.

Positive Perception is a crucial step in the process of creating commitment, although the change is still conceptual at this period. People must begin to experiment the new way of doing things—they must change their mentality and behavior.

The following are the outcomes of the Positive Perception Stage:

- a) Experimentation—A preliminary trial of the new way of thinking and acting; alternatively
- b) Inaction—Failure to make preliminary alterations in ideas and actions.

The Commitment Phase signifies crossing the Action Threshold. In this phase, the perceptions formed in the Acceptance Phase culminate in genuine commitment as observable changes are made in individual attitudes and intentions. This is an important stage since there are many instances where people will declare that they see a change as beneficial but will not take any action to modify their behavior for several reasons.

The Commitment Phase is divided into four different stages: Experimentation, Adoption, Institutionalization, and Internalization.

Employees make progress to experiment the change in Stage V. People put the adjustment to the test and get a feel of how it will influence their daily tasks. This phase is a crucial indicator to verify that dedication to the program is building, or if the program should be reinforced.

This stage is essential because, no matter how effectively individuals realize the change before they are getting involved with it, their real understanding of the change will reveal a variety of tiny or significant shocks. Some of these may be good, while others may include unforeseen difficulties with serious implications.

The following are the consequences of the Experimentation Stage:

- a) Adoption—People go forward with the new behavior
- b) Rejection— People stop exploring the new behavior.

Adoption occurs once people successfully complete the preliminary trial period. The behaviors are comparable to those seen in the Experimentation Stage. Both phases are steps in which the person and the company evaluate the costs and advantages of the change program.

If the adjustment is effective after the extended testing phase, there is a good chance that the new way of doing things becomes usual. The Adoption Stage's effects are now either:

- a) Institutionalization—the new method of doing things becomes ordinary;
- b) Termination—the change is terminated after a lengthy trial period.

Stage VII is the time at which individuals no longer consider the shift to be in its early stages. They regard it as an ordinary operating practice. The structure of the organization has been updated to

suit new methods of working and incentives and disciplinary measures may be put in place to preserve the new attitudes and behavioral patterns.

In Stage VIII a member should have reached a maximum degree of commitment to the organizational transformation. Personal views and aspirations are linked with those of the company. While a firm can enforce a change's institutionalization, internalization demands the direct engagement of every member. Individuals "control" the change at this point.

Conner and Patterson's model resembles the Kubler-Ross model (1960s), a widely used model in change management studies. The model depicts different stages through which the employees go through during the change process. Originally the work by the author was used to explain the grieving process that upon notification of terminal illness, a sick patient would go through five stages of sorrow. The model was then applied to any life-changing situation and in particular associated with change management programs and their process, from the moment of the announcement to the integration in the corporate culture. It is articulated over two axes, the x-axis represents the evolvement over time, while the y axis shows the "performance" over time of the employee, but rather than performance we can refer it to as its emotional status regarding the change process. The model (Figure 9) follows three different stages, comprising two phases each.

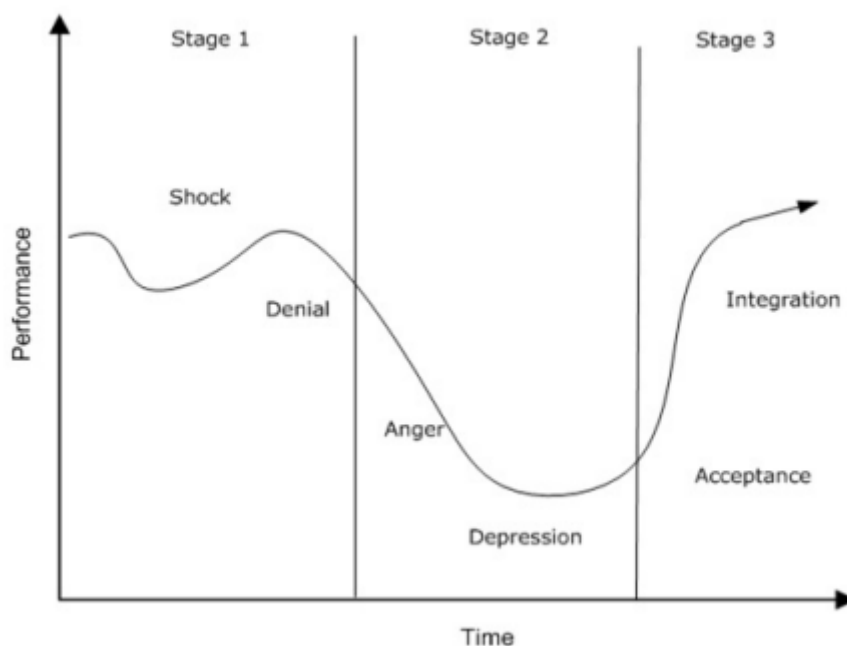


Figure 9 Kubler Ross Curve Source: Exeter University PDP Toolkit

In the first stage following the announcement of the change program, the employee is in a state of shock, and there could be some loss of productivity, but it is usually time-limited. The shock is due to a lack of information and a fear of the unknown primarily. After the initial shock is over, individuals are normally experimenting denial, as they refuse to accept the changes, denying there is a need for it not understanding what was wrong about the status quo. At this stage, as we can see in the graph, productivity has revived, but to improve confidence in the employees about the changes, communication is key to assure the importance of the change program and its potential effects on the organization to the individuals. Anger is frequently the following stage after the initial shock and denial. Blaming someone or something permits the denial to continue offering another focus for the concerns and anxieties that the possible consequence is producing.

When the moment of anger passes and the realization that the change is realistic occurs, the curve reaches its lowest level. Morale is frequently poor, and doubt and stress levels are high. Feelings might be difficult to articulate at this stage, and despair is likely when the significance of what has been lost is recognized. At this moment, performance is at an all-time low.

Following the deeper feelings of the second stage, a more positive and exuberant attitude emerges. People acknowledge that change is unavoidable and start to cope with the new condition.

The final stage is integration. The emphasis is fully on the long term, and there is a sense that substantial improvements may now be achieved. When everyone reaches this point, the new paradigm has overtaken the old.

1.7 Supporting the change

Once a change program is implemented, it is crucial for the company to monitor the results and support the changes. This phase evaluates the efficacy of change tactics in achieving the objectives and goals set before the start of the program. These goals must be non-negotiable, clear, and reachable. Setting unreachable and high standards before the program starts might discourage employees to work out for the changes.

Companies over the years have found out that although the change processes have been grasped by the employees over time, yet these changes failed to last because they have not been supported by the company's efforts to successfully implement the programs both in the workplace and in the corporate culture. Sometimes it may be that the intended goals of the effort are absorbed by the

employees but, for several causes, the initiatives seem not to follow the planned path or to reach the intended outcomes.

The first thing that can be done by organizations to assess the results of a change program is to compare key performance indexes (KPI) against those reached by the company before the transformation occurred. A useful tool to evaluate the performance is to adopt control systems, committees, or a dedicated structure of the organization to monitor change outcomes. If these methods are not developed, the firm could risk regressing to the underperforming states, that were carried out before the transformations took place. Usually to “institutionalize” employees three are the ways to reinforce the change through either rewards both on a monetary standpoint or intangible point, feedback over the program, and lastly through training programs, which is the most widely used and accepted technique.

In this phase, the various possible steps taken by firms would differ much, depending on the degree of change undertaken and the degree of commitment by workers to the program.

As we have seen in the previous paragraph, when speaking about supporting the change, scholars often refer to “institutionalization of change”.

Institutionalization of change refers to the refreezing stage that we have seen before in Lewin’s model³⁰. “An institutionalized act is defined as a behavior performed by two or more individuals, persists over time as a social fact.” (Goodman and Bazerman, 1978 p.5). Goodman and Dean (1980) assert that the literature relies heavily on the concept of failure or success of the change program, while it is much more interesting to look at the various degrees of institutionalization, that represent how the change has been received and acted out by its protagonists.

The conceptualization of institutionalization was divided by the author (Goodman, 1983)³¹ into five different categories that would describe the degree of institutionalization if present or absent.

These five categories are knowledge of the behavior, performance, preference of the behavior, normative consensus, and finally values.

Knowledge of the behavior refers to the new behaviors adopted and the consciousness that the individuals possess over this behavior. It may depend on the degree of conscience or cognitive representation that the individual possesses over a determinate behavior.

³⁰ Lewin’s three step model presents 3 different stages

³¹ Goodman, P. S.. (1983). Measuring Institutionalization of planned organizational change (Version 1). Carnegie Mellon University

Performance successively refers to the actions put in place by the employees and represents a measure of the degree of institutionalization to which people are carrying out the tasks.

Preference of the behavior describes the degree of like and dislike towards the patterns by the individuals that have to carry out the behaviors.

The criterion of normative consensus refers to the degree of consensus that surrounds the behavior. Namely, the more the consensus around the behavior of the employees, leads to the awareness that the behavior is suitable, and thus higher is the level of institutionalization.

Values are ideas about what is acceptable, assertions about how one should or should not act. The degree to which individual values reflect the performance is high and represents a very important aspect of institutionalization degree.

Having explained the five facets of institutionalization, we can analyze how the process works. Institutionalization categories are independent from one another, and steps may be preparatory to follow to reach a higher institutionalization, meaning their order is not a casual choice. Although some facets are more important than others to become institutionalized, the process is in critical need of all five steps.

When some individuals adopt the behaviors, they pass through the first three facets of institutionalization. After gathering knowledge about the behavior, they will perform them, and naturally, they will accumulate diverse perceptions and preferences about these behaviors. This stage may create two groups of individuals at this stage as well, the ones that have accepted the behaviors and may have some information about the change program, while there is a third party of people who became part of the company after the change was developed. These employees do not possess knowledge but have not yet executed the behaviors.

Having described the five facets of institutionalization, the focus can shift to the differentiation on the degree of institutionalization. Two behaviors, X and Y can differ in the degree of institutionalization. Behavior X is fully understood by employees, performed, preferred to other behaviors, and is characterized by higher values, while behavior Y, although acknowledged, is not performed by everybody and has lower normative consensus. It would be spontaneous to state that behavior Y is less institutionalized but is interesting to understand what the differences are that lead to the different approaches.

The independent variables have within themselves a set of processes that affect the facets of institutionalization. The elements of the institutionalization process are active in organizations, such

as socialization, commitment, incentive, allocation, diffusion, sensing, and calibration. These factors can have a direct impact on the level to which programs are institutionalized.

The alteration of knowledge concerning beliefs, interests, norms, and values in relation to the change intervention is referred to as socialization. A continuous socializing process is required to ensure the success of the transformation plan.

Commitment connects people to intervention-related behaviors. It entails both a preliminary commitment to the program and a reinforcement of the commitment over time. Reward allocation entails associating incentives with the new path, demanding intervention to prompt workers into adopting the new behaviors.

Organizational incentives, by engaging the staff, can improve the persistence of the initiatives. Diffusion is referred to as the act of transmitting innovations from one system to the other, aiding institutionalization by expanding the organizational foundation available to assist the new practices.

Finally identifying variations from expected behaviors and taking remedial action is what sensing and calibration are about.

CHAPTER 2: The influence of the internal and external environment on change management programs

2 The organization environment: internal and external

Each organizational change differs from another, not only because it involves different actors, but also because it takes place in non-homogeneous contexts. To fully understand the meaning of the phenomenon of change, it must be contextualized, since only after understanding the characteristics of the external context, related to everything that happens outside the dimension of change (group, company, network) object of change (group, company, network) and of the internal context, that is, what happens inside the entity, it is possible to determine the reasons and the direction of the phenomenon itself and to highlight potential strategies for the change program.

2.1 Organizational Climate

Over the course of time, numerous definitions have been offered to clarify the concept of organizational climate. Within this elaborate, we will consider the definition of Forehand and Von Gilmer (1964, p.362)³², which states that organizational climate can be defined as “a set of characteristics that describe the organization and distinguish it from other organizations and influence the behavior of people in the organization”. Often climate is thought to be a synonym of organizational culture, although organizational culture is the company identity, i.e., the set of subjective and objective, written and unwritten values and behaviors that represent the company to both its internal employees and to the external world.

An attempt to measure organizational climate was made by Litwin and Stringer (1968)³³, Koys and DeCotiis (1991)³⁴, and Zammuto and Krackover (1991)³⁵ as they provided several dimensions of organizational climate, such as structure, responsibility, autonomy, cohesion, trust, credibility, conflict, trust, and morale. In addition, Zammuto and Krackower (1991)³⁶ proposed four different types of climate using the competing values framework: group, developmental, rational goal, internal

³² Forehand, G. A., & Von Haller, G. (1964). Environmental variation in studies of organizational behavior. *Psychological Bulletin*, 62(6), 361–382

³³ Litwin, G.H. & Stringer, R.A. Jr. (1968). *Motivation and organisational climate*. Division of Research, Harvard Business School, Boston.

³⁴ Koys, D. J., & DeCotiis, T. A. (1991). Inductive measures of psychological climate. *Human Relations*, 44(3), 265–285.

³⁵ Zammuto, R.F. and Krakower, J.C. (1991) *Quantitative and Qualitative Studies of Organizational Culture*. *Research in Organizational Change and Development*, 5, 83-114

³⁶ Previously cited

process. Hooijberg and Petrock(1993)³⁷ described these variables correlating them with the competing values. The Competing Values Framework (CVF) paradigm can help identify and define corporate strategies and behaviors. According to the authors ³⁸**group, climate** can be characterized as a workplace, where individuals are continuously interacting with each other and should be cultivated by companies that want to foster a familiar environment, where employees are very committed to the organization and teamwork is highly recurrent.

Organizations with this type of climate are held together by loyalty, tradition, and commitment (Burton et al., 2000). **Developmental climate** is found in innovative organizations, that allow employees to grow as individuals and professionals. These types of organizations are often groundbreaking, and they encourage initiative between their workers and risk-taking (Burton et al., 2000). **Rational Goal Climate** is found in a results-oriented organization in which winning is often emphasized and competitiveness is one of its most important drivers (Burton et al., 2000). **Internal process climate** can be characterized as hierarchical organizations held together by formal rules and policies, aiming to remain stable, predictable, and efficient (Burton et al., 2000).

2.2 Resistance to Change

Resistance to change is a key topic in the change management field and should be considered as crucial when a company is undergoing a change process.

Regardless of both the technical and administrative precision and planning of the change process under consideration, ultimately it is the people who will determine its success or failure. After an organizational change, individual and group behavior can take various forms, ranging from acceptance to active resistance.³⁹

Organization members may develop psychological resistance, preferring to continue to adopt the same behavior, feeling comfortable in the so-called “comfort zone”. The fear of the unknown, linked to the loss of known behaviors is great for everyone. As the anxiety for something uncertain and intangible increases when employees realize they will have to exchange familiar behaviors and systems with new and uncertain conducts. In this sense, the biggest concern is the breakdown of those patterns and habits that have been consolidated over the years, as there will be less incentive to mutate when individuals are perceiving that those consolidated routines are working well. The loss of status

³⁷ Hooijberg, Robert & Petrock, Frank. (2006). On Cultural Change: Using the Competing Values Framework to Help Leaders Execute a Transformational Strategy. *Human Resource Management*. 32. 29 - 50.

³⁸ Hooijberg and Petrock(1993)

³⁹ Kreitner, R., & Kinicki, A. (2008). *Comportamento organizzativo. Dalla teoria all'esperienza* (C. Bombelli, & B. Quacquarelli, a cura di). Milano : Apogeo.

will lead the individual to question what will be the potential benefits from the reorganization, and expectations will likely grow.

Every company has within it the alternation of two opposite mentalities, one that wants stability by not recognizing the necessity of changing out of fear, and the one that realizes that change is necessary to update the company and enhance its competitiveness. In a company, it is possible to distinguish resistance to change depending on the actor who exercises it: whether it is the individual or the group. For the case where the individual is the force behind the resistance to change, we refer to individual resistance to change, while for the group we refer to group resistance to change.

Some people show natural aversion to change since they perceive it as the loss of something they have experienced for a significant period of time. Personal attitudes and actions, on the part of both the actors and the beneficiaries of change, will reflect these resistances.

The change is often perceived by employees as a personal fact perceiving it with possible reflections on the personal sphere, while its strategic-evolutionary nature is not caught. Group resistance to change, on the other hand, manifests itself at the level of the corporate group bringing the resistance to greater intensity and making it very difficult to achieve the new balance that is being sought. This type of resistance is very common in companies where teamwork is well integrated, as people who cooperate with each other on a daily basis will likely get together and discuss proactively the existing issues related to the transformation. If there are cohesive business teams, they will inevitably remain so even in the change process by compactly detecting inconsistencies and uncertainties in the strategic plan, leveraging undecided workers to follow them in. This kind of negativity, fuels conflicts, and may hinder the whole process or even sabotage it.

Goodwin Watson in 1967⁴⁰ proposed that resistance to change is prone to move in a life cycle, consisting of five different phases. In the first stage, only few employees are seeing the necessity of change, while resistance is spread throughout the firm as workers fear the loss of their habits. At this time, either the change program is brought to an end, or it grows, depending mostly on the size of the organization. On average, large organizations have more difficulties implementing change than smaller organizations, having multiple departments and sometimes serving international markets is not easy to put all the layers of the firm on the same page.

In the second phase, as change is advertised in the company, more members of the organization become aware of the process and understand it, diminishing the perception of threat. The third phase

⁴⁰ Goodwin Watson, "Resistance to Change, (1967)" Concepts for Social Change. Cooperative Project for Educational Development Series, vol. 1 (Washington, D.C.: National Training Laboratories,

consists in the conflict between those advocating for change and those against it. Following this decisive stage, the fourth stage will determine which side has overcome the other. There is yet a chance that the resisters may rally enough support to tip the scales in their favor. Particular attention is required in dealing with the overt resistance as well as the large part who are not publicly opposed to the change but are also not convinced of its benefits, to bring them to convince them of the potential benefits for the organization.

In the final phase, few resisters are present while most of the company is aligned and loyal to the program. Even though the characterization of the five stages of the model could give the illusion that a fight is going on between those attempting to promote change and those resisting it (which may sometimes be the case), the actual conflict is often more subtle and may only surface in minor verbal disagreements, timid attempts of refusal and requests of clarification. The model is in this sense, a representation of a possible worst-case scenario where the level of resistance present in a company is very high.

2.3 Causes of resistance to change

The causes of failures in change management programs or resistance to accept the change are due to reasons internal to the organizations, a good part of which is attributable to the employees of the company and not to the forces of the external pressures that urge for change.

The reasons behind employees' hostility to change are several and can assume different levels of commitment, degree, and cause.

Zander (1950,p.9)⁴¹ provided six reasons for resistance to arise:

- 1)“ if the nature of the change is not made clear to those who are going to be influenced by the change
- (2) if the change is open to a wide variety of interpretations,
- (3) if those influenced feel strong forces deterring them from changing
- (4) if the people influenced by the change have pressure put on them to make it instead of having a say in the nature or the direction of the change,
- (5) if the change is made on personal grounds, and
- (6) if the change ignores the already established institutions of the group.”

⁴¹ Zander, A. (1950). Resistance to change—its analysis and prevention. *Advanced Management Journal*, 15(1), 9–11.

Dent and Goldberg (1999) assert that people actually do not resist change itself. “People may resist loss of status, loss of pay, or loss of comfort, but these are not the same as resisting change”. (Dent & Goldberg, 1999, p.26). Consequently, “the belief that people do resist change causes all kinds of unproductive actions within organizations” (Dent & Goldberg, 1999, p.26). Kotter (1995) reported that when organizations attempt a major change, the employees often understand the new vision and want to make it happen, but some obstacles prevent the actual execution of the change. Certainly, those obstacles may be in the individual, but Kotter (1995) states that such individual resistance is rare. More often, the obstacle is in the organization’s structure or in a performance appraisal system that makes people choose between the new vision and their self-interest (Kotter, 1995).

Employees, feel secure in the present, even if the scenario is not the best possible, but there is no certainty in the future and hence uncertainty of the future, is a major obstacle to change.

Individuals indeed identify with their job, forming an emotional bond with it, and developing habits and customs that once formed and acquainted are hard to abandon.

On the other hand, people who are interested in change are afraid of making the work experience they have gained over the years meaningless.

In addition, there is the fear of having to start again from scratch, as the majority of organizational changes involve transforming production processes and the way people work. There could be employees that may feel deprived of their jobs and may begin to doubt their identity (loss of status), that may lead to fear of losing their job, because they are not efficient in their new role.

The consequent loss of automation, derived by the job experimentation and experience leads to learning about all facets of one's task, one metabolizes one's own work and one creates a series of automatisms that lead to a decrease in energy and lowering of stress. Changing means leaving this comfort zone and jeopardizing all the benefits obtained over time.

Proposing and pursuing change projects may also lead to dissenting opinions from other members of the organization and to having much of the top management against them. This is a barrier to change, even for those in the top management team. They need motivation and firmness in their choices and determination to continue along the path they have started.

2.4 Overcoming resistance to change

From what has been analyzed so far, it is clear how necessary change is for companies to maintain a competitive edge over competitors, technological and cultural developments.

Despite this, as explained in the last paragraph, the resistance or participation of the workers can become an essential factor for the success or the eventual failure of a change management initiative, already from its early beginnings. However, the involvement of the workers alone cannot be sufficient to fight the existing resistances in the organization that need to be necessarily faced in a correct and organized form.

Companies must organize themselves to make the degree of resistance more subtle as possible and reduce the possibility that more people could follow this “movement”. Critical spirit and transparency are essential to build a productive program. Opposition that fosters obstruction to the program should not be open-heartedly welcomed but should be nevertheless recognized and dealt with immediately.

It is, therefore, necessary to set up a communicative process on the part of the agents of change towards the receptors of change, which allows a symmetry of information in clearly describing the changes to which it will be necessary to adapt, making clear the objectives to be achieved, the advantages linked to the action of change and the actions necessary to obtain them through proactive management.

The approach to overcoming resistance proposed by Lussier (1996)⁴² describes several management methods that encourage the internalization of change actions:

- Development of a climate favorable to change, through improved personal relations and cooperation between functions and increase innovative skills and competencies.

- Planning for change, as analyzed above, through the clarity of objectives and expected results. the diagnosis of resistance, operational support, and involvement in organizational interventions.

Within the design process, even before what is described, the truly determinant factors are awareness, in those who have the responsibility of planning and implementing the change, the speed of the adaptation strategies, and methods applied to

An incremental approach can be effective in stable evolutionary situations but cannot be maintained in sudden and intense crisis situations.

⁴² Lussier, R. (1996), “Human Relations in Organizations”, Irwin-McGraw-Hill, Boston,

In this sense, the diagnosis of levels of acceptance in organizational subjects (refusal, passive acceptance, active acceptance) makes it possible to determine the need to introduce a different type of internal relations, communication methods, the intensity of coercion, etc., in order to avoid the need for a different type of internal relationships.

An increase in the coercive dimension may increase resistance when the context in which it is applied is not traditionally accustomed to hierarchical settings, or conversely, an approach of greater involvement and sharing could be perceived as a form of responsibility shift, preventing active participation in the project.

It is evident, therefore, that the lack of reparameterization to the "urgency" of the action in parallel with that of the widespread acceptance of the same, can only lead to serious delays or the risk of failure of organizational interventions.

Kotter, in a 1979 article⁴³ affirmed the need for the presence of these two dimensions to effectively implement change, listing six methodologies for the managing of resistance:

Training and communication: People need to be trained about the need for change through effective communication, both individual and group, that compensates for the lack of information. This leads people to take action to contribute to the change but, as a counterpart, it requires intense efforts in terms of commitment and time.

Participation and involvement: When planned interventions involve intense efforts on the part of the people involved, a participatory approach is necessary, sharing objectives and strategies that increase the level of commitment.

Support: this is necessary in cases of problems in adapting to organizational interventions. In addition to communication and involvement, people may need support of the following types: emotional support in the presence of dissatisfaction or perception of inadequacy, that includes forms of listening (counseling) or technical-relational training (training or coaching programs).

This is a particularly demanding approach that is not always perceived and valued by management, and its lack of consideration may even lead to burnout effects in employees in some extreme cases.

Negotiation: When the consequences of the change generate strong resistance due to the real risk that it may cause a significant "loss" on the one hand, or that the strong resistance may cause risks that other organizational projects could fail, generating losses on the other, the easiest way to act is

⁴³ Choosing Strategies for Change (March 1979) by John P. Kotter and Leonard A. Schlesinger

to negotiate, making concessions in exchange for the restoration of the change process. Although quite simple, this approach can be particularly costly in economic and financial terms and, moreover, risky for the future when, having created a precedent, the organization finds itself forced to change its approach.

2.5 Stakeholder involvement

The practicability of change models is heavily influenced by the actors who are called upon to make it happen. Strategic leadership is important, as is an active role for key stakeholders.

Stakeholders, who have a clear interest in the process, in analogy to Freeman's (1984) stakeholder theory can be divided into two groups. The so-called primary stakeholders, who represent the social system that interacts with the organization, represented by the citizens or clients on whom any changes in the services offered by the company would be reflected, the suppliers whose commercial relations could be modified or even terminated, depending on the degree and purpose of the change, the trade unions, committed to safeguarding the needs of the workers and, finally, any other organizations that are in partnership with the company that is being reorganized, which are subsidiaries of the company, or controlled by it.

Secondary stakeholders, on the other hand, represent a more specific context, towards which the company maintains less pronounced relationships of influence. For example, they are represented by local communities, trade associations, institutions, and the entrepreneurial community.

If the direct effects of an organizational change can be marginal on the day-to-day operations of secondary stakeholders, they could often be significant on primary stakeholders, the ones that hold a stricter relationship with the company.

Stakeholder involvement is a fundamental condition for the start of a fruitful collaboration for the success of a change management process. In the past, the involvement of stakeholders was necessary to reduce risks of any kind, but today it is considered also an important and necessary process when companies are restructuring their internal structure or shifting their corporate strategy towards a new dimension. In fact, only through a transparent and collaborative confrontation, it is possible to intercept the needs and expectations coming from the external environment and from the main actors that influence the actions of the company and, consequently, develop a change management action that takes into account these needs and translates them into strategy.

Stakeholder engagement is a process through which an organization can involve stakeholders in the formulation of business strategies and raise the level of commitment to the desired objective. This

"tool" is used more and more frequently because it is considered useful to open up to comparison, changing point of view, and favoring the logic of collaboration over that of opposition. The final objective is to strengthen the development plans of the change program by listening to external and impartial actors. The latter are those who benefit from the success of any change program.

If prior to the development of the plan, the firm does not extend its reach beyond internal boundaries, the outlined strategy may risk falling into self-referentiality, succumbing to the internal pressures of the top management, or the individuals that are unwilling to hear from an external point of view the potential validity or not of the change management process.

CHAPTER 3: Change management and sustainability

3.1 Company overview

The “Ente Nazionale Assistenza al Volo” (ENAV S.P.A, from now on “ENAV”) is an Italian air navigation service provider (ANSP) company established in 1981, part of the ENAV Group. Headquartered in Rome ENAV employs more than 4200 professionals. It is owned by the Italian Ministry of Economy and Finance (MEF) that has a 53.3 % stake, while the rest of the company is owned by different entities, as represented in the figure below (Figure 10) that reports the classification and the shares owned by the different shareholders (the major stakeholder is Azimut Capital Management SGR SpA that controls the 4,31%. The company is managed by the Ministry of Infrastructure and Transport (MIT) and is subject to the supervision of the “Ente Nazionale per l'aviazione Civile” (ENAC), the Italian Civil Aviation Authority, and has the exclusive right of supervision over the Italian skies of the non-military air traffic. The company ensures the well-functioning of the air traffic services through the control towers of 45 different Italian airports and 4 control areas over the 732,800 km² of the Italian airspace. The four area control centers (ACCs) are based in Rome, Milan, Padua, and Brindisi, each has clearly defined airspace jurisdiction over a defined area.

The company provides the following services; the management of the takeoffs and landings in the airport, the in-flight assistance, the air traffic management, in-flight information, and the weather forecasts in the Italian skies and national civil airports, with ever-increasing levels of safety, efficiency, and regularity.

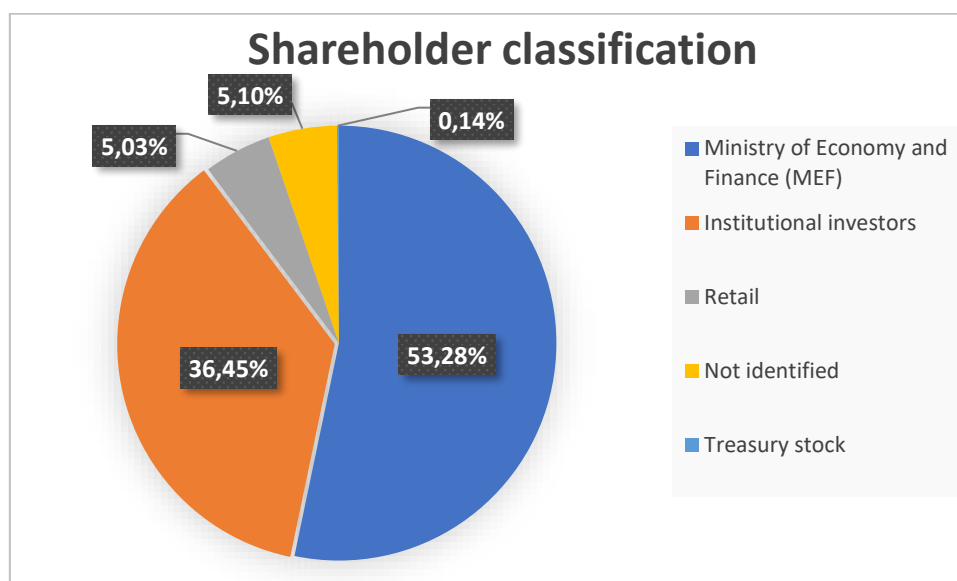


Figure 10 Shareholder classification- Author representation Data Source: ENAV annual Sustainability Report

The company is also committed to incorporate the latest technological trends to build revolutionary Air Traffic Control (ATC) infrastructural technology. ENAV also provides non-regulated services such as airspace design, flight inspections, meteorological services, and training through commercial bilateral contracts to other ANSPs.

As one of the Italian state-owned companies privatized during the years by the government, ENAV was listed on the Milan stock exchange in July 2016 at the FTSE Italia Mid Cap Index.⁴⁴

Due to the high responsibility tasks carried out the company is subject to a rigorous regulatory framework, to guarantee the continuity of the service over the Italian airspace.

Furthermore, ENAV promotes the creation of a safety culture in which the importance and dedication to safety are expressed at all levels - individuals, groups, and the organization. Staff's continuous dedication and professionalism ensure high safety levels in all operations.⁴⁵

ENAV is an integral part of the international air network and ranks among the top European service providers for the quality of services offered. In addition to managing national airspace, the company is also present on international markets, particularly in Southeast Asia with its subsidiary ENAV Asia Pacific. Along with this subsidiary, the portfolio of the ENAV Group includes also other companies each with different expertise and fields of interest. such as Techno Sky, IDS Air Nav, D-Flight, and Aireon. In the figure below (Figure 11) is given an overview of the ENAV Group's corporate structure. In the corporate structure, ENAV ES and Sicta Consortium have not been included as liquidated in 2021, respectively in March 2021 and February 2021. Moreover, ENAV holds a 16.7 % stake in ESSP, a company providing satellite services for aviation purposes, along with the main European ANSP players.⁴⁶

⁴⁴ The Index gathers the first 60 Italian companies by capitalization which do not belong to the FTSE MIB index, that is composed by the 40 most traded Italian companies' stocks

⁴⁵ Fiorentino, Grimaldi, Lamboglia, Merendino (2020), "How smart technologies can support sustainable business models: insights from an air navigation service provider", Emerald Publishing.

⁴⁶ Other shareholders include : DFS (Germany), DGAC-DSNA (France), ENAIRE (Spain), NATS (United Kingdom), NAV-Portugal (Portugal) and Skyguide (Switzerland)

Company under study

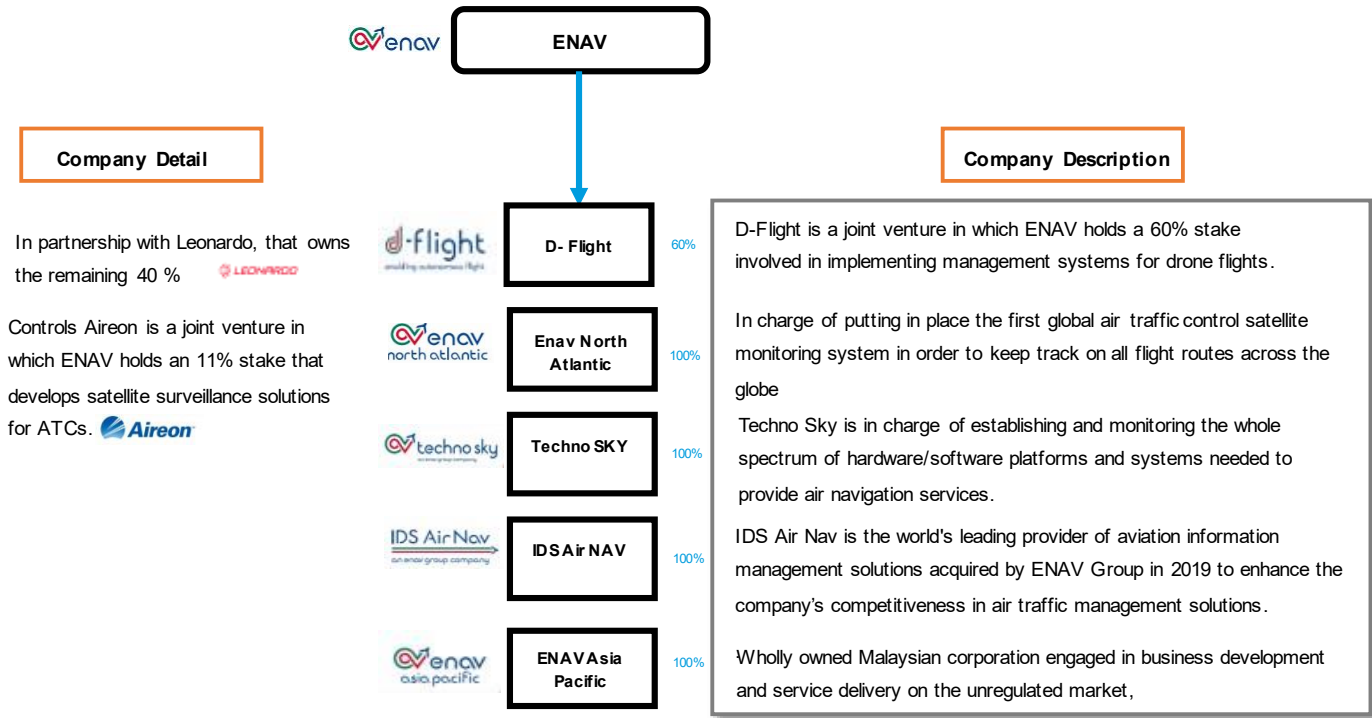


Figure 11 Company structure Source : own representation

3.1.1 Financial Performance

ENAV has represented over the years a financially sound company, however, it has been significantly challenged by a sharp decrease in air traffic due to the pandemic which started in March 2020.

The air traffic industry has been one of the most hit industries in Italy following the imposition of restrictions, with almost zero traffic during the highest peaks of the pandemic. As a total, in 2020 air traffic decreased by more than 60%, with a volume of passengers decreased by more than 70%.⁴⁷ (Figure 12)

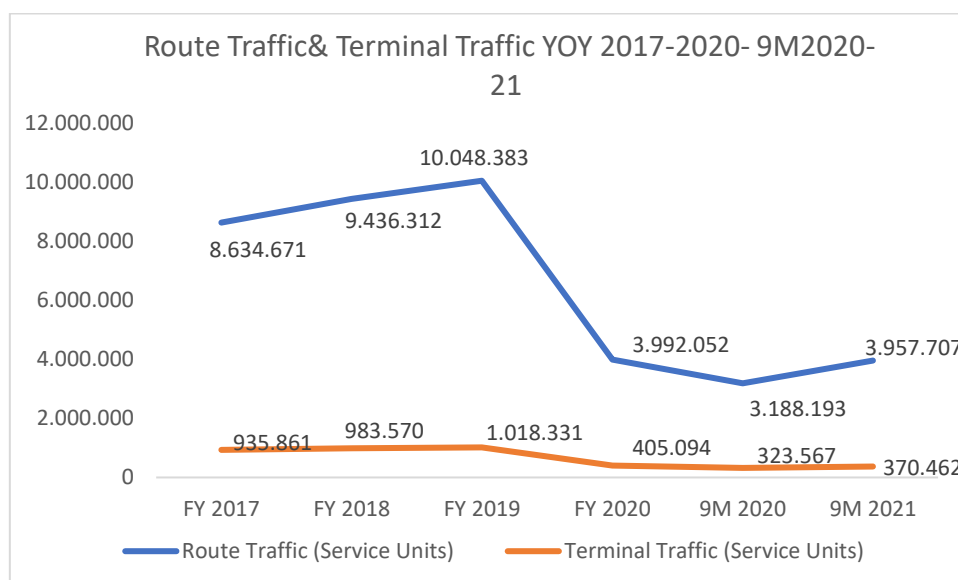


Figure 12 Route Traffic and Terminal Traffic YOY 2017-2020 Data Source: ENAV Investor Factbook 2021

The contraction of business activities has obviously led to a decrease in revenues that had been increasing since 2014, from a record 902 €/Mln in 2019 to the lowest result in 7 years at 771 €/Mln in 2020 (Figure 13). Lower costs for operations (560 €/Mln), lead anyway to a decrease in the EBITDA value of 210 €/Mln, down by 30% with respect to 2019, also the lowest result of the last 7 years. (Figure 14)

⁴⁷ ENAV Annual Financial Report version 2020

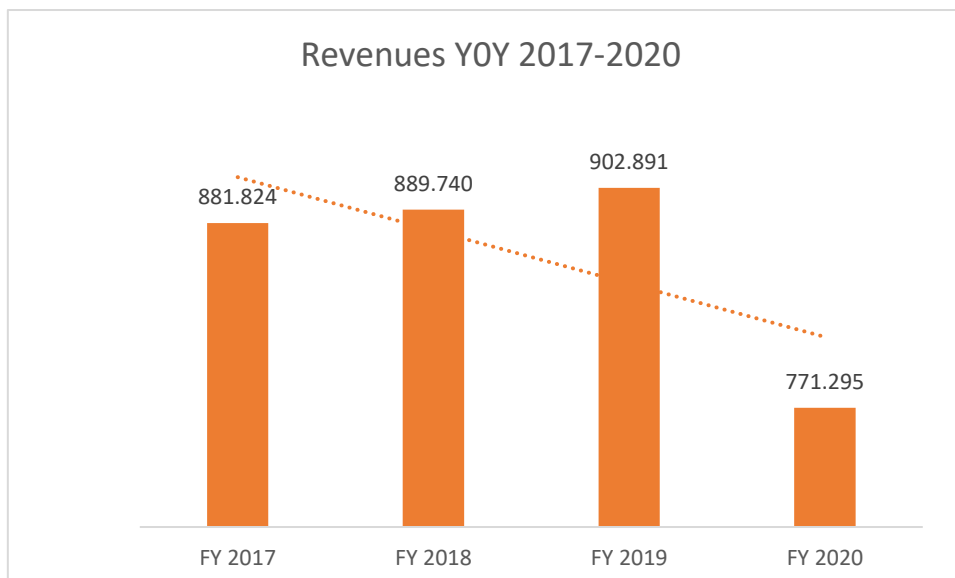


Figure 13 Revenues YOY 2017-2020 Data Source: ENAV Annual Financial Report 2020

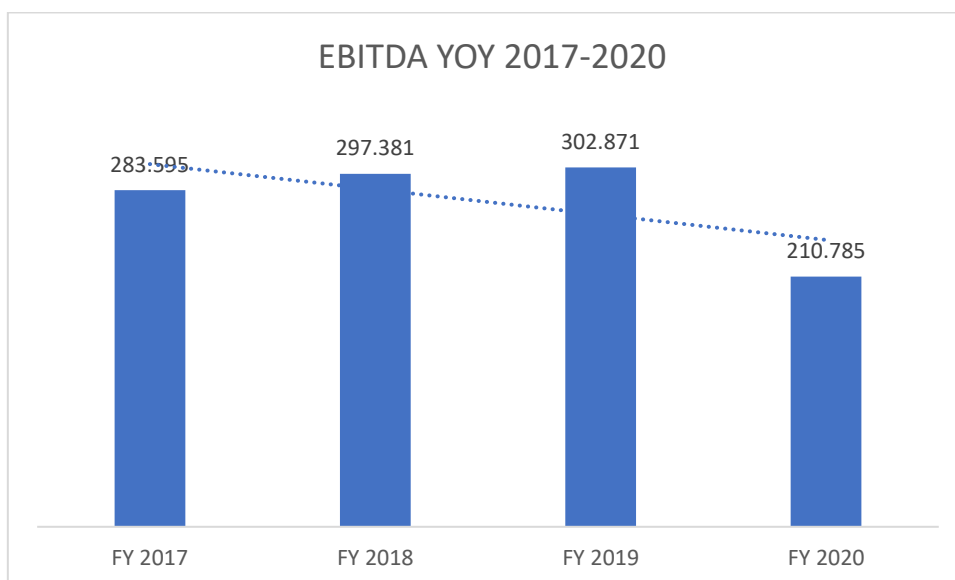


Figure 14 EBITDA YOY 2017-2020 Data Source: ENAV Annual Financial Report 2020

The general level of investments represented by CapEx decreased in value to a lower degree than other financial indicators. The consolidated CapEx of the ENAV Group in 2020 amounted to 91.5 €/Mln, of which 87.7 deployed to investments for ENAV S.P.A., compared to investments in 2019 equal to 116.3 €/Mln (117.8 €/Mln for ENAV S.P.A.). This slight decrease shows the company's commitment to further investments despite a collapse in the EBITDA value of about 30%.

The last financial outlook published on September 30th, 2021, presenting the interim financial report with the last nine months report, displays figures in line with the same period in 2020. Revenues amounted at 587 €/Mln, a constant value with respect to the same months of last year, an EBITDA of 146 €/Mln, a reduction of 16.4% in comparison to the first nine months of 2020, while operating

costs increased at 440 €/Mln, as a consequence of the efforts aimed at revitalizing the air traffic market.

Since the operative technological infrastructure has a fundamental impact on the daily performance and safety of air traffic control services, the main investments address projects focusing on operational technology infrastructure.

The Group's working capital hit a negative -38.4 €/Mln in 2020 with respect to a 2019 value of 20.8 €/Mln. A negative working capital is not as negative as it might appear. The company was able to collect receivables at a higher capacity than in the previous year, while payables were in line with the previous year (a slight increase of 8%). As evidenced by the 2020 data, the company did not need to resort to deferment of receivables owed.

The total number of flights served increased by 24% in 2021, as air traffic slowly starts to recover thanks to the loosening of restrictions during the summer season. According to Eurocontrol figures, Italy has been the country with the sharpest increase in en-route traffic for the first nine months of 2021 with respect to 2020, but a long-term forecast is hard to predict in light of the continuously evolving sanitary condition. (cfr. 3.2)

3.2 The industry

The air traffic management control industry is by nature strongly connected to the airline industry, the more airplanes are around, the more need for air traffic control there will be, to assure the safety of the flights and the information services connected. As a result, the digitalization of services has become a necessity for the industry and one of the pillars of ENAV's operational strategy.

In this subchapter, it will be provided an overview of the airline industry and its developments, as they directly affect ATM services in the country being ENAV the only provider in Italy to run air traffic management control operations and thus acting in some way as a monopolist player.

The aviation sector in Italy accounts for 3.6%⁴⁸ of the National GDP. The airport community comprises around 150,000 workers and overall the sector economically supports over 880,000 employees.

In a highly competitive market such as the airline industry one, that historically has also suffered for low-profit margins, high barriers to entry, and high general costs, the entry onto the scene of low-

⁴⁸ Assaereoporti estimates, Proposal for the definition of guidelines for the Recovery Plan, 1 Oct 2020, Senate of the Republic

cost airlines has disrupted the market and forced largely financially indebted companies to review their business plans to continue to operate. The pre-Covid European market represented a fragmented situation compared to the American one (first global market), where market leaders had to face competition from an increasing number of small players.

The pandemic was an exogenous and unpredicted shock that severely undermined the day-by-day operations of the companies and the profitability of the entire market. The whole industry is still suffering due to the consequences of the epidemic and many reports believe unlikely an economic rebound to pre-pandemic numbers in the short term. IATA, the International Air Transport Association, although predicts that 3.4 bln passengers will fly in 2022, almost double the number of people that have flown in 2020, and in net decrease with the 2019 number when 4.5 bn passengers buckled up.⁴⁹

The last estimates included in a EuroControl report forecast that the industry will return to normal values at best at the end of 2023 or at the beginning of 2024, while other observers believe that a full recovery of the industry and the return to growth will take longer than expected.

A recent outlook on the global airline industry by the International Civil Aviation Organization (ICAO)⁵⁰, an agency of the United Nations, estimated an overall decrease in global passengers of 50% for the year 2020 concerning 2019. An improvement with respect to 2020 where the decline was circa 60 %. The impact of monetary loss in 2021 for airline carriers is estimated to be around 250 billion USD (YEAR?), compared to an approximate loss of 371 billion USD of gross passenger operating revenues of airlines. The loss is due to both low confidence by passengers in the sanitary measures carried out by the carriers and an overall reduction of seats of over 60% by the airlines following the restrictions implemented during the pandemic.

In Italy the outlook does not seem to be brighter, being one of the countries most affected by the pandemic, the national aviation market has surely suffered more than its global counterparts. In Figure 15 we can have a look at the different numbers of the average weekly flights in 2019 (blue line) and 2021 (orange line).

⁴⁹ IATA Press Release Number 64, Losses Reduce but Challenges Continue - Cumulative \$201 Billion Losses for 2020-2022, 4th October 2021

⁵⁰ Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis, ICAO

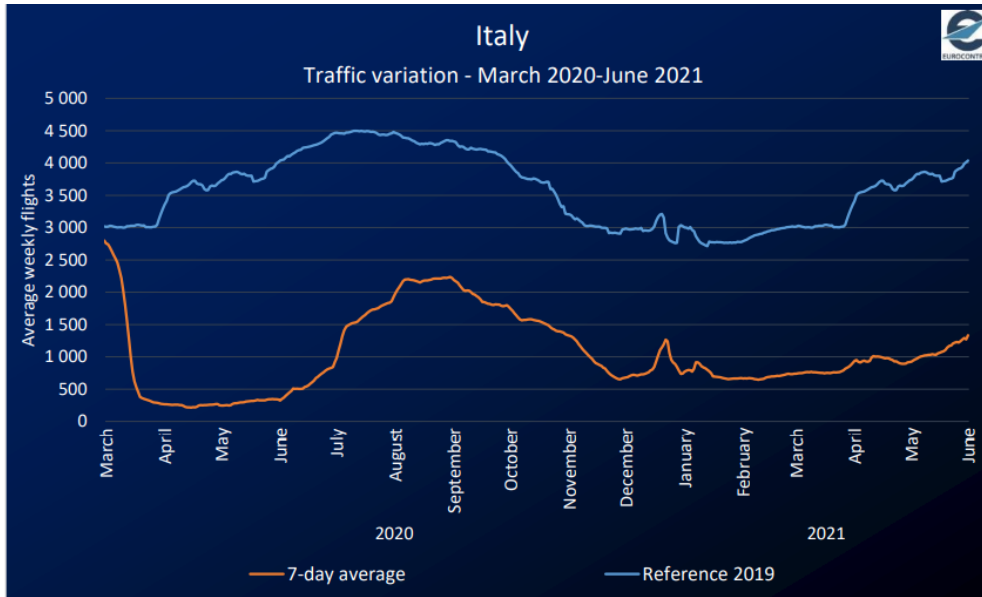


Figure 15 2020-2021 Traffic Evolution- Source Eurocontrol States Briefings

Almost two years after the start of the pandemic, the aviation crisis seems not to stop as the decrease in average daily flights in the five most trafficked Italian airports is well over 50% compared to the 2019 rollout. The Eurocontrol Report on states shows data of one of the most trafficked weeks of the year in the top five Italian airports with peaks of contraction that reached 75% for what concerns the Fiumicino airport. (Figure 16)

Top 5 Airports (26-05-2021 - 01-06-2021)		
Airport	Average daily flights (Dep/Arr)	% vs 2019
Milan/Malpensa	238	↓ -61%
Rome/Fiumicino	230	↓ -75%
Milan/Linate	160	↓ -51%
Catania Fontanarossa	99	↓ -60%
Venice/Tessera	89	↓ -70%

Figure 16 2020-2021 Traffic Evolution- Source Eurocontrol⁵¹ States Briefings

The traffic of passengers influences the number of flights yearly and consequently, the amount of work ENAV will have. Currently, it is strongly affected by the government’s decision on how to manage the fight against the pandemic, by either closing the country to limit the spread of the virus or push for vaccine obligatoriness and not grounding people’s movement. The Figure below (Figure 17), from the Eurocontrol Report, pictures three different scenarios, forecasts under the condition of

⁵¹ Eurocontrol is a European Organization working to achieve a safe European air traffic management framework

a certain percentage of vaccines in the year 2021 and 2022 (Scenario 1 and Scenario 2), and the condition of a continuing lingering infection (Scenario 3). The first two are the most promising scenarios, while the third scenario showcases a pessimistic forecast of the traffic flow in the next two years. However, this report does not take into account the possible new restrictions that could be introduced by the government, if the sanitary condition would worsen in a near future. If the movement of people were to be limited again, the scenario for the industry would be catastrophic, along with further large profit losses, companies would be forced to cut back again on operation costs and increase worker's redundancies.

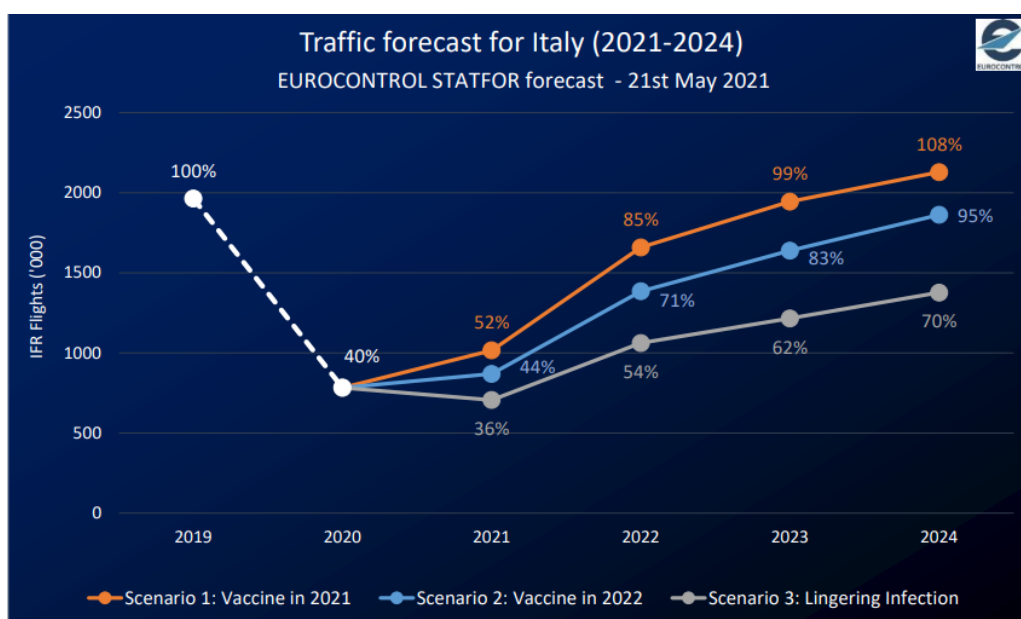


Figure 17 2020-2021 Traffic Evolution- Source Eurocontrol⁵² States Briefings

3.3 Main drivers of change for the industry

Until recently, flying was considered a status symbol and a privilege for the happy few, but in the last decade, thanks to the advent of low-cost airlines, flying has become accessible even for families with low incomes or from areas far from large cities. This has meant a big boost for the whole industry and required adjustments for long-haul operators, but in recent years two other phenomena are forcing actors in the industry to rethink their business models, incorporating sustainable actions to keep up with the market and with customer's preferences.

The social movement Flight Shame ("Flygskam" in Swedish), born in 2018 in Sweden, to dissuade people from flying to reduce carbon emission to fight climate change, was initially not taken seriously by the airlines until in 2019 it was observed that in Sweden there was a decrease in the volume of passengers around 8% which used other types of transportation such as trains that are less pollutive. This phenomenon was a first warning for the entire industry to accelerate in moving towards more sustainable operations, although it must be understood that the airline industry relies heavily on highly polluting fuels to fly planes, such as JET A-1 and JP-8 based on kerosene. The airline industry contributes globally around 3% of the overall CO₂ emissions but the sector is the fastest growing in terms of Green House Gas emissions (GHG) emitted. In fact, emissions from international travel rose by more than 75% from 1990 to 2012, two times the normal rate of growth in emissions from all other economic sectors.⁵³ This increase is due to an extensive globalization and the rising in Europe's low-cost carriers that in short time were able to take over the market of short-haul flights and extend their network in multiple locations in Europe relying mainly on the hub and spoke strategy⁵⁴- consisting of an airport acting as a central hub from where most of the flights passed by- winning over the competition of long-haul carriers.

However, given the concern of airlines and consequently of the entire industry to lose customers and reduce profits, the whole sector started to discuss more about decarbonization and carbon footprint, as the first pioneer companies launched ambitious initiatives to reduce emissions.

The first airline company to launch a significant campaign was EasyJet, a Swiss-based low-cost carrier, which decided to offset the emissions of its flights. Offsetting means compensating the amount of CO generated by any flight activity through the carbon sink activated by environmental protection projects. The impact of emissions is therefore balanced out and absorbed by investing in projects such as planting trees or investing in environmentally friendly initiatives of any type.

⁵³ EU SCIENCE HUB

⁵⁴ Strategy characterizing the low-cost carriers such as Ryanair

However, these are extra costs, and most companies are forced, in offsetting the emissions, to charge extra money to customers when they book the flight to invest in environmentally friendly projects, while the EasyJet initiative was considered revolutionary since it started to offset emissions by bearing the costs.

The other driver of change was certainly the outbreak of the Covid 19 pandemic. To get on a plane, people need to trust in that company first. This has brought in a new sense of sustainability seen from a safety point of view, which was already a prerogative of the whole industry, even before the advent of the pandemic.

In some way, the pandemic has also accelerated the need for sustainable development. Airline carriers have seen their revenues decrease dramatically but this period has been certainly beneficial for the environment, as fewer airplanes in motion have reduced emissions impacting the climate.

This certainly has raised the attention of the carriers towards sustainability, along with the fact that the majority of the airline carriers are state-owned or participated by the state as airlines or are seen as a strategic asset for national interests. Indeed, in these times of turbulent crisis, airline carriers turned to governments in need of rapid injection of liquidity to run their day-to-day operations and to assure the financial stability of their companies, as the entire industry lost over 95% of their profits in 2020. Most governments economically aided companies to recover from this crisis, with large investments in flag carriers, requiring them to comply with ambitious environmental targets.

Countries such as France and Germany have included environmental requirements in their government assistance to Air France and Lufthansa. For instance, Air France decided to restrict on some routes domestic flights by 40% to encourage rail travel, which is more ecologically friendly. Lufthansa has committed to withdrawing from its fleet many noisier and highly polluting aircrafts.

Recent research has shown how the outbreak of COVID -19 has generated even more attention from people to environmental issues. According to an Accenture 2020 study⁵⁵ conducted on a sample of more than 3000 consumers worldwide found out that consumers are increasingly focusing on ethical consumption, considering more the environmental consequences of their consumption choices, with 45% of the sample making more sustainable choices when buying products and services and 64% of the consumers focusing on reducing food waste

At the same time, major investment funds and private equity firms have played an important role in the development of sustainability concepts in corporate business strategies. In recent years, the value

⁵⁵ COVID-19 Increasing Consumers' Focus on "Ethical Consumption," Accenture Survey, May 2020

of corporate shares has fallen precipitously, not for economic or financial reasons, but for reputational ones. In addition to market instability, some corporate scandals arising from large companies prompted investment funds to require compliance with sustainability principles to avoid exposing their investments to the danger of default. Large investments have been conveyed by financial institutions through the direct involvement in environmental projects or by issuing green bonds, financial obligations utilized to fund environmental programs, first issued by the World Bank in 2007, and nowadays a typology of security present in the financial market more and more insistently.

As recently stated by BlackRock⁵⁶ CEO Larry Fink decarbonizing the global economy will create the biggest investment opportunity of our lifetimes and it will leave behind companies that do not adjust their business models.

As a result, within a few years, sustainability has become the largest revolution in history, even in corporate business models.

3.4 Sustainability Plan

3.4.1 Sustainable development framework

Often in today's society, we hear about sustainability, the environment and sustainable development, which over the years has become a ubiquitous paradigm in the social debate, in the agendas of governments and international institutions, but also in those of private companies, as also stressed at the recent COP26 in Glasgow.⁵⁷ But what does sustainable development really mean?

The concept was first defined in 1987 in the “Brundtland Report (Our Common Future)” by the World Commission on the Environment as “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given, and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.”⁵⁸

⁵⁶ BlackRock is the world's largest asset management company

⁵⁷ The “Conference of the Parties is a conference organized yearly by the United Nations to discuss about climate change and environmental issues since 1995.

⁵⁸ Report of the World Commission on Environment and Development, Our Common Future, 1987, p.41

Sustainable development is stressed over three diverse dimensions that can at times intertwine: the economic dimension, the social dimension and the environmental one.

Economic sustainability is defined as the ability to generate income and employment to sustain the population. Social sustainability is understood as the ability to ensure conditions of human well-being such as safety, health, for all classes and genders. Environmental sustainability is understood as the ability to maintain the quality and reproducibility of natural resources, limiting their exploitation only to the surplus.

These three dimensions reflect into the so-called ESG factors, which stand for Environment, Social and Governance. Environmental factors generally considered include natural resource management, pollution prevention, water conservation, energy efficiency and reduced emissions, and disaster risk analysis. The social aspect refers to the methods and tools that the company puts in place in addition to legal and/or contractual obligations, towards employees, customers, and suppliers, but also the external relationship with local communities (giveback) and civil society. Governance measures how the company manages internal and external relations in accordance with certain ethical parameters such as the independence of the board of directors, shareholders' rights, management remuneration, the purchase of products or services, internal control and audit procedures, the selection of suppliers, and compliance with national and European regulations. These factors are nowadays continuously monitored by companies, evaluating risks and opportunities arising from these areas. ESG strategies are indeed calculated and formulated following a careful study of the potential affecting a company. ESG risks are defined as risks arising from ESG factors related to environmental, social, and governance issues that are material to the company and its stakeholders.

In 1992 was held in Rio de Janeiro the United Nations Conference on the Environment and Development, known as the Earth Summit, with the aim of deepening the themes highlighted by the “Our Common Future” report. During the conference, the so-called “Agenda 21” was drafted, a document divided into four parts containing the guidelines that governments and organizations had to adhere to in order to contribute to a more sustainable planet.

In 2000 the former United Nations Secretary Kofi Annan launched the first corporate sustainability initiative known as the Global Compact. It brought together more than 15.000 companies in 163 countries globally to urge corporations to pursue socially responsible policies and to report them correctly.

In 2015, with the expiration of the Millennium Development Goals (MDGs), the United Nations identified new objectives, the so-called Sustainable Development Goals (SDGs), 17 objectives with about 169 targets to be achieved by 2030 (Figure 18). These goals refer to the main aspects of sustainable development, having universal validity and equal contribution of Member countries is essential to reach the objectives. Each goal has a number of sub-goals, that are measurable through indicators to ensure ongoing monitoring. The SDGs have rapidly become reference points for numerous institutional and corporate sustainability policies.



Figure 18 Sustainable Development Goals Source: Institute for European Environmental Policy

In the last few years, in the wake of these institutional upheavals and societal pressures, a new economic model has emerged giving birth to the so-called green economy, a vast concept aiming to an improved environmental impact of business activities. The concept underlying the green economy can be summarized as “doing better with less resources”.

Sustainability will be at the center of strategies of governments and businesses for the post-pandemic economic recovery necessary to lead the way for a society with at its heart not only environmental protection and conservation, but also the optimization of processes and the development of fairer working and living conditions.

Therefore, the sustainable development concept has been augmented over time and continues to be the subject of vast scientific research. However, we must not risk reducing the scope of sustainable development as its practicability should remain the primary distinguishing element, rather than consider it only as a purely theoretical and undefined concept.

Correlating the theoretical aspect of sustainability with the concrete one by adopting sustainable indicators as a mean that allows to measure and quantify the criticalities of daily operations could generate positive educational and cultural effects over the company or institution implementing it and positive spillovers for local communities and stakeholders. The use of empirical indicators is also a critical tool for evaluation, control, and promotion for public debate.

Some institutional bodies have already set up these processes and possess this conformation; the objective now is to apply this procedure in every experience while trying to achieve one of the most important challenges of our time. It is therefore necessary, a model of economic and social development in which the social production of wealth can be achieved without the destruction of environmental balances and the squandering of natural resources.

3.4.2 ENAV's experience

The most important feature about sustainability is that the public's attention is no longer only on the product or on the service offered but it considers also the company that provides it and translates above all into transparency and accountability towards customers and stakeholders, that has become a priority for both consumers and consequently for companies. The company's transparency to the negative impacts of society is critical to reassure the public about its social commitment.

ENAV is a company that provides a strategic service for the country ensuring that all air travel takes place in total safety, in airports as well as in Italian airspace. In the concept of sustainability is therefore already reflected the company's mission. In this sense, ENAV's approach is based on two aspects that are considered central to the company's strategic viewpoint: timely and advanced training of all personnel and constant investments in technological innovation.

The development of any strategy regarding sustainability within companies should rely on the United Nations Sustainable Development Goals as a starting point⁵⁹. Indeed, ENAV, like other companies, started from these guidelines, and each activity that the company carries out must be in line with the SDGs set by the UN.

In order to better plan its activities in accordance with the SDGs, ENAV developed a materiality matrix, listening to the priorities that emerged from meeting with stakeholders, analyzed market trends and the methods used by the best performers in the Italian corporate landscape. After these

⁵⁹ Cfr. 3.4.1

steps, ENAV has first developed a three-year sustainability plan (2018-2020) based on 5 strategic assets.

The five pillars on which the company decided to articulate its sustainability strategy were: strategy & governance, policies, technological innovation, reporting and communication, and corporate culture, and dedicated projects. Before the introduction of the new sustainability plan in 2020, the firm added a new dimension previously neglected, climate change, given the growing importance of this natural phenomenon and the devastating effects that is having on the environment and on natural resources.

The sustainability plan was market and communication-oriented, with particular attention to the graphic presentation, and with the development of clear and not redundant contents, in order to develop a document that could be of interest not only for insiders but also for those who wanted to be informed about the role that the company plays in the field of sustainability and in the reduction of CO2 emissions.

In this sense, the development of an initiative such as the Free Route Airspace Italy (FRAIT) was a great step forward to reduce emissions. ENAV has been the first service provider to develop such an initiative in Europe and the first-mover advantage has brought great market attention and publicity. In December 2021 NATS, the UK's ANSP has applied a similar approach in Great Britain. (cfr. 3.6)

This revolutionary project consists in a project implemented in 2016, well before the sustainability framework of the company would be established. It features the optimization of airplanes routes for all aircrafts flying over 9000 meters to follow a direct route instead of a specific network of predetermined routes.

FRAIT allows airlines to plan the shortest possible trajectory, flying directly from a point of entry to a point of exit from Italian airspace, saving fuel and consequently reducing operating costs and harmful emissions while maintaining unchanged safety levels, in line with the prerogatives defined by ENAV in its mission.

FRAIT enabled yearly fuel savings of roughly 30 million kg in 2017, equivalent to the prevention of approximately 95 million kg of CO2 emissions. The result in 2018 was even greater: owing to more optimal itineraries that airlines could employ, the lengths flown by aircraft reduced by 11 million km, resulting in a 43 million kg savings in fuel and a 135 million kg reduction in CO2 emissions. In 2019, flying lengths were reduced by 14 million kilometers, saving roughly 53 million kg of fuel and reducing CO2 emissions by 167 million kg,

ENAV is today the first, among the 5 major European service providers, to have implemented the Free Route Initiative and with it has completed the full reorganization plan of the Italian airspace, which guarantees to reach the maximum flight efficiency, producing benefits both for the airlines and for the environment.

In 2020, the effects of the pandemic and the unusually low level of air transport activity added up to the emissions savings brought in by the FRAIT and the Flight Efficiency Plan outcomes⁶⁰. Last year, in-route lengths were reduced by 7 million kilometers, saving about 29 million kg of fuel, and avoiding approximately 91 million kg of CO₂ emissions. From 2016 to 2020, the overall distance traveled by aircraft was reduced by 43 million kilometers, resulting in a saving of around 156 million kg of fuel and the mitigation of 492 million kg of CO₂ emissions.

In the same direction, the company introduced an ambitious goal to become net-zero by 2022, meeting EU targets ten years before. The characteristics of a company like ENAV facilitates the attainment of this goal, as it does not have any direct environmental impact, by providing services to third-party companies that have detrimental impacts on the planet.

The plan to implement the Net-zero strategy by reducing the company's carbon footprint was developed over three macro-areas:

- 1) All externally acquired energy must come from renewable sources (acquisition of Guarantees of Origin);
- 2) Hybrid energy plants and photovoltaic panels will provide a portion of the energy consumed;
- 3) The current business fuel automobile fleet will be gradually phased out in favor of hybrid and plug-in electric cars.

The strategy estimates a reduction of emission of 23% in 2021 and over 80% in 2022, compensating the remaining 20% by buying carbon credits through the investments in environmental protection projects for the benefit of national and international communities, in particular the realization of a hydroelectric plant in India and the replacement of polluting stoves in rural settlements in Mozambique.

Another important project developed by ENAV, in collaboration with the airport management companies, is Airport Collaborative Decision Making (A-CDM) in which all the phases of a flight, from the flight plan to the stopover operations, through the take-off to the flight route and the

⁶⁰ The Flight Efficiency Plan was a programme launched in 2008 aimed at reducing flight distance and routes, and the results were then combined since 2016 with those of FRAIT

subsequent landing, with the relative turn-round, are considered as a "single process" that links the departing flight with the arriving one, allowing to optimize the air traffic management and all the assistance operations, through the constant exchange of information, updated in real-time, among the operators involved. This system permits to decrease the taxiing times before take-offs, with a consequent substantial reduction of fuel, as pilots will start the engines only when the controllers will communicate that the aircraft can depart.

The project has already been enforced at the airports of Milan Linate, Milan Malpensa, Venice Tessera, Naples Capodichino, and Rome Fiumicino. At the Fiumicino airport, the procedure allows a daily reduction of up to 800 minutes of taxiing time, which is equivalent to about 10,000 kg less fuel consumed, with a consequent reduction in CO2 emissions of 30,000 kg per day.

In the 2021-2023 sustainability plan, in addition to the goal of achieving net-zero emissions, ENAV pledges the reduction of single-use plastics, the replacement of the car fleet with hybrid or fully electric cars, further developments in the sustainable supply chain, and the increase of consumption efficiency and place technological and operational excellence and digital transformation increasingly at the service of passengers, people, and collective wellbeing, as well as the continuous monitoring of suppliers along the supply chain.

Thanks to a newly developed and integrated IT platform, ENAV can analyze the ESG information of its main suppliers that make up the strategic supply line avoiding those suppliers that could pose a serious risk to the company's reputation if they use unsustainable practices. The intent of the company in this case is to establish a relationship of mutual collaboration with suppliers based on continuous monitoring of sustainable practices.

ENAV in 2021 became a member of the Science-Based Targets Initiative (SBTI), the first Italian company to obtain the membership in the Air Transportation - Airport Services sector. The SBTI is a program that provides a clear roadmap to companies on how to cut emissions in accordance with the Paris agreement objectives. The program has already enlisted over 2000 enterprises globally. The science-based targets are GHGs (Greenhouse Gas) emission reduction objectives whose ambition is in line with the level of decarbonization required to keep the global temperature increase below 1.5°C, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).⁶¹

⁶¹ The International Panel on Climate Change (IPCC) is a United Nations intergovernmental group tasked with expanding understanding on human-caused climate change.

In ENAV's approach sustainability is not a standalone concept but rather is a comprehensive concept ranging from a variety of businesses activities. For example, the innovative drone project D-Flight, in partnership with Leonardo, represents a virtuous example of how the company is focused both on the new technologies that will shape the aviation market of the future and on low-impact mobility that will contribute to the achievement of the decarbonization strategies.

ENAV considers sustainability as an integrated element of the "new normal" inextricably linked with innovation. Innovation and digital transformation increasingly permeate all aspects of company life, from corporate governance to operations. However, this combination has not always been considered as a virtuous pair, in the past, digital transformation was considered as one of the major causes that led to the consumption of the planet's natural resources. Today this is no longer the case, innovation and sustainability are increasingly interconnected and it is thought that sustainability is one of the main goals towards which companies must strive and innovation is the mean by which to achieve these goals.

3.5 Explanation of the main change management programs undertaken by the company

In the previous chapters has been investigated the birth of change management practices, the launch of such programs, and techniques adopted to accomplish successful programs. In this subchapter, ENAV's ongoing change initiative will be deepened and details unveiled on the sustainability approach proposed in the company strategy and most importantly how the need for a strategy to deal with this issue became essential for the company over the years.

Although the change management program conducted by the company started late in comparison to other private sectors' experiences it was dictated by a major shift in public opinion and stakeholder needs, as well as a moral obligation towards consumers. The public opinion was demanding an adaptation and a commitment by firms to lead by good example, accelerating sustainable development and fostering the use of low emissions practices. By definition, the industry in which ENAV operates is characterized by heavy use of fossil fuels, given that the airline industry is a very carbon-intensive sector.

The launch of the sustainability plan was the most important segment of the change management strategy, the main element that hinges in full with what the company is committed to achieve during the three-year period, in line with the assumption that the company's focus had to move towards a vision of the future, rather than seeing what had already been achieved in the past. The real goal of the change program was not only to make the company the top priority of the company to become more sustainable but mostly to instill a positive feeling towards this change into the people.

The company has been greatly engaged in the development of an internal change management program because sustainability goals cannot be pursued without a path of internal change management and, therefore, the creation of a corporate culture on sustainability issues. The CSR manager must collaborate proactively with all departments to nurture such behaviors throughout all branches of the company, in a continuous exchange of information and knowledge.

It is interesting to understand how the need for a non-financial reporting scheme developed and consequently a relative strategy grew inside the company, and how the whole process was deployed.

The path of the ENAV Group began following legislative decree 254/2016, in accordance with the EU regulation n.95/2014, that required the obligation to submit an individual non-financial declaration for large companies that had an average of more than 500 employees during the financial year and, at the close of business, at least one of the following two requirements: have exceeded 20 million euros in the balance sheet or have exceeded 40 million euros in total net revenues from sales and services.

Since ENAV at the time of enactment of this act belonged to all three categories, to comply with the legislation, the top management assigned to the communication office the task to prepare a non-financial reporting.

The growing interest in ESG information led over the years, as part of the company's measurement system to the need to report on all aspects of a company's operations and transactions that could also affect the position of stakeholders. The financial statements, typically used to verify economic, financial, and patrimonial balances, remained the first external communication vehicle, but were no longer able to meet the information needs of the many stakeholders, being excessively polarized on quantitative-monetary evaluations and disregarding the value of other, equally important indicators, less quantifiable financially but of undeniable growth.

At the time when ENAV decided to approach non-financial reporting, there was not full awareness within the company and its structures of what was meant by the term “sustainability”, as it was thought that was sufficient to narrate the approach taken by the company towards social and environmental issues. However, deepening the legislation and studying examples of other virtuous companies that had already drawn up non-financial reports, the top management realized that it was not such an easy task, perhaps more difficult than drawing up a financial balance sheet, given ENAV's size. The complexity was due both to the fact that the data did not reside in a single structure, there were no integrated Enterprise Resource Planning (ERP) systems that could integrate

key business operations in live time through information technology and enable the calculation of the KPIs, and because the company's offices are located throughout the national territory.

The first criticality encountered was the creation of a materiality matrix, to list and group together all of the company relevant issues that management and stakeholders considered fundamental to be tackled. In terms of sustainability reporting, such a matrix has two dimensions: one is the relevance of the matter (Higher- Lower), to the organization, and in particular to the company's stakeholders, and the other dimension is represented by the potential impact on the business (Higher- Lower).

Not including an aspect in the matrix consequently means not including it in the non-financial statement, thus not considering it as a variable of importance to the company. The approach of drawing up a ranking by importance of the various business aspects is not a simple task for management, let alone for a company like ENAV that deals with air traffic control for which safety is the main issue, but aspects like technological innovation and quality of service are equally important and increasingly connected.

Contextually to this work the company began the study of the non-financial reporting standard, the Global Reporting Initiative (GRI) that describes sustainability reporting metrics that allow organizations to uniquely and uniformly measure their impact on the planet and make it public in a standardized format that even non-experts could understand. There are three sets of thematic standards covering, respectively: Economy (GRI 200), Environment (GRI 300), and Social (GRI 400).

To make sure to involve all structures of the company, ENAV developed, in May 2017, a zero number of the non-financial reporting, for internal use only and relied on the expertise of an external consulting company. The zero number of the report was useful to understand the existing criticalities, estimate the amount of work needed, and prepare the work to be started in January 2018. The main difficulty encountered was that the release of the document had to be developed in time. The work had to be started before the middle of January and had to be completed by end of February in order to be presented and approved by the board of directors together with the financial statement. In March 2018, ENAV released its first non-financial reporting after approval by the board and the contracted auditing firm.

The document highlighted some interesting aspects about the company. ENAV, being a company that offers a strategic service for the country and that guarantees flight safety not only to its direct clients, i.e., the airlines but indirectly also to all passengers, already had a sustainability approach inherent in its mission. ENAV is a company that puts safety and quality of service before any other

business objective. For the sustainability department, this feature of the company was certainly an advantage, while many might have thought that it was already enough. In April 2018, a turning point was proposed to the CEO by the CSR department from which it would be difficult to come back, namely, not limiting at regulatory compliance reporting but developing a path that would focus on value creation through sustainability.

To develop the most appropriate strategy, the company relied on strategic problem solving and balanced scorecards. These analyses resulted in three change strategic objectives:

1. increase commitment;
2. increase staff engagement;
3. move from the past to the future.

Once the objectives had been defined, the strategy had to be developed, that is, the plan of actions that would have made it possible to achieve them.

First of all, involvement had to be increased not only within the company but also externally. To consolidate ENAV's image towards the market, stakeholders, and public opinion, was first necessary to demonstrate internally that the operations being carried out were also appreciated outside the company offices. For this to happen, it was not necessary to have embarked on a path, but it was necessary for it to be considered virtuous. This implied a comparison with companies that had begun years before to place sustainability at the center of their business strategies and had activated virtuous processes, making them national and international best performers. Taking these companies as benchmarks, the company met them to learn about their paths, difficulties, and benefits. This action was conceived because at the time ENAV's CSR structure was composed of only two people, and it was necessary to start with a bottom-up approach, to minimize possible procedural mistakes.

Another of the first initiatives undertaken after the period of study was stakeholder engagement. To define the materiality matrix, the regulations required that all managers had to be directly involved, but the company decided to go even further. Bringing together all stakeholders, it organized a roundtable including airlines, airport management companies, institutions, suppliers, shareholders, and employees. This meeting provided important evidence that the sensitivity of the airline industry towards sustainability issues was growing. It emerged that stakeholders expected from ENAV not only a service centered on safety, but as well service efficiency and constant updating and professionalism of its people, and an increasing focus on the environment, social issues, diversity, and all non-financial risks. With regard to this last point, the company, together with the Enterprise Risk Management department, worked on integrating the non-financial risks defined in the report into the corporate risk monitoring system, raising the level of attention paid to these issues by the

managers involved. For a listed company, it was a fundamental step to equate non-financial risks to financial risks, which are considered key to a company's profitability.

Subsequently, a Sustainability Committee was created, an initiative that not only made it possible to bring the issues to the attention of the Board of Directors and the Board of Auditors but also represented a very clear message from the top management to the entire company.

Work was then carried out on the brand identity in terms of sustainability through the restyling of the sustainability with the purpose of giving a precise identity to all the initiatives developed. In collaboration with Alitalia and Aeroporti di Roma was prepared an advertising video focused on flight safety was, and at a later stage was created a website outside that of the company completely dedicated to sustainability.

At that point, the sustainability structure had to be implemented involving all the corporate structures. To do so, a three-year Sustainability Plan (2018-2020) was drawn up, within which were included more than forty projects concerning five different macro areas.

The success of this first Sustainability Plan has led to the achievement of many objectives, and consequently to a new plan for the three-year period 2021-2023, with the addition of a new dimension, that has been the main environmental concern of the latest years, climate change.

The latest plan, in addition to having been shared with each structure responsible for the projects and with the CEO, has been submitted to the approval of the Board of Directors, to make it even more binding in the corporate structure.

Setting the plan as a starting point, it was then necessary to actively involve the corporate structure, starting with the human resources office that helped to nominate the Sustainability Ambassadors, a group of around thirty professional figures from all the departments and companies of the group, chosen among non-management figures who had already collaborated in calculating the reporting data, with the task of proposing new ideas and also acting as a megaphone within their departments about the initiatives taken. In November 2018, an important step for the company was the launch of the Sustainability Day at the auditorium of Ciampino Airport, with the entire company participating remotely. This event saw the intervention of the top management and it was crucial in making people understand the need and the importance that sustainability issues were assuming in the business world as the company's strategy and its leading role in the transformation were outlined.

At the same time as ENAV moved from non-financial reporting to sustainability reporting, moved from the GRI reference reporting system to the GRI core. In addition to the inclusion of new

indicators, this operation has allowed the company, to move from reporting on what was done to what would be done. In fact, an important part of the sustainability report was dedicated to the sustainability plan and future developments in terms of projects and actions that would be implemented in the years to come.

The constant evaluation of the internal and external effectiveness of the initiatives implemented was useful to register that in a short time not only the sensitivity of people within the company had changed, but also how investment funds and private equity were moving along the same path taken by ENAV. This last aspect was a decisive finding to increase commitment and sustain the development of the paths undertaken. In the meetings organized with ESG investors, it was clear that the attention of the financial community towards these themes was very high. The investors' attention focused both on the results already achieved and, on the commitments, made for the future.

This step deserves further reflection as if it is linked to the development of a change management process and the overcoming of the physiological resistance involved. The process is difficult if you do not find allies for what you want to change, not only inside the company but especially, in this case, outside. In fact, if on one hand, it is necessary to develop a bottom-up involvement, on the other hand, it is essential that some key management figures are on board, convinced that their proactive attitude towards sustainable development can create value for the company.

The role of the CFO, which at the beginning was not central to the development of the process, started to become crucial when discussions about integrated budgeting occurred. However, the most important figure in this process has been the CEO. In fact, the ESG KPIs, with which they were evaluated, were included in the MBOs (Management by objectives) of the CEO and management. Thus, the CEO's variable compensation depends on achieving and improving the company's sustainable practices, and this is a very important step, as much as the ethical narrative of sustainability is a driver of change, the inclusion of ESG goals in the management evaluation significantly increases the level of attention. In fact, placing ESG objectives in the hands of top management indirectly means placing them in the hands of the entire company.

Another aspect addressed is that of corporate giving, i.e., all the charitable initiatives that define ENAV's commitment to social issues. The company had already implemented various initiatives in this sense but without a common thread, with initiatives ranging from very different and unrelated areas. Instead, a precise strategy was implemented, deciding to invest in projects that were closer to ENAV's culture and corporate values, with a strong reference to the UN's SDGs. Following this strategy, the projects designed were also communicated more effectively and created a strong bond

between the participants feeling part of a community of people united not only by the same job but by the same values.

In December 2019 the first of many awards acknowledged the work done: the University of Pavia awarded ENAV's sustainability report as the best for the category of medium-large companies for the following reason: "ENAV's report presents an excellent balance of the criteria analyzed and in particular demonstrates a strong strategic orientation and a solid quantitative approach".

3.6 Comparison with main competitors over sustainability strategies

As already stressed, ENAV is granted by the Italian government the exclusive right of operations over the national skies, meaning that as far as air traffic management control on the national territories it does not have direct competitors, except for the Italian Air Force that manages the traffic of military flights.

However, technological innovation advancements, urge all ANSP not to consider themselves as monopolist actors, even if they are practically acting like it. Remote tower control may open the market to international air control, as flights could be in a near future controlled from anywhere in Europe and in the world and this is a potential scenario that ENAV has been highly considered investing the most in the latest business plan.

It is interesting to understand how the company positions itself regarding sustainability issues in comparison to foreign companies operating in the air traffic management industry. In other countries, ANSPs are not only supervising flight control but are also handling airport management.

This subchapter will briefly review sustainability strategy and investments of some of the main European ANSP players.

AENA (Aeropuertos Españoles y Navegación Aérea S.A.) is the Spanish air traffic controller, that manages 46 airports as well. In March 2021 the company presented the ambitious Climate Action Plan 2021-2030 which includes an investment of 550 million euros with the goal of reaching the short-term goal of carbon neutrality by 2026 through a 94 percent decrease of emissions per traveler linked with AENA's own operations by 2030, laying the groundwork for the long-term goal of Net Zero by 2040.

DFS (Deutsche Flugsicherung) is the German air traffic controller since 1992 providing air services to 24 airports. Actually, the company does not provide information about any green practices nor publishes any sustainability report. Sustainability is mostly a safety issue, and the most prominent action in this sense is the commitment by the company to reduce noise disturbance and a general

promise to diminish emissions. Currently, the DFS website does not include a section devoted to sustainability, and hence it can be considered as a laggard on these themes with respect to other companies analyzed.

NATS (National Air Traffic Services) is the UK provider of air traffic services and handles ground services for 14 airports. The company publishes yearly the so-called “Responsible Business Report” since 2009 in which highlights the results achieved in the previous year as well as the goals for the current year and the results in data achieved, with a specific focus on the reduction of emissions. Among the foreign companies in the industry in which ENAV operates NATS is the most advanced as far as environmental reporting and strategic planning. Despite this, it has introduced only this year, a Free Route Initiative similar to that of ENAV. On the 2nd of December 2021, NATS announced an initiative that will reduce by 12,000 tons of CO₂ emitted each year by delivering efficient and shorter routes over 150,000nm² of British airspace.

Based on the available information collected on other European ATM players like ENAV, a positioning map (Figure 19) was built to highlight the relevance of sustainable development for each company. The variables taken into account to design such a map were the levels of commitment to sustainability and investments to sustainability sector as displayed on the sustainability report, websites, and available information up to date on the interested companies. This is not an attempt to discredit any of the companies, but rather to give an overview of the ATM sector’s sustainability penetration.

Although the limitations brought by this technique are several; as generally perceptual mapping are the outcome of the preferences and perceptions by several consumers on a brand, product, or company, while in this case results are drawn up on the analysis by a single observer with scarce and limited information.



Figure 19 Positioning map

3.7 Research study

The aim of this research was to assess and determine the state of the change management program undertaken by the ENAV Group, with a particular focus on the development of the sustainable practices underlined in the Sustainability Plan. The sustainability actions since coinciding with the change management program, have been considered as the change management program in this framework.

In particular, the research has investigated the level of engagement and the commitment by the employees and how the ENAV program is assessed by the external stakeholders.

The company's aim was to translate the integrated reporting encompassed in the Sustainability Report into an integrated perspective, meaning that sustainability should permeate as one of the main features recognized by employees, both in the mission and vision and in the corporate culture embedded in the day-to-day operations.

The main research question asked to the sample was calibrated on the insights given by the company:

What is the state of the art of the sustainability initiatives (namely the change management program) and the formation of an integrated perspective?

To facilitate the gathering of the data, the researcher has organized the study in sub- research questions to help the formulation of the questions administered to the selected sample:

- *How much do the Ambassadors feel involved in the sustainability process?*
- *What do the Sustainability Ambassadors think about the company's sustainability initiatives?*
- *What do they think needs to be improved?*
- *What do the Ambassadors think about the evaluation of stakeholders?*

These sub research questions were then transformed and formulated in questionnaire questions that were first bypassed by the ENAV CSR department and then delivered to the selected sample of respondent

3.8 Methodology

The research was conducted through a double procedure, a sample directed to internal members of the firm (privileged “opinion leaders”), and targeted interviews with external actors from the CSR world surrounding the firm’s network and selected stakeholders.

In designing the research, it was first of all taken into consideration the data available to formulate the research question that could prompt valid and insightful answers. Given the fact that no quantitative data was available to the purpose of the study, in accordance with the ENAV Group the research design utilized was the aforementioned. A qualitative methodology may be also more accurate for the intended results.

The survey was targeted to the ENAV Sustainability Ambassadors, the employees who oversee the drafting of the non-financial reporting and are responsible for the dissemination of the sustainable strategic planning in the different departments of the company.

The Sustainability Ambassadors are a group composed of 32 individuals ranging from all departments selected by the human resources department and coordinated by the CSR structure, with the aim of suggesting new sustainability projects and promoting the ESG issues to the entire structure of the company.

Nevertheless, if to some extent, the choice of choosing the Ambassadors could be seen as a biased sample, due to their direct implication in the company’s sustainability efforts, it was not possible for this study to investigate a larger sample, including the different divisions of the labor force, for the purpose of answering the research question. Conducting an internal climate analysis is considered a sensitive matter when managed by internal departments, and it is even more delicate if performed by external individuals. Furthermore, selecting among over 4000 employees dislocated in various national locations would have been a very complex choice, and a useless task.

The results produced will serve as a tool for the company to understand how the program is developing and if it needs some adjustments, given that the Ambassadors represent the voice of the company on sustainable matters, and may reflect in some way the opinion of the whole population of the firm.

To examine deeper the significance of the change management program and the actions implemented towards sustainable development, in order to get a feedback on the firm’s activities, external actors coming from the macro environment of the firm were interviewed through the sub ministrations of three questions. (See appendix).

The internal survey consisted of ten different questions to assess the level of commitment and engagement of the employees selected as sponsors of the change and to understand the degree of integrated thinking in the company. The survey was administered through the Qualtrics platform, allowing participants to submit their opinion both voluntarily and anonymously.

The gender of the respondents was omitted as it was not necessary for the purpose of the investigation.

Age and tenure are two informational variables that have been included to have an overview of the respondents' characteristics.

The time given to the Ambassador to answer the questionnaire was stretched in order to give everybody the opportunity to answer deliberately.

In Table 1 in the next page are listed the questions that have been administered in the survey.

The study presents numerous limitations, first as already said the sample could be viewed as biased and limited, second the survey has been administered by the company, after having been sent by the researcher, thus some kind of indirect influence may have been bestowed.

n	QUESTION
1	<p>What is your age?</p> <p>Age groups</p> <ol style="list-style-type: none"> 1) 25-34 2) 35-44 3) 45-54 4) 55-65
2	<p>How many years have you been working for ENAV?</p> <ol style="list-style-type: none"> 1) 1-5 yrs. 2) 6-10 yrs. 3) 11-15 yrs. 4) 16-20 yrs. 5) 20 + yrs.
3	<p>How do you rate the sustainability path undertaken by the company?</p> <ol style="list-style-type: none"> 1) Completely insufficient (1-3 pts) 2) Insufficient (3-5 pts) 3) Sufficient (5-7 pts) 4) Excellent (8-10 pts)
4	<p>How involved do you feel in the sustainability process?</p> <ol style="list-style-type: none"> 1) Barely (1-3 pts) 2) Insufficiently (3-5 pts) 3) Fairly (5-7 pts) 4) Deeply (8-10 pts)
5	<p>Do you think the 2021-2023 Sustainability Plan is challenging for ENAV?</p> <ol style="list-style-type: none"> 1) Barely (1-3 pts) 2) Insufficiently (3-5 pts) 3) Fairly (5-7 pts) 4) Substantially (8-10 pts)
6	<p>What would you introduce into the sustainability plan?</p> <ol style="list-style-type: none"> 1) More attention to social issues 2) More attention to staff needs 3) More attention to environmental issues 4) More collaboration between departments
7	<p>Do you think that the introduction of these issues has increased the commitment and engagement of staff towards these issues? If yes, in what way?</p> <ol style="list-style-type: none"> 1) Completely insufficient (1-3 pts) 2) Insufficient (3-5 pts) 3) Sufficient (5-7 pts) 4) Excellent (8-10 pts)
8	<p>How do you think ENAV's stakeholders and customers evaluate the sustainability path undertaken by the company?</p> <ol style="list-style-type: none"> 1) Completely insufficiently (1-3 pts) 2) Insufficiently (3-5 pts) 3) Sufficiently (5-7 pts) 4) Excellently (8-10 pts)
9	<p>Do you think that the introduction of ambassadors has had an impact on a greater sensitivity of employees? If yes, in what way?</p> <ol style="list-style-type: none"> 1) Completely Insufficient (1-3 pts) 2) Insufficient (3-5 pts) 3) Sufficient (5-7 pts) 4) Excellent (8-10 pts)
10	<p>How much do you think the path taken so far has contributed to consider sustainability as an integral and fundamental part of the business strategy?</p> <ol style="list-style-type: none"> 1) Very little (1-3 pts) 2) Little (3-5 pts) 3) Fairly (5-7 pts) 4) Very much (8-10 pts)

3.9 Results

The main results of the internal survey and the external actor's interview are based on the opinions expressed on the path of the firm's change management program on sustainability

Out of 32 Ambassadors, 24 were the individuals that were proactive in answering the questions. For clarity purposes it must be clear that the Ambassador grew in number over time, as new members were appointed, whilst the research study had already started, de facto making it difficult to reach these newly added Ambassadors.

The results of the survey highlighted a general satisfaction of the Ambassador regarding the initiatives of the company and the change management program itself.

Compared to what expected, resistance to change that may have been registered by older employees is minimal.

Of the Ambassadors completing the survey 16.7 % is included in the 55-65 years 'age group, 33,3% belonged to the 45-54 years 'age group, 45,8% to the 35-44 years, while only the 4,2% is in the 25-34 years group. This shows that the great majority (almost 80%) of the ambassadors are in the age group between 35 and 54 years while older and younger employees are underrepresented due mainly to factors linked to a younger age and thus shorter tenure, (Figure 20)

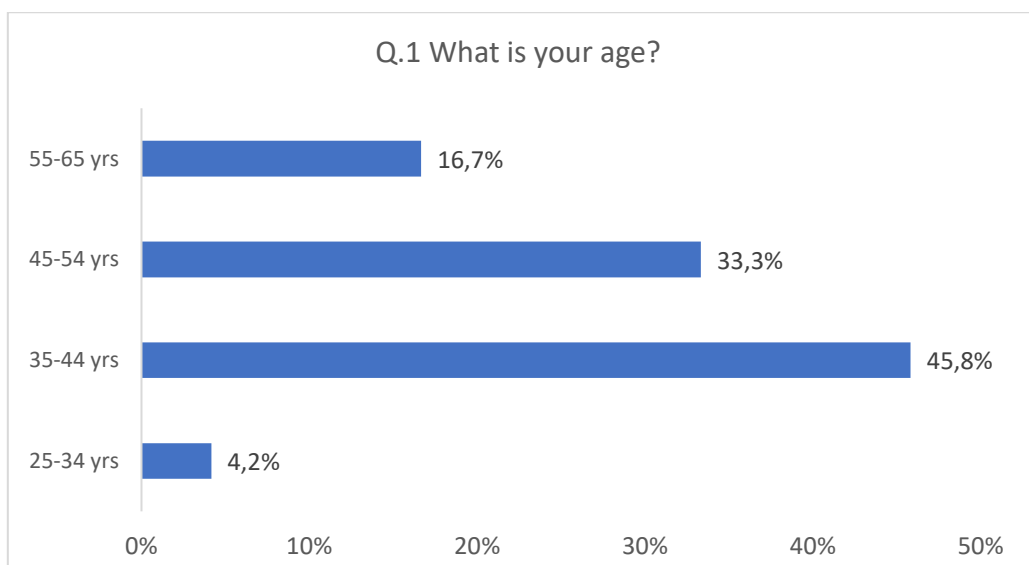


Figure 20

The second question was aimed at comprehending the level of tenure in the sample. Almost half (45.8%) of the respondents have been working for the company between 11 and 15 years, about one-

third of the employees has been working for 16 or more years, while employees serving for 10 or less years amounted cumulatively to the remaining 25% of the sample. The same rationale explained above for the age group is found here, as less tenured employees are less likely to be selected by the Sustainability Committee to be ambassadors, not having yet accumulated a consolidated experience in the company that is necessary to be able to influence colleagues in the respective departments. (Figure 21)

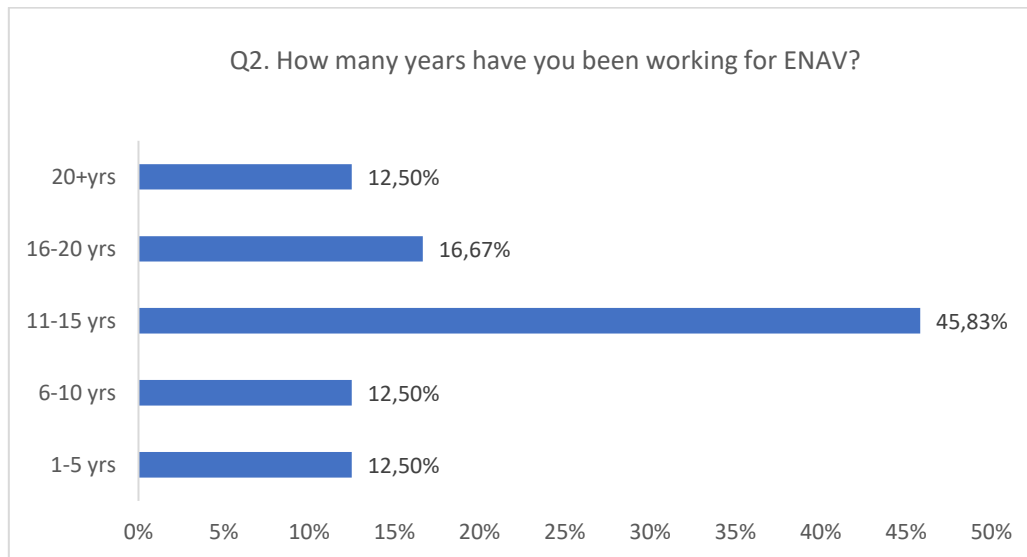


Figure 21

In general, answers to the question about the rating of the sustainability path undertaken by the company were almost equally distributed between “excellent “ and “sufficient”, with only one employee considering the path to sustainability so far undertaken as completely insufficient, and none as completely insufficient. (Figure 22) Analyzing closely the sample, younger employees, tended to appreciate more the new initiatives of the company by giving it the higher score; excellent (8-10 pts), while the average of the responses of longer-tenured employees is sufficient (5-7 pts).⁶²

⁶² The division between long tenured and younger employee answers has been difficult to discriminate graphically

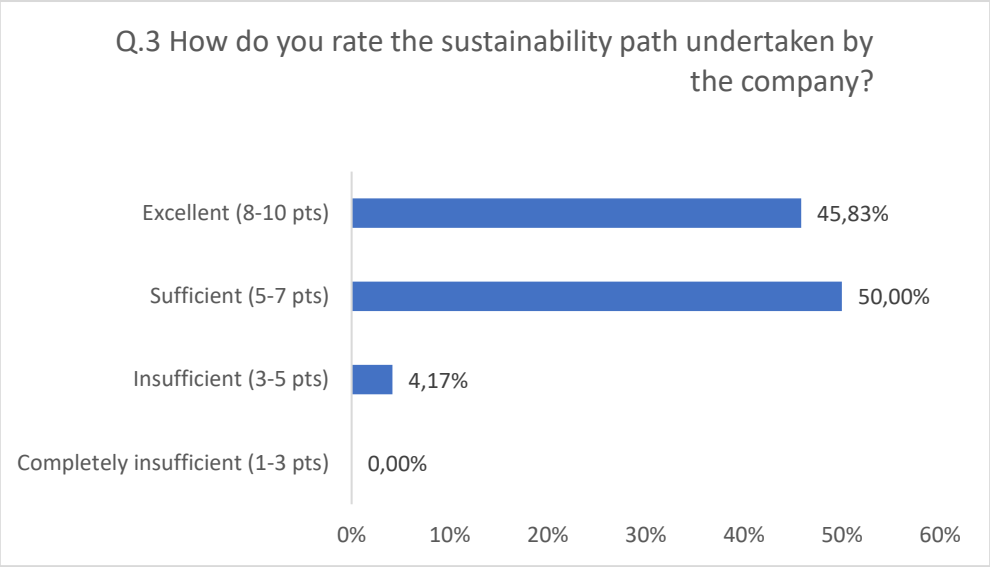


Figure 22

Regarding the level of involvement in the whole process, two-thirds of the employees (66.7%) reported their involvement in the sustainability program as fair, while fewer employees (29.2%) felt very much engaged in the program (deeply (8-10 pts), and a minor percentage of employees (4.2%) considers themselves as insufficiently involved in the initiatives. (Figure 23)

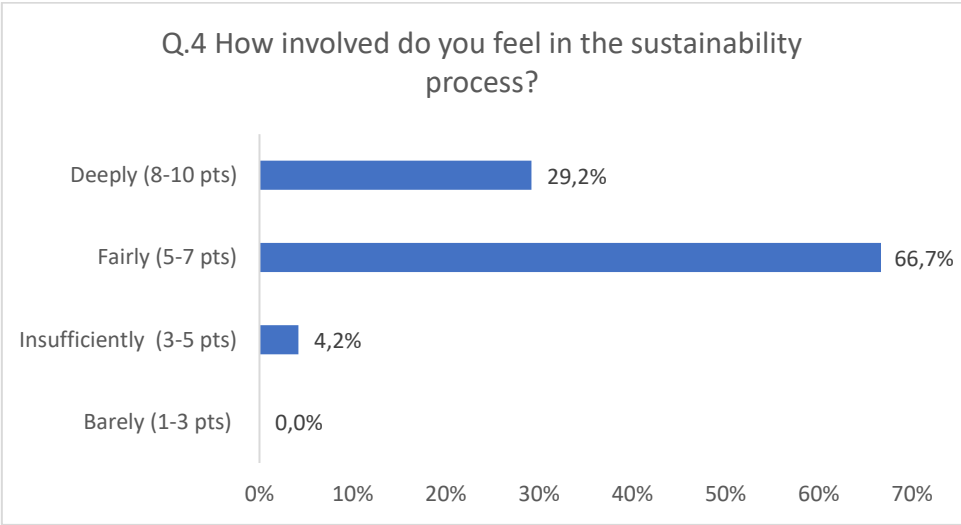


Figure 23

For almost all responders the 2021-2023 Sustainability Plan is a challenge for the company, divided into those that think it is substantially challenging (45.8%) and those that thought that is fairly challenging. (50%). As the aggregated 95.8% of the responders indicated that the Sustainability Plan is effectively challenging for the company only 4.2% of the sample rating the sustainability plan as insufficiently challenging (Figure 24)

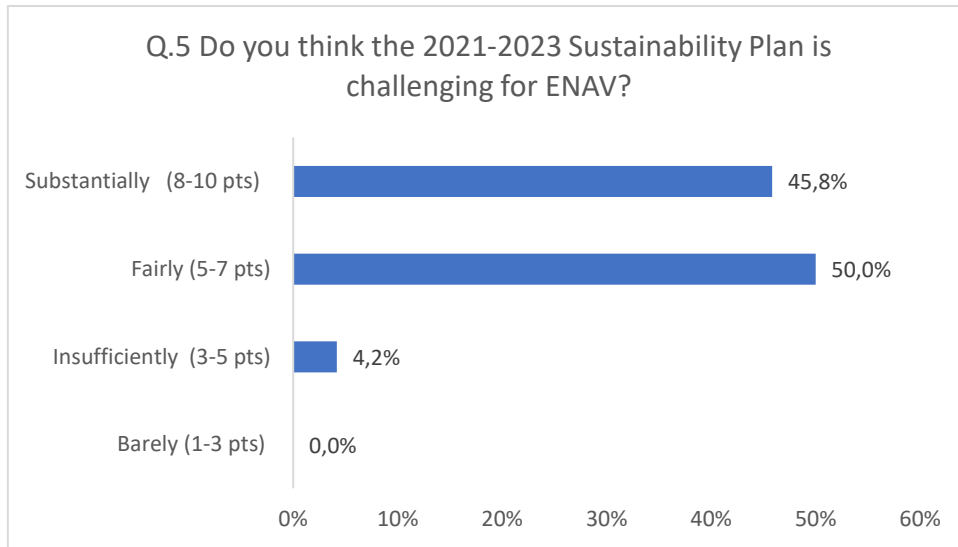


Figure 24

The 6th question was a very important question for this study, as it did not test the employee's satisfaction but rather gave the opportunity to the responders to express their thoughts about what is lacking in the initiatives and on what the focus of the program needs to target. The majority of the sample (54 %) of the responders suggested that there should be more attention to staff needs, 25% that what is needed is more collaboration between departments, for 16,7 % there should be more attention to social issues, while 4,2% asked for more attention to environmental issues. (Figure 25)

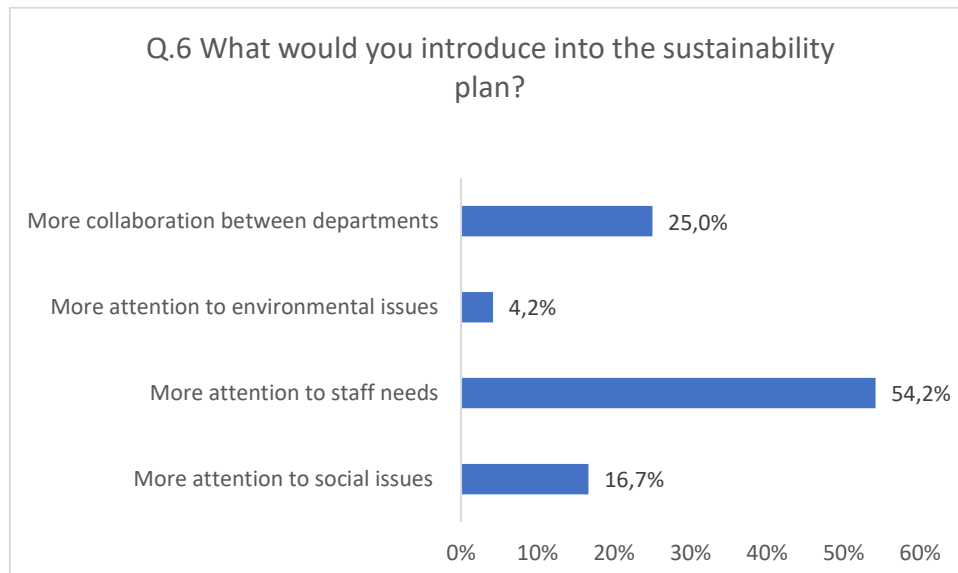


Figure 25

A large part of the responders (87,5%) considers that the introduction of sustainability issues has had a direct link with an increased commitment and engagement of the staff towards these issues, with

only few (4,2%) ranking it as excellent, or believing that there has not been an improved sensitivity among the staff of the sustainable activities. (8.3%) (Figure 26)

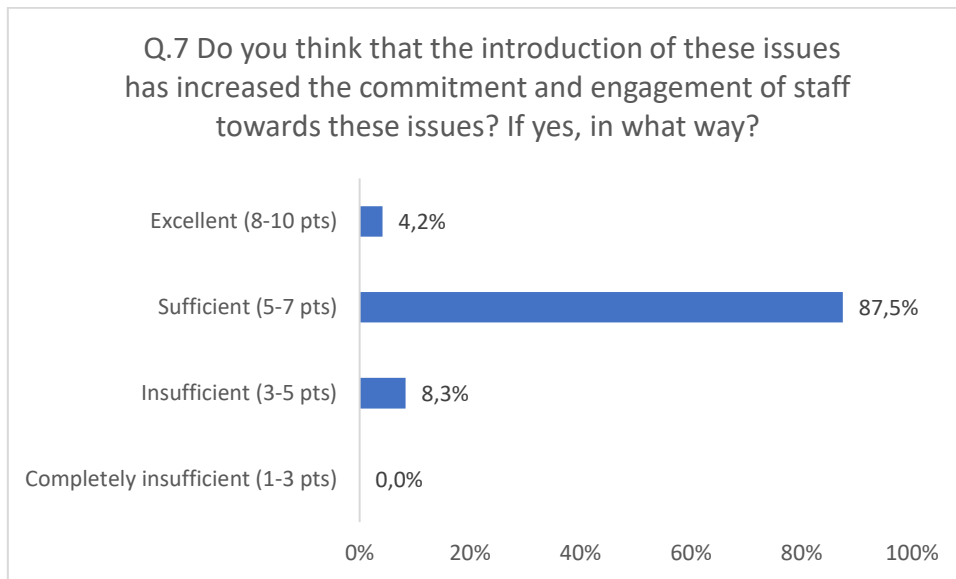


Figure 26

There is a general feeling that ENAV stakeholders and final clients have a good opinion of the company’s sustainability strategy. According to half of the Ambassadors (50%), the evaluation of the external actors on the firm is excellent. The 37 % thinks that the evaluation is sufficient, while only 12,5% notes a negative judgment by stakeholders and customers. (Figure 27)

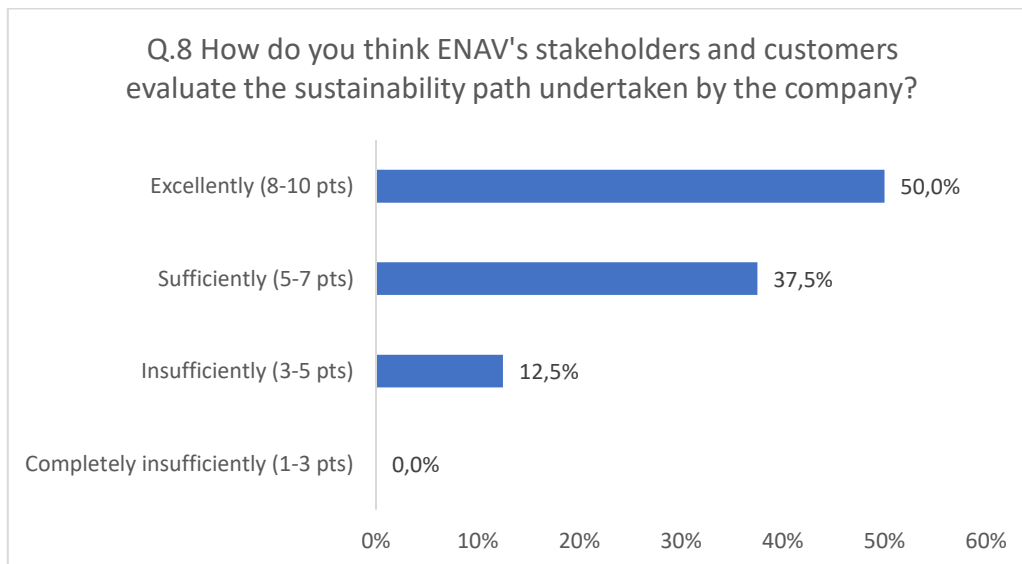


Figure 27

Then the Ambassadors were asked a question that concerned them personally: whether their introduction had a relevant impact or not on a greater sensitivity of the employees towards sustainability issues. The majority of the sample (75%) thinks that the introduction of the ambassador

has been sufficient to increase the sensitivity of all employees on sustainability matters, and a few (8,5%) thinks it was an insufficient initiative, while a small percentage reported that it has been an excellent addition to the sustainability strategy (16,7%). (Figure 28)

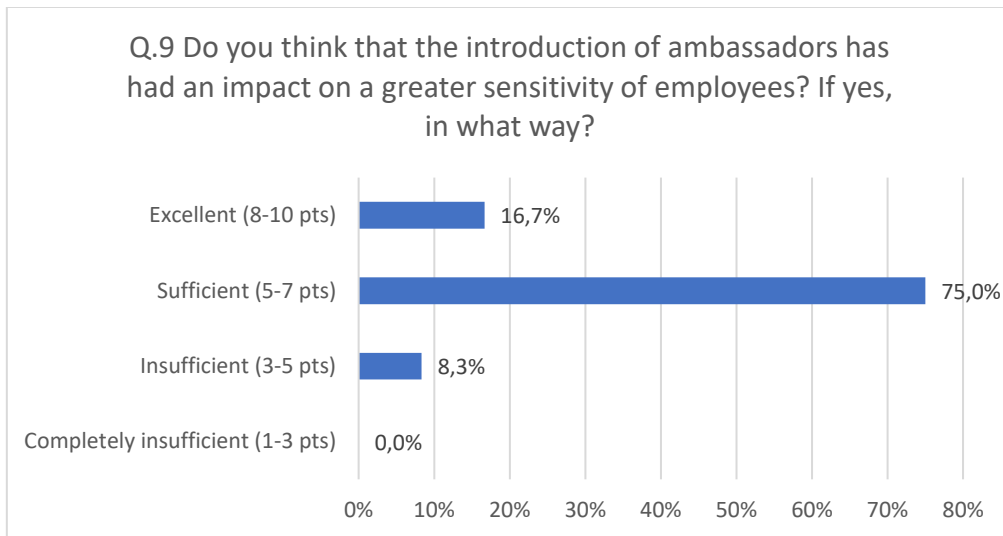


Figure 28

Finally, two thirds (67%) of the sample has reported a fair opinion on the question whether the path taken until now has made sustainability an integral part of the business strategy, and in some sense of the corporate culture, with also a good percentage (16.7%), considering that the sustainability plan has contributed much to this purpose, and only a few (16.7%) believing that the program’s impact is not yet considerable as part of the business strategy put in motion by ENAV. (Figure 29)

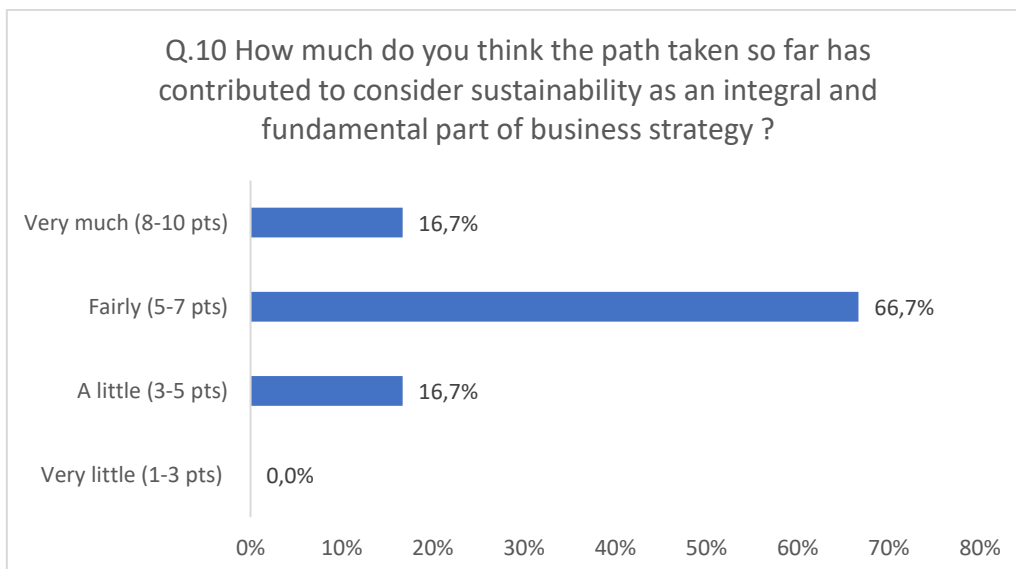


Figure 29

The strategic action to name Sustainability Ambassadors has been praised by the CSR universe as an original way of increasing commitment throughout the organizational layers through an innovative approach to make the employees true protagonists of the change. (See Appendix for details)

3.10 Discussion

The path to sustainability of the ENAV Group has started a few years ago and among recognition from the CSR universe, the company is establishing as one of the industry's leading sustainability actors in the Italian airline market.

Aligning a sustainability strategy into a well-established and structured company is not an easy task, as creating a change culture that fosters optimism, teamwork and cooperation requires continuous monitoring and commitment from both the top management and the employees.

Furthermore, as it does not concern the integration of a service or a new product or service, but rather the adaptation of the business model to new practices it is a more cumbersome and risky activity.

This study has uncovered the different approaches to change management, the change implementation phases, and possible causes that influence the resistance to change.

According to the company itself (the CSR department in this sense), what is missing is the creation of an integrated perspective leaning towards sustainability, meaning a more integrated approach that considers the topic as (i.e., institutionalization) one of the focal points of the corporate strategy. The introduction of the non-financial reporting can be considered a step towards this "transition".

Moving along these lines, ENAV's efforts are in the right direction as besides the low impact on the environment also topics such as diversity, gender equality, and work-life balance that contribute equally to the sustainability of the company are taken into consideration as pivotal points around which to build a sustainable strategy anchored in time and adaptable to a dynamic external context. The pandemic has stressed the importance of the adoption of updated business and social models, thus taking care of employees has become crucial, and include them in the corporate initiatives has become a necessity. In light also of the "Great resignation", a recent widespread phenomenon developing primarily in the US, and growing in Europe where employees resign from their jobs due to stressful working conditions and salaries that struggle to grow up after a certain stage of the career, ENAV is trying to increase the involvement of its employees. Two examples of this conduct were the change management program focused on sustainability and the strategic move to incorporate a Sustainability Committee and Sustainability Ambassadors.

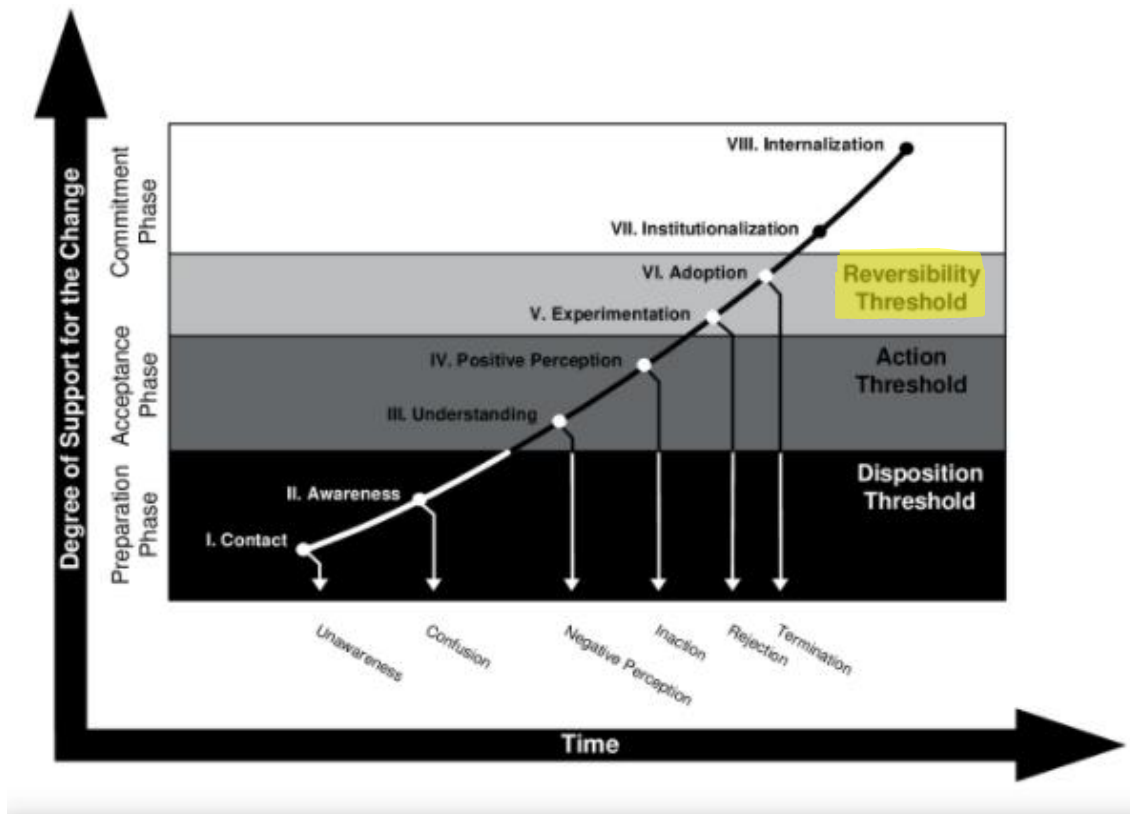


Figure 30 Graphical Representation of Change commitment phases source: Conner, D. R., & Patterson, R. W. (1982).

As uncovered by the study the employees are understanding the changes being made and are generally in favor of those. The change in place is both adaptive as it responds to needs arising from the external environment and planned as the response coming from the organization has included the preparation of the whole hierarchical structure to adjust to the new status quo.

There is no awareness about the level of resistance to change registered in the passage between the two “*modus operandi*” but from the results of the study transpires that the level of resistance was low or isolated to a few cases, while a large part of the employees is embracing the changes.

Looking again at the Conner Patterson diagram studied before, (cfr. 1.6), we can state how ENAV’s change management initiative is positioned in the reversibility threshold, the most delicate phase of the whole model, in which the activities are experimented and adopted in the daily operations by employees but are not yet institutionalized and internalized. This means that although the new behaviors have been assimilated, as evidenced by the appreciation of this experimental study the vast majority of the people interviewed, they have not yet reached a level of familiarity and experience both in workers and in the hierarchical structure such as to be highlighted and to make sustainability a value recognized as one of the cornerstones of the company both internally and externally as the

experience gained so far has not been enough to develop such peculiar behaviors. This is not necessarily a negative condition, but highlights, however, how the behaviors introduced so far have been successful but need to be augmented and improved with new ways to engage the employees. Institutionalization and internalization as we stressed before, are phenomena that take time to build, and given that the change program has been adopted in 2018, such a change even if not drastic like other programs, can take time to establish.

Nevertheless, in a society like ours where speed has become crucial for business both acting and reacting, some things are worth the wait. In this sense, time must be given to individuals to adjust to new behaviors and wait for their “excitement” for the program to develop. This is not only crucial for the success of the program, but also for the impact the program can have within the company and on the individuals.

Behaviors that consider the environmental impact of each action are not only not beneficial for the company itself, but also for the overall impact on the planet. However, it is necessary to clarify that the storytelling of these practices must be in line with what the company is actually producing as far as initiatives and then results, to eliminate misunderstandings created by expectations not met that may receive counterproductive criticisms as “theorized” by the “greenwashing” phenomenon.

The term greenwashing was originally coined by the prominent American environmentalist Jay Westerveld in a 1986 essay and is referred to as the dissemination by companies of misleading marketing information to persuade external investors and consumers of their sustainable actions to nurture a positive image of the companies.

Avoiding greenwashing is a must for a company operating in a high-impact sector such as the airline one, as “walking the talk” is crucial to maintain and increase reputational inertia⁶³ and to assure consumers of the high level of commitment. So far, ENAV has been very clear on the direction of its program and the measurement of the achievement of the objectives, along with the supervision of the Committee is a visible sign of the seriousness of the company’s commitment.

The climate emergency, with its environmental risks and the consequent ecological transition, represents a new economic paradigm, with significant social and cultural implications that can condition the feasibility of choices. This means that any intervention must be sustainable not only from an environmental point of view but also from economic, social, and territorial ones to avoid becoming a source of discontent and conflict for the actors involved. Therefore, if there is exchange

⁶³ Reputation inertia effect means that once a company or an individual obtains a high reputation it becomes constant over time

and consultation between the territorial stakeholders and those responsible for ecological change, it will be easier to increase the possibility of solving complex problems and satisfying social needs.

The decarbonization of the global and local economies and the transition to more sustainable economic models will generate the greatest investment opportunity of our time and companies that do not adapt their business models to this new paradigm will be left behind.

Institutional and financial investors are increasingly investing in ESG projects, as they present less risk and allow them to anticipate future regulatory developments by national and international institutions.

Aligning the company with ESG parameters was therefore a strategic move, albeit one that lagged slightly behind trends in other sectors such as the energy industry. The sustainable transition, in fact, in this industry has necessarily occurred earlier than in other sectors because it still has the highest environmental impact, and transitioning to more sustainable practices is a necessity to continue operating.

The sustainability challenge has represented for ENAV a winding road to find the right angle on how to find the right storytelling both to its shareholders, stakeholders, and employees, but the results achieved so far are an important milestone that are contributing to transform the company into a purpose-driven institution.

The efforts made by the top management are remarkable and aiming in the right direction, especially thinking that in the ATM industry sustainability has not been the main issue since recently and thinking about these issues may not be straightforward even for the external environment when thinking about what ENAV's business is and what the company represents as far as corporate values.

ENAV's mission to make sustainability a core value of the company will depend on the commitment of the top management that must remain as it has been since 2018 and whether a sense of community and pride in being able to work together for a company that cares about the future of the planet and its people will be instilled in employee mindset.

4. Conclusions

As highlighted by the results of the study the path undergone by ENAV is encouraging, aiming towards a lower emission impact, as well as a major penetration of sustainability concepts and employees' activities, the company is increasingly perceived both internally and externally as a "greener" player since incorporating these new actions.

According to the Ambassador's opinions gathered in this study, the company's commitment to sustainability is on the right track and the efforts made by the company to implement sustainable development and to develop the initiatives of the firm in this field are producing results. This initiative has been a successful attempt by the company to increase the participation of its employees by including them in the process. Ambassadors acted as professional figures reporting to higher structures and at the same time are key referral figures to increase the attention of employees over ESG issues and possibly understand what are the existing criticalities of the program, to propose ways of improving it, and intercepting potential employee's contribution.

As already stressed in this study, despite some good performances in the matter, the sector in which ENAV acts is heavily based on emissions, and it will take time to offset them, even though some actions have already been taken. In this sense, the pledges made at the recent Cop26 to reach the ambitious goal of net zero emissions by 2050 and to limit global warming to 1.5 ° are an important step forward to push non-state actors to accelerate, even in the most polluting industries.

A particular period like the pandemic is serving as a catalyst for a new economic system, recently driven by changing consumer tastes, that will define the future of our planet.

The investments needed to adapt the company to more sustainable practices are not to be missed, especially in light of the European Union extensive efforts in this regard thanks to the funds allocated to the Next Generation EU, a financial stimulus program aimed at bringing member countries out of the pandemic. The program focuses heavily on digital transformation and above all on the sustainable transformation, for which Italy alone has allocated almost 60 bln/euros of the more than 191.5 bln/euros allocated to the country.

ENAV with its strategic advantage, should not miss the opportunity to act as a frontrunner for its industry paving the way for other players to embrace the "sustainability challenge".

ENAV has been a trailblazer in introducing sustainability concepts in the air transport industry, and its example should be followed by other airlines and airport management companies to create important synergies laying the foundations for a more sustainable sector. The challenge that the

company has undertaken is epochal and only through a cohesion of the whole ecosystem and of the industrial network will it be possible to fight it and try to win it, otherwise, unfortunately, the initiatives undertaken could be vain in the long run.

As ENAV President Francesca Isgrò stressed during the Acea⁶⁴ Sustainability Day “the transport sector must be integrated and connected as a whole to create an ecosystem capable of planning over the short and long term the implementation of models and infrastructures that will truly improve the country's transport system sustainability and efficiency”.

The limitations of this work, as stressed before, ranging from the restricted number of publications included in the literature review and the restricted sample used for experimental purposes, make this study purely demonstrative, but a starting point for further potential research on ENAV and the industry or similar companies exploiting similar strategies.

Future further research on this topic may fill gaps and limitations present in this study. Possible topics sustainability issues, that may be deepened could be employee intervention, industry network exploitation on the collaboration and synergies between actors of the same industry, and the development of new technologies to reduce emissions such as biofuels.

⁶⁴ Acea is an Italian multiutility player operating in the water and energy sector

APPENDIX

The interviews were conducted in Italian and then transcribed in English. For clarity, both versions have been reported below.

1) Interview to Marisa Parmigiani, Head of sustainability and stakeholder management Unipol Group and President of the CSR Manager Network, Italy's leading CSR professional network. The interview was conducted on November 30th 2021

Versione italiana

1) Come valuta il percorso di sostenibilità intrapreso dall'azienda?

Si tratta di un percorso serio e concreto, che da diversi anni vede un notevole affinamento delle tecniche di rendicontazione e controllo della sostenibilità, unito all'implementazione di azioni ad impatto positivo sempre più efficaci. Una strategia basata sulla proattività e sull'attenzione alle necessità del nostro tempo che merita senza dubbio un plauso.

2) Come pensa che gli stakeholders e i clienti di ENAV valutino il percorso di sostenibilità intrapreso dall'azienda?

Con il passare del tempo, la domanda di mercato è sempre più sensibile alla sostenibilità del business. L'attenzione verso le tematiche ambientali, sociali e di buona governance è divenuta essenziale per il mantenimento di relazioni positive con tutti gli stakeholder. In questo contesto, è evidente che la valutazione dei clienti e di tutte le parti interessate, rispetto al percorso di sostenibilità di ENAV, non può che essere positiva.

3) Pensa che l'introduzione degli ambassador abbia avuto un impatto su una maggiore sensibilità degli employees? Se sì in che maniera?

Indubbiamente. Oggi amiamo dire che il miglior testimonial di un'azienda è il suo dipendente, e la presenza di persone che possano confermare con convinzione l'impegno e l'attività dell'impresa sui temi della sostenibilità ha delle conseguenze importanti. La presenza di ambassador è un grande stimolo e un forte incentivo per tutta la compagine aziendale a fare sempre di più e sempre meglio.

English transcription

1) How do you assess the sustainability strategy undertaken by the company?

It is a serious and concrete path, which for several years has seen a considerable refinement of the techniques of sustainability reporting and control, combined with the implementation of

increasingly effective positive impact actions. A strategy based on proactivity and attention to the needs of our time that undoubtedly deserves praise.

2) How do you think ENAV's stakeholders and customers evaluate the sustainability strategy undertaken by the company?

As time goes by, market demand is increasingly sensitive to business sustainability. Attention to environmental, social and good governance issues has become essential for maintaining positive relations with all stakeholders. In this context, it is clear that the assessment of customers and all stakeholders, with respect to ENAV's sustainability path, can only be positive.

3) Do you think that the introduction of ambassadors has had an impact on greater employee awareness? If yes, in what way?

Undoubtedly. Today we like to say that the best testimonial of a company is its employee, and the presence of people who can confirm with conviction the company's commitment and activity on sustainability issues has important consequences. The presence of ambassadors is a great stimulus and a strong incentive for the entire company to do more and better.

2) Interview to Rossella Sobrero, President of Koinètica, Promoter of “Il Salone della CSR e dell’innovazione sociale”, Italy’s leading sustainability event. The interview was conducted on November 28th 2021

Versione italiana

1) Come valuta il percorso di sostenibilità intrapreso dall’azienda?

Mi sembra un percorso molto interessante che si è sviluppato in pochi anni con una rapida accelerazione nonostante il difficile periodo che stiamo attraversando. L’azienda dimostra di credere nella sostenibilità e continua a sviluppare politiche per la riduzione delle emissioni di CO2 e progetti innovativi come il Free Route. Interessante la scelta di ENAV di adottare un Tool per valutare gli impatti in funzione del raggiungimento degli Obiettivi di Sviluppo Sostenibile dell’Agenda 2030 delle Nazioni Unite.

2) Come pensa che gli stakeholders e i clienti di ENAV valutino il percorso di sostenibilità intrapreso dall’azienda?

Immagino possano valutare positivamente la volontà di ENAV di coinvolgerli ma non ho elementi per dare una risposta corretta. Mi sembra che l’Azienda ritenga i propri stakeholder un elemento centrale nella definizione strategia di sviluppo sostenibile e quindi che il giudizio dei portatori di interesse possa essere positivo.

3) Pensa che l'introduzione degli Ambassador abbia avuto un impatto su una maggiore sensibilità degli employees? Se sì in che maniera?

Credo che il coinvolgimento del pubblico interno sia sempre fondamentale. Mi sembra innovativa la decisione di ENAV di dotarsi non solo di un Sustainability Committee composto dai primi livelli organizzativi ma anche di Sustainability Ambassador che possono proporre nuovi progetti nell'ambito della sostenibilità.

1) How do you evaluate the path of sustainability undertaken by the company?

It seems to me a very interesting path that has developed in a few years with a rapid acceleration despite the difficult period we are going through. The company shows that it believes in sustainability and continues to develop policies to reduce CO2 emissions and innovative projects such as the Free Route. Interesting is ENAV's choice to adopt a tool to assess impacts in relation to the achievement of the Sustainable Development Goals of the UN Agenda 2030.

2) How do you think ENAV's stakeholders and customers will assess the sustainability path undertaken by the company?

I imagine that they can positively assess ENAV's willingness to involve them, but I have no elements to give a correct answer. It seems to me that the company considers its stakeholders to be a central element in the definition of its sustainable development strategy and, therefore, that the judgment of stakeholders can be positive.

3) Do you think that the introduction of ambassadors has had an impact on greater employee awareness? If yes, in what way?

I believe that the involvement of the internal public is always fundamental. I think that ENAV's decision to have not only a Sustainability Committee composed of the top levels of the organization

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