

# A Strategy Map for the Portuguese Air Force

Carlos Páscoa<sup>1,2</sup>, Tiago Oliveira<sup>1</sup>, and José Tribolet<sup>2,3</sup>

<sup>1</sup>Department of University Education,  
Portuguese Air Force Academy, Sintra, Portugal

<sup>2</sup>Department of Information Systems and Computer Science,  
Instituto Superior Técnico, Technical University of Lisbon, Portugal

<sup>3</sup>CODE - Center for Organizational Design & Engineering,  
INOV, Rua Alves Redol 9, Lisbon, Portugal  
cjpascoa@gmail.com, tm\_oliveira@live.com,  
jose.tribolet@inesc.pt

**Abstract.** The history of Mankind is a history of evolution, a history of increasing adaptation by man in relation to his environment. Mankind's history is also 'Organization's history'. As "Mankind's instruments" [1], organizations also need to evolve and adapt, finding new solutions to the emerging challenges and new objectives. Organization's first response to its challenges is strategy. Strategy is a "plan that configures certain company's aspects, which involves processes, places, people and time in order to achieve organizational goals" [2]. It is organization's 'flight plan' to 'navigate' towards the future it seeks, its Vision. Under the body of knowledge and principles of Organizational Engineering – and other theoretical-practical knowledge – this paper proposes a Strategy Map for the Portuguese Air Force, a tool that clarifies strategy and provides the organization with a mean of communication capable of generating motivation and creating focus and alignment, key features to 'move' the organization towards its Vision.

**Keywords:** Balanced Scorecard, Business Motivation Model, Non-Profit Organizations, Organizational Engineering, Strategic Management, Strategy, Strategy Maps.

## 1 Introduction

Today's organizations face unprecedented challenges: driven by globalization, fierce competition, increasing organizational complexity, technology's value and increasing development of optimization, the importance of information, the constant change and the speed at which it occurs. To survive and fulfill its mission, in an unstable and mutable battlefield as this, an organization very much depends on its ability to adapt, act and think strategically.

Alvin Toffler refers to the role of strategy in an organization: "*An organization without strategy is like an airplane weaving through stormy skies, hurled up and down, slammed by the wind, lost in the thunderheads. If lightning or crushing winds do not destroy it, it will simply run out of gas*" [3]. This reveals the importance of strategy, as the mean that one has to head towards one's future Vision, the destination,

being the primary instrument which first has to deal with all external and internal factors that affect the organization and must be taken into account, and considered the best way, to determine a course of action or several courses of action, which will allow the organization to 'navigate' in the intended course.

Over the years it was found that even though many organizations had strategy, they were having difficulties in obtaining the expected results. Robert Kaplan and David Norton suggested that this situation was originated by two major reasons: problems in strategy formulation, unfocused on vital elements of the business and incorrectly aligned with it; and problems in execution and implementation, much due to communication issues [4]. It is now time to introduce Strategy Maps, the strategic tool that comes to help organizations providing the missing link between both strategy formulation and execution [4].

Despite the particular characteristics of the Portuguese Air Force (PoAF), it is, nonetheless, an organization. As such, it is liable to be subject to concepts applicable to any other for-profit organization, since the scope of that application is properly adapted and developed over a consistent logic of reasoning. Thus, this article organization is as follows: section 2 goes through the necessary literature to develop a strategy map; section 3 focuses on the PoAF Strategy Map; section 4 presents the conclusion.

## 2 Concepts and Application

This paragraph deals with the theoretical framing that supports section 3, bridging Organizational Engineering to other knowledge theories, principles and models directly relevant and necessary to approach the subject theme, namely Strategy Maps.

### 2.1 Organizational Engineering and Enterprise Architecture

Organizational Engineering (OE) is a platform that approaches an organization in a holistic perspective, considering it as a complex system of processes that can be engineered in order to achieve specific organizational objectives [5]. Enterprise Architecture reflects how that complex system of processes is viewed through the prism of OE, allowing the capture of essential business elements used to develop 'maps' which assist the business design and management.

### 2.2 Business Motivation Model

A domain in which the organization must be clearly organized is in its business plan: *"the elements of business governance, how these elements are inter-related and what purposes they serve, id est, their business motivation"* [2]. The Business Motivation Model (BMM) provides a framework which does precisely this. For the purpose of this paper, BMM two major areas will be briefly focused since they embody the core concepts of the model: 'Ends' and 'Means' [2].

The 'Ends' refer to something that the business seeks to accomplish. It comprises the Vision and the Desired Results that the organization seeks to achieve and maintain. The Desired Results can be divided in Goals (more qualitative and general) and Objectives (more quantitative and specific) [2].

The ‘Means’ refer to the methods and instruments that one disposes to achieve the ‘Ends’. It comprises the Mission, the Courses of Action and Directives. The Mission describes what the business does on a day-to-day basis and makes the Vision operative since it focuses on achieving it. The Mission is planned by the Courses of Action, composed by Strategy and Tactics, and corresponds to an action plan to achieve the Desired Results, respectively Goals and Objectives [2].

### 2.3 Non-Profit Organizations

Non-Profit Organizations (NPO) are organizations where people voluntarily come together in order to fulfill personal and/or social needs that are not completely fulfilled, or should not, or cannot be fulfilled by other organizations [7]. NPO’s Mission represents the sole purpose of its existence and is the link between the organization and society. That is what it proposes to do and to accomplish [8].

PoAF cannot be regarded as a ‘pure’ NPO’s since is in fact a State Institution with a link to the Government. However, in spite of being more correct to integrate PoAF in the public sector, PoAF is also a NPO given its non-profitable nature, the very meaning of the Mission as its purpose, and since it also faces the same challenges this kind of organizations does in relation to its management, namely to prove trustworthy and the need to maximize the use of their resources.

### 2.4 Balanced Scorecard

Reviewing OE definition, OE intent is to engineer the organization in order to improve its performance so it will achieve its objectives. It is evolution that sets in motion this ever-constant need for performance improvement. While trying to comply with its demanding environment organizations must dispose of the right tools that allow them to make the right choices by providing the right information never losing sight of the ultimate ‘objective’, their Vision. Within this context, BSC arises as one tool available to OE, offering a performance measurement system focused on Strategy and Vision that is ideal for organization strategic management.

The BSC can be defined as a framework that allows the integration of financial and non-financial indicators in different perspectives, enabling a comprehensive view of the organization’s performance to the manager. BSC is built around the maxim “*What you measure is what you get*”, therefore a single measure of business is not enough to analyze the state of the business, its performance and evolution [6]. The metaphor presented by Kaplan and Norton is quite enlightening: “*Think of the BSC as the dials and indicators in an airplane cockpit. For the complex task of navigating and flying an airplane, pilots need detailed information about many aspects of the flight. They need information on fuel, airspeed, altitude, bearing, destination, and other indicators that summarize the current and predicted environment. Reliance on one instrument can be fatal*” [6]. Likewise, given the complexity that characterizes the management of an organization nowadays, managers, like pilots, have to be able to analyze the performance of various parts of the business simultaneously and process this information.

BSC presents four business perspectives, as follows [6]:

- Financial perspective: it is the central perspective that unfolds all the structure of the BSC; linked to profitability, seeks to establish how the organization is providing value to its shareholders; indicators answer: *“How do we look to shareholders?”*;
- Customer perspective: it aims firstly to identify the organization’s customers, to secondly identify their needs, so the organization can look into its performance through their eyes, seeking the answer to: *“How do customers see us?”*;
- Internal Business Process perspective: it identifies at which processes the organization must excel at, so it can monitor its performance on the most critical processes to guarantee customer’s satisfaction: *“What must we excel at?”*;
- Learning and Growth perspective: it ensures that the organization continues to develop its intangible assets (human, information and organization capital); therefore indicators answer: *“Can we continue to improve and create value?”*.

The BSC structure presented above relates to for-profit organizations and as such its unfolding follows the logic of value creation in these organizations. For that reason the presented structure is not valid for NPO’s as the *“ultimate definition of success for public and NPO’s is their performance in achieving the mission”* [4]. The logic of value creation in these organizations is therefore different and, like this, the financial perspective is no longer dominant, although its objectives are of great importance [4].

## 2.5 Strategy Maps

A Strategy Map can be defined as *“a visual representation of the strategy on a single page, showing how it is articulated to create value and what objectives and cause-effect relationships motivate it”* [4].

Strategy Maps evolved from the BSC as executives intuitively started drawing arrows linking the four perspectives objectives and explaining how they related between each other. This feature led Person to compare a strategy map to a roadmap: *“Just as a roadmap shows the path to a destination, the strategy map shows which chain of objectives will lead to successfully executing your strategy”* [9]. Although Strategy Maps evolved from the BSC, they are indeed the first step in the BSC methodology as they describe the strategy and the logic of value creation.

Two advantages of this strategic tool should be emphasized: firstly, the fact that it puts a clear stroke on the business strategy defining how it intends to create value, and how each individual role supports the overall strategy and fulfill the mission while moving towards the vision; secondly, as a visual representation of the strategy is a simple and organized model that is ideal for communication, that allows the organization to align efforts around the same objectives [9]; the combined focus and alignment will generate motivation proportioned by a better understanding of the business and of the individual role on the overall strategy [4].

Before an organization even thinks of developing a strategy map, Kaplan and Norton stress the importance of defining basic elements like the organization’s Mission, Vision, Values and Strategy; only then can an organization dwell on the architectural legacy of the BSC [4].

### 3 Building of the Strategy Map

In order to build a strategy map, a structure that best suits the business of the subject organization must be found. This concern is shared by Person while referring that the map should be in accordance with the ‘culture’ of the organization, regardless of the model that is pointed out by Kaplan and Norton as to the architecture of the strategy map [9]. This is because it will be that structure that will highlight the critical elements to be identified, defining the ‘views’ from which managers will look to the organization, just like on an airplane it is critical to have appropriate instruments to monitor the flight.

Once that structure is achieved, and having the business plan well defined – in accordance with the BMM and as stressed by Kaplan and Norton –, the issue is discussing the most critical set of elements to compose the map. These elements, which must be inter-dependent and derive from the mission and strategy, should configure a coherent model. This model will be all more valid if it portrays a more realistic picture of the organization.

#### 3.1 PoAF Business Plan

After analyzing the matrix documents that constitute PoAF strategy and strategic guidelines, it was possible to identify contact points between PoAF business plan architecture and the framework provided by the BMM. As pointed out by the BMM, PoAF also enunciates its Vision, Goals, Objectives – the ‘Ends’ –, its Mission, Strategy and Tactics – the ‘Means’ –, and even according with Kaplan and Norton, the Values. All these elements are correctly enunciated and disposed on a hierarchal way so there is a similar purpose on the efforts they concur to, as suggested by the BMM. Since describing all PoAF business plan elements would be impracticable in this paper, only the Mission will be presented while ensuring that the development of the map will be completed without interfering with reader's understanding.

**Mission.** PoAF Mission, as stated on PoAF website, is the following: “*Cooperate in an integrated way on the Military Defense of the Republic, by conducting air operations and by defending the national air space. It must also fulfill missions assigned under international commitments, as well as missions of public interest*” [10]. Closely related to its mission, is the PoAF motto “*Ex Mero Motu*” [10], meaning, at the smallest request, reflecting the merit that distinguishes it.

#### 3.2 PoAF Strategy Map Meta-Model

The meta-model is the structure upon which the PoAF strategy map model will be built on. Due to the particular mission and military nature of the PoAF, the meta-model will forcibly be different from a for-profit organization and even an NPO’s approach is not enough. It is worth looking at what similar organizations have been doing, namely the United States of America Army (USAA) and New Zealand Defense Force (NZDF).

NZDF strategy map architecture puts aside the Financial perspective and in its place identifies a Resources Management perspective, which pin-points the building bricks that the strategy needs in order to be carried out, according to the question:

“What are the resources we need to obtain and manage?” [11]. The same can be verified in USAA strategy map [4]. Moreover, NZDF also identifies a perspective, placed at the top of the map, that comprises the Vision, and one more, placed at the bottom, which comprises the organization Foundations, as considered the Values, Warfighting Ethos and People. Finally, both NZDF and USAA strategy maps rearrange the order of the perspectives, which directly reflects a different perception as to how the organization creates value [4] [11].

After considering the various inputs, PoAF strategy map meta-model was drawn out of these last two case studies:

**Table 1:** PoAF Strategy Map Meta-Model [12]

Vision	
Mission	
Perspectives	Customer
	Internal Business Process
	Learning and Growth
	Resources Management
Values	

### 3.3 Selection of the Strategic Objectives

At this point, interviews that were made on the context of the work gave an important contribution, as they allowed not only to bridge the author's view about the reality of the organization – given the ‘field’ experience of the entities interviewed – but also to make decisions concerning the construction of the strategy map.

**Customer Perspective.** Through analysis of interviews made across the organization it was possible to identify three types of customers appointed by the majority of the interviewees: i) Citizens; ii) State; iii) Allied Countries and Organizations. Once identified the PoAF customers, the following question is placed: What are the customer's needs? It is by meeting its customer's needs that PoAF produces value, but their needs are not all equal. By analyzing PoAF Strategy and Mission, as well as analyzing the interviews, three objectives were listed: i) Citizens: Generate Trust and Safety; ii) State: Operational and Organizational Success; iii) Allied Countries and Organizations: Cooperative and Reputed Ally.

The objectives of the customer perspective, along with the upper layers of the strategy map, describe what the strategy seeks to achieve. The perspectives that follow describe how it is implemented, materializing it.

**Internal Business Process Perspective.** With the previous perspective emerges the internal perspective that aims to answer the following question: At what should we internally excel in order to meet customer needs? The analysis of PoAF Strategy provides the answer. However, given the scope and detail of the documents, it is necessary to filter the critical internal processes. The interviews gave an important contribution at this point, since the interviewed consensually considered valid the translation of the strategy on the following seven critical processes: i) Affirmation of

Airpower: capability of a nation to effectively exploit its airspace, which extends from the means to the platforms and aeronautical facilities; ii) Execution of PoAF Capabilities: translated by the five mission types carried out: Training & Qualification, Common, Counter Air, Anti-Surface Force Air Operations and Support; iii) Operational Readiness and Residual: to ensure the critical mass to perform the operations, and also enough margin to respond to unforeseen operational requests; iv) Agile and Deployable Logistics: the support structure that allows the conduct of PoAF activities; v) Organization Management: critical to the organization operation is the correct management of it, which look to ensure not only organization survival but also a high level of performance in mission execution; vi) Building of an Organizational Culture: is the set of values, principles, standards, policies and assumptions that guide behavior and interactions in the organization, of critic importance once it dictates the organization attitude, way of being and acting; vii) Development of Good Relations with Foreign Entities: directly related to the image and credibility that PoAF projects towards its customers.

**Learning and Growth Perspective.** This perspective seeks to ensure that the organization can continue to improve and create value in the future, addressing the question: How to develop human resources, infrastructure and technology? The intangible assets must be developed in close alignment with the organization critical processes, in order to enable them. That involves specifying the skills and attributes required by the critical internal processes of the strategy. The following objectives were obtained and define the necessary investments: i) Weapon System Modernization: embodies the air defense means and combines the weapons, components, equipment and personnel necessary to support its operation and maintenance; ii) Technological Infrastructure Modernization: the greater and greater growing use of information technology and communications makes necessary and imperative this investment to support the mission; iii) Recruitment, Formation and Training: the third pillar to ensure value generation in the future must focus on the investment performed on people, the basis of every organization.

**Resources Management Perspective.** Completing the previous perspective, this perspective aims to identify the building bricks that the strategy needs, questioning: What resources do we need to obtain and manage? The following were identified as the most important: i) People; ii) Infrastructure; iii) Technology; iv) Budget; v) Doctrine; vi) Motivation.

**Strategic Themes.** No two organizations have the same perception about their strategic themes. These emerge from the most critical internal processes to the implementation of the strategy, thus they are quite specific to the organization and translate ongoing concerns of the strategy. The approach adopted for the PoAF strategy map was inspired in another case study, the United Kingdom Ministry of Defense strategy map, which consider the strategic themes as transversal to the whole map, defining a “*path to strategy fulfillment and mission achievement*” [4]. The PoAF Goals were selected: i) Manage with Efficiency; ii) Operate with Efficacy.

Lastly, the map was added of the “*complex web of interactions and causalities that supports the objectives*” [4]. In NPO’s the importance of these connections increases as these organizations strive to manage their limited resources.

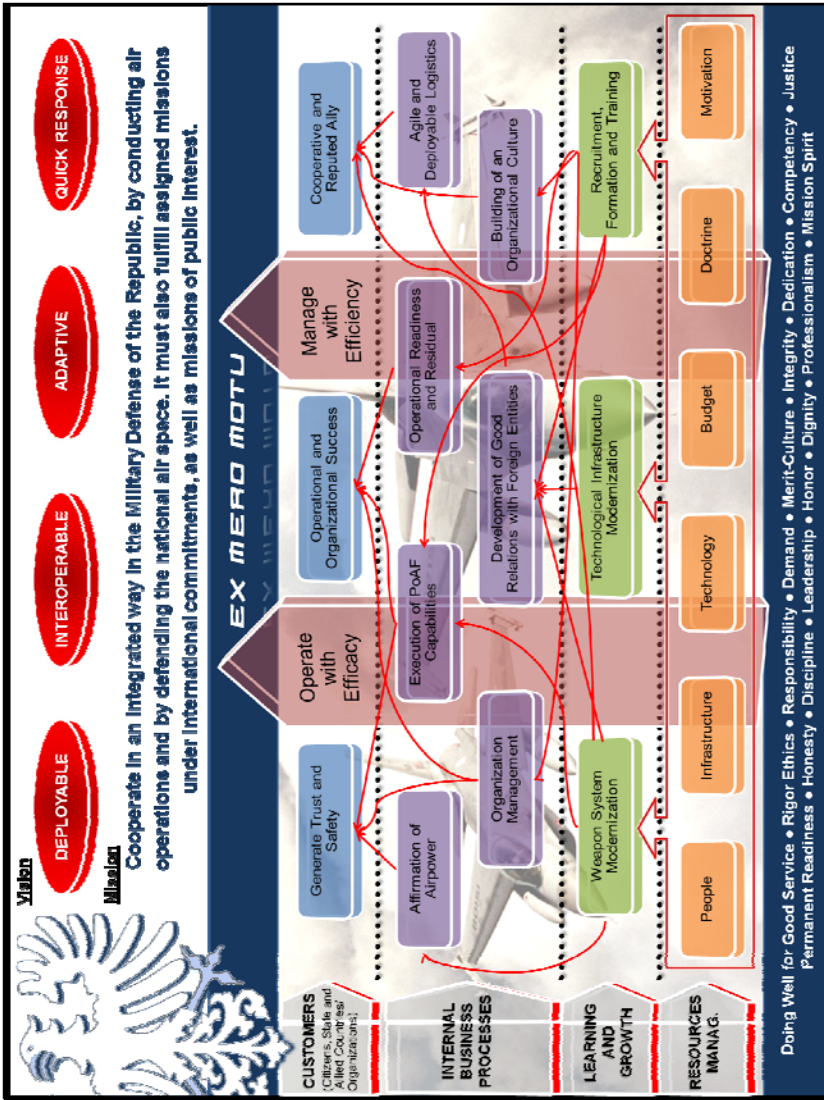


Fig. 1. PoAF Strategy Map [12]

The strategy map is complete, but how real is the value creation that is supposedly offered? Unfortunately, without implementation, there is only room for opinions, which, on behalf of the author and interviewees, give an assent on the matter, as long as the map is well implemented. This happens because no matter how good a solution is, it will not have impact unless it is executed in the proper way.

The strategy map creates value by clarifying the strategy and by being at the same time a communication tool common to the ‘organizational cockpit’ that explains to everyone ‘this is our Mission, our Vision, our Strategy, for which you are important because you do this, and these are our values that guide us’. It creates value because



it motivates people, it focuses on what is important to the organization and it aligns the efforts of everyone in common objectives and goals.

Due to the scope of the map presented – map developed to the strategic level, hence with a more broad-sense – the map can be ‘read’ by everyone, in accordance with one’s functions and responsibility, one will identify stronger connections to a set of objectives. One student pilot interpretation example follows: “*To me it means to study and train to acquire the knowledge, skills and competencies of an officer pilot, not only on air but on ground as well. It also means to strive selflessly for the culture of values that distinguishes military*” [12].

However the ideal would be if each person had their own strategy map. This would permit the generation of much more value to the organization as one would have objectives fitted to their action sphere. By developing a series of maps in a ‘cascade’ process, each entity, each context, regardless of the level, would have a specific strategy map properly aligned with the ‘general’ map which would clearly allow to see one’s contribution to the organization’s strategy and one’s fulfillment of the mission. The necessary alignment would ensure that the “*organization flied*” [13] all in the same direction, according to the same strategy, the same ‘flight plan’ [13].

## 4 Conclusion

To develop a strategy map it is firstly necessary to observe the specific characteristics of the business, which will directly determine the structure in which it will be built. After pondering some vectors emphasized by characteristics of NPO’s and also military organizations, the meta-model adopted to the PoAF strategy map includes the integration of the Values and the core elements of the BMM, namely the “Ends” and “Means”, which evidences the importance of having a clear vision and consensus around these elements of the organization business plan.

Once the strategy map is completed, it is important to understand that this tool is not a ‘miracle’ that comes to ‘save’ an organization, solving all the strategic issues from strategy formulation to execution. It does however, give a ‘big hand’ on the matter. The strategy map is a step in the organization’s strategy and is recognizable of immense potential. Potential that can be unlocked and converted into value if the organization puts the time and effort required to correctly implement it.

The value of the strategy map is in providing answers to people, giving them food for thought, as they see themselves integrated into a complex web of cause-effect relationships in which they are a link that is expected not to fail, because it is fundamental to the BP a, b or c, critical to the achievement of the objective 1, 2 or 3 of the strategy, which is central to fulfill the mission in a given way. By motivating people, by focusing on what is important to the organization and by aligning the organization efforts, the strategy map endows an organization not only with the ‘flight plan’, but also with the ‘fuel’ needed to ‘navigate’ towards its ‘destiny’, the Vision.

The map may not yet be inflexible and there must be room for change, to understand as inevitable and necessary, which justifies the search for methods to enhance this tool as a concern in this work, seeking no more than ensure the value creation in the future. In order to unlock even more value to the organization one more step can be taken, which involves exploring this strategic tool according to a

new dynamic. By identifying the cause-effect relationship between the objectives of the map and adding these of indicators, linked to a second layer of objectives, it will be possible to create an ‘instrument panel’, namely a BSC, work that can be futurly equated. While the strategy map describes the logic of the strategy, describes the organization’s ‘flight plan’, it does not guarantee that the organization is ‘flying’ under the assumed parameters simply because it is not itself a performance measurement system [13]. The BSC adds a new layer of detail which permits the analysis of ‘flight instruments’ – indicators – in order to establish if the ‘aircraft’ – organization – is ‘on track’ or if was affected by the ‘wind’ – environment – and diverted from the ‘course’ intended, thus needing to develop corrective actions.

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