# Chapter 1.2

# How to Use Information Technology Effectively to Achieve Business Objectives

#### **Antonio Goncalves**

Trás-os-Montes University, Portugal

#### Natália Serra

Polytechnic Institute of Setúbal, Portugal

# José Serra

OLISIPO, Portugal

#### **Pedro Sousa**

Instituto Superior Técnico, Portugal

#### **ABSTRACT**

In this chapter the authors show, by using a case study, how it is possible to achieve the alignment between business and Information Technology (IT). It describes several phases of project development, from planning strategy, enterprise architecture, development of businesses supporting tools and keeping dynamic alignment between the business and the IT. The authors propose a framework, framed under an enterprise architecture that guarantees a high level of response to the applications development or configuration as improves its alignment to business by solving some limitations of traditional software development solutions namely: difficulty in gathering clients requirements, which should be supported by the applications; difficulty to connect the organisation processes used to answer the client, which must also be integrated in the applications and the difficulty to develop the applications that can follow the business cycle. To test the approach, this was applied to a real case study consisting in the configuration of an application that manages the relationship with the clients.

DOI: 10.4018/978-1-61350-456-7.ch1.2

#### INTRODUCTION

The use made by the IT is recognised as crucial to the good performance of an organisation (Laudon, K., & Laudon, J., 2009). Different factors have been promoting and conditioning the changes on the IT namely (Spewak, S., 1993), (Henderson, J. C., & Venkatraman, N., 1993): minor duration of the company's business cycle; markets globalisation and group activities, competition and technologies revolution. Pressure for changing (Figure 1) may occur due to different reasons. For the new IT to be efficient, their development must be done in an organised way. The strategy of change of the IT must be consistent with the business strategy. This is the only way to justify the investments on IT (Amor, D, 2001) (Maes, R., 2000).

The framing of new technologies in the business offers great possibilities for the organisations that are able to benefit from the advantages of their use but it also means challenge to the IT management as the organisations become more dependent on them and their management specificity. In this complex scenario, the challenge means to identify the risks and the benefits that the IT represents to the organisation targets. In principle aspects, which are always present, are identified (Lankhorst, M., 2009): administrative automation, rationalization of means and processes remodelling.

The main challenge of this work consists in defining frameworks that permit aligning business strategies with applications. For such it was used a modified version of the Hochin Kanri Matrix where the CRUD table, which allows the alignment of the business with the Information Systems, is introduced. At last, to promote the development of the applications it is proposed the introduction of some principles that may assure the success of applications, namely (Reich, B., 2000): simplify; automate and integrate.

As such, we use an approach to the development of applications that enable a continuous and fast increase in opposition to more complex and more expensive solutions whose development is prolonged over the time and represents a major risk of failure.

These works follow the concepts: what is static alignment and dynamic alignment between business strategy and IT. In the formulation definition phase, the alignment is made just once and sets the components of business planning and the IT components. In the next development phase, the alignment often occurs by the use of revision and control of the execution methods of the plan components defined in the previous phase.

After having a tool that promotes the alignment between business and IT in the organisation it was noted that business demand to the IT increased, new development requested occurred and changes to the existing applications. This is due to the IT exposition. In fact, the requests always existed but

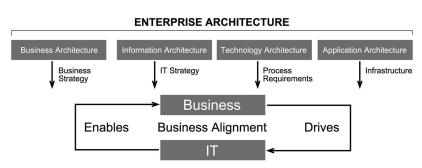


Figure 1. Alignment between business and IT

15 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/use-information-technology-effectively-achieve/62432

# **Related Content**

#### A Test-Driven Approach to Behavioral Queries for Service Selection

Laura Zavala, Benito Mendozaand Michael N. Huhns (2013). *Agile and Lean Service-Oriented Development: Foundations, Theory, and Practice (pp. 116-133).* 

www.irma-international.org/chapter/test-driven-approach-behavioral-queries/70732

## **Building Defect Prediction Models in Practice**

Rudolf Ramler, Johannes Himmelbauerand Thomas Natschläger (2018). *Computer Systems and Software Engineering: Concepts, Methodologies, Tools, and Applications (pp. 324-350).*www.irma-international.org/chapter/building-defect-prediction-models-in-practice/192884

### Towards a Programming Model for Ubiquitous Computing

Jorge Barbosa, Fabiane Dillenburg, Alex Garzão, Gustavo Lermenand Cristiano Costa (2012). *Computer Engineering: Concepts, Methodologies, Tools and Applications (pp. 1744-1757).*www.irma-international.org/chapter/towards-programming-model-ubiquitous-computing/62542

# Automatic Test Data Generation Using Bio-Inspired Algorithms: A Travelogue

Madhumita Pandaand Sujata Dash (2021). Research Anthology on Recent Trends, Tools, and Implications of Computer Programming (pp. 848-866).

www.irma-international.org/chapter/automatic-test-data-generation-using-bio-inspired-algorithms/261057

#### Impact of ICT on Innovation: The Case of Japanese SMEs

Hiroki Idota, Teruyuki Bunnoand Masatsugu Tsuji (2020). Disruptive Technology: Concepts, Methodologies, Tools, and Applications (pp. 1624-1651).

www.irma-international.org/chapter/impact-of-ict-on-innovation/231258