

CENTERIS 2013 - Conference on ENTERprise Information Systems / PROjMAN 2013 -
International Conference on Project MANagement / HCIST 2013 - International Conference on
Health and Social Care Information Systems and Technologies

Business Processes Improvement on Maintenance Management: a Case Study

João Abreu^{a,*}, Paula Ventura Martins^b, Silvia Fernandes^b, Marielba Zacarias^b

^a*Faculdade de Economia, Universidade do Algarve, Portugal*

^b*Research Centre for Spatial and Organizational Dynamics-University of Algarve, Campus de Gambelas 8005-139 Faro, Portugal*

Abstract

The adoption of business process improvement strategies is currently a concern of most organizations. The use of approaches to quality and service improvement and the quest for the benefits of this improvement on resource optimization enables organizations to achieve business objectives. Maintenance management also plays a significant role in achieving the goal of improving overall efficiency in the services of an organization, helping to maintain continuity and avoiding costly downtime. However, there have been few studies about business improvement in maintenance management. This paper presents a case study about maintenance management to realize business process improvement in an airport.

© 2013 The Authors Published by Elsevier Ltd.

Selection and/or peer-review under responsibility of SCIKA – Association for Promotion and Dissemination of Scientific Knowledge

Keywords: Business Process Improvement (BPI); change management; Information Technology Infrastructure Library (ITIL); Computerized Maintenance Management System (CMMS); maintenance management.

1. Introduction

Business process improvement (BPI) is a challenge to organizations trying to continually improve the quality of their services and to keep up their competitiveness. Organizations in many different areas, aware of

* Corresponding author. Tel.: +351800900; fax: +0-000-000-0000 .
E-mail address: jglabreu@gmail.com.

workflow optimization benefits on time and cost control, have adopted strategies and methodologies for process improvement. Today we can find a broad range of process improvement approaches, distinct from each other, either on its principles and techniques, or on the target area on which the improvements are focused.

Like other organizations, airports also propose to increase organizational performance by process redesign. In this type of organizations, maintenance management plays an important role in achieving the goal of improving overall efficiency in the services of an organization. A process-oriented view of maintenance actions, where collaboration and coordination can effectively become a critical factor. The motivation of this work is to provide appropriated methods to perform business process improvement, in particular with the aid of Information Technology Infrastructure Library (ITIL).

This case study is based on the corporate implementation of a maintenance management system, which in the near future will allow a cross-sectional analysis integrated with the core business processes of maintenance. The Maintenance Management Procedure is an important tool for the whole maintenance process, because it assists coordinators and managers in decision-making based on indicators previously studied, analysed, discussed and approved by all agents. In the recent past, all local and corporate organizational analysis were developed empirically and based on good maintenance practices and solid knowledge of technicians, where many decisions were based on life cycles and technological analysis of equipment. With the implementation of a truly corporate maintenance management system, the whole approach to maintenance has been developed through a repository with the same data structure in all airports, allowing both upstream and downstream visions of all processes involved as a multidisciplinary area [1].

The contribution of this paper is to present a solution for problems related to maintenance management, such as: lack of maintenance reports with a local and corporate perspective, lack of improvement actions (and/or correction) in the existing business processes and inability to obtain a truly corporate vision oriented to common goals across all business units. The final solution includes the development of an integrated information system to support maintenance management.

This paper is organized as follows. Section 2 describes the concepts, standards and indicators for maintenance management effectiveness. Section 3 introduces the case study based on a computerized maintenance management system for a corporate perspective in the Organization ANA, SA-Aeroportos de Portugal. It has subsections related to the development of the maintenance management procedure with appropriated methods and performance analysis, with a focus on the ITIL's approach. Section 4 presents our conclusions.

2. Literature Review

In this section we present the concepts, standards and key performance indicators related to maintenance management that are essential for defining the system presented in the case study. We conclude the section with a brief description of ITIL, since this is the selected approach for studying the system.

2.1. General concepts in maintenance

The definition of maintenance is based on the “combination of all technical, administrative and management activities of the life cycle of an asset, in order to keep it or return it to a state where it can perform its required function”[2], where the required function is “the function or combination of functions of an asset considered as necessary to provide a certain service”[2]. In a general overview, there are three major types of maintenance: preventive, corrective and improvement [3]. In theoretical terms they are defined as:

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات