Chapter 26
Organizational Knowledge and Innovation: The Cost per Flight Hour in the Portuguese Air Force

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ABSTRACT

Having the necessary instruments to steer the organization, allowing constant knowledge informed changes, is extremely important for an organization, while adapting, in an agile way, to the external environment. Like an aircraft, the organization must have a flight plan and instruments that provide an update of what is happening in real time. As an organization, the Portuguese Air Force needs to make good planning and possessing instruments for assessing, considering innovative manners, the progress made, allowing for a greater self-awareness. Every organization has key elements, essential for its operational success, and vital to plan controlled transformations. The objective of the research described in this chapter is to create a new instrument that provides complete knowledge about an organizational key element, in this case the Organizational Cost per Flight Hour that allows coping with transformation projects, by allowing innovative, knowledge-based, informed decisions.

INTRODUCTION

Today’s world witnesses a great economic revolution, which has been affecting several countries. These countries have adopted new measures in order to try to improve their economic situation. One of these countries is Portugal and as such measures have been taken that affect several public organizations. The military also suffered cuts in their budgets. Therefore, the Portuguese Air Force (PRT AF) had budget cuts, having to adapt to these new circumstances.

For a good adaptation of an organization to its environment, it is always necessary to have a set
of tools that fosters obtaining relevant information that allows assessing new strategies increase effectiveness and efficacy. When compared to an aircraft this set of essential instruments to “Fly” the organization is the called “Organizational Cockpit”. The better and more complete the “Organizational Cockpit” is, the better and easier will it allow decisors to monitor the organization’s path to attain its Vision and Objectives.

The research done by the Portuguese Air Force Academy, in direct liaison with the PRT AF Staff, procured to develop a model to consider different organizational costs (at the view of one essential key element) and calculate an organizational cost per key element. One example of the model use, in the PRT AF, is the Organizational Cost per Flight Hour (OCFH) that calculates de Organizational Cost (all the costs supported by an organization in relation to a specific key element) for an essential element: the flight hour. The OCFH can be defined as all the costs supported by the PRT AF in relation to the Flight Hour.

However, since the research details are not available for publication, after the presentation of the model, a theoretical case study is presented to illustrate its possibilities and benefits. The model is an innovative way to acquire knowledge on a chosen key element, essential to any organizational transformational project.

The chapter is divided in 5 main sections. After an introductory section, the section “Literature Review” describes the concepts studied and its contribution to the research outcome. The section “Model Development” describes, in brief, how each concept contributed to build the model and the methodology associated to its use, when defining the key components and presents the model developed to calculate the Organizational Cost of a certain key element. The section “Model Application” presents a theoretical example on model use. The last section concludes.

**LITERATURE REVIEW**

This research entailed studying and developing a Model that can bring organizations to consider global costs taking in consideration priorities and key factors that will be affected when changing key factor importance. It intends to guarantee that these key factors and their importance to the global effort are taking in consideration, for example, when considering transformation project that needs to change location of organizational resources.

The process of global calculation to aid decision making should consider scientific theories, models or frameworks that can foster transversally application within the organization. These are described in the next paragraphs.

**Organizational Engineering**

Organizational Engineering (OE) is the science that designs, improves, implements and operates an organization through the use of engineering and analysis methods with the following objectives:

- Fostering self-awareness, which is the perception of its external and internal environment;
- Improving:
  - Agility, which represents the ability to act quickly with a management effort in the accurate response to change. It also represents the ability to initiate changes in order to achieve business advantage (Allen, 2006);
  - Flexibility, which represents the “capability of identifying multiple ways to succeed and moving seamlessly between them” (Alberts & Hayes, 2005);
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