

Available online at www.sciencedirect.com**SciVerse ScienceDirect**

Procedia - Social and Behavioral Sciences 65 (2012) 70 – 75

Procedia
Social and Behavioral Sciences

ICIBSoS 2012

Business/IT Projects Alignment through the Project Portfolio Approval Process as IT Governance Instrument

Carlos Juiz^{1*}, Mercedes Gómez², M. Isabel Barceló³¹*Department of Computer Science,*²*Office of the Vice rector for IT,*³*Information Technologies Center,
University of the Balearic Islands*

Abstract

In this paper, we present the result of the alignment between the strategic and tactical objectives for information technology at a public company, precisely a public university, through the approval process of Information Technologies (IT) project portfolio. The main contribution of this work is to demonstrate that the three IT governance mechanisms: alignment, communication and structures, when used properly, are irreplaceable means to produce the value that the board expects from IT. We also depict part of our IT governance framework which uses these three mechanisms, with special reference to the business/IT alignment.

© 2012 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/3.0/).

Selection and peer-review under responsibility of JIBES University, Jakarta

Keywords: IT Governance, Business/IT Alignment, Strategic Alignment, ISO/IEC 38500, Project Portfolio ;

1. Introduction

Generally, IT governance aims to achieve the evidence that IT is a strategic asset and provides added value to the company businesses [1]. Thus, IT governance activities include mechanisms that seek IT alignment with objectives in the context of business activity. One of usual mechanisms to improve the alignment between the board (IT governors), the business units (IT projects applicants) and IT staff (IT acquirers or developers) is through a transparent Project Portfolio Approval Process. Among other benefits, this process should enable companies to communicate this alignment between objectives and projects effectively, creating more value from IT assets; and also when CIOs make decisions transparent, shared and public, everyone better understands this IT value [4]. Our work illustrates how these structures are related within the IT governance and providing an opportunity to improve communication between the governors (board members) and the rest of enterprise stakeholders.

The paper is as follows: in section 2 we will remind the importance of the Project Portfolio Approval Process as mechanism of IT governance. In the next section, we shall overview the strategic and tactical objectives for IT. In section 4 we will show the alignment statistics of the 2012 project portfolio. The paper ends with our findings that show the problems that remain open and the future work to be done.

2. Project Portfolio Approval Process as mechanism of IT Governance

Our IT governance framework is based on the ISO/IEC 38500 standard [2]. This general standard consists of two layers, governance and management, respectively. We have extended it with two additional layers, corporate strategy and line operation [3]. Every layer in our framework represents essential actions performed by their main stakeholders. The transition between layers is done through different instruments that depict the IT governance at University of the Balearic Islands (UIB) [5]. In particular, the Project Portfolio Approval Process is one of the most important instruments. The process is a virtuous cycle, which starts and ends with the board. It starts when the board seeks value from new IT applications, and finishes when a yearly project portfolio is approved. As IT governance instrument, the Project Portfolio Approval Process is one of the best mechanisms of alignment between business units and IT staff, since it formalizes this transparent process for all the stakeholders and even the general public [7]. This process at UIB runs the entire previously mentioned virtuous cycle at the IT governance framework, in an intranet application, where the main stakeholders must fill several forms out and browse them in order to select the next year IT project planning for the Information Technologies Center (ITC). This is a brief description of the virtuous cycle.

First, the board establishes the direction of IT governance (for a larger period than a year, usually for four years at UIB) setting the strategic objectives. The CIO sets the tactical objectives (for a variable period, ranging from one to four years at UIB). The results of these objectives (strategic and tactical) are IT plans and policies. The final selection of projects in the portfolio should be aligned with these plans and policies.

Then, business units and IT staff collaborate together to submit project proposals to the CIO office. These proposals are promoted by sponsors (members of the board at UIB) and then are evaluated by the CIO. The ultimate instance of the project portfolio construction is the formal approval of the board, closing the cycle of the process. Thus, the strategic and the tactical objectives, the project proposals coming from business units (departments and offices) and the final decisions are explicitly published at the IT governance framework.

In Figure 1, the Project Portfolio Approval Process flowchart is shown. Every flowchart state (circle) corresponds to a phase completing the questions at the intranet application in order to help the board about taking the decision of rejecting, delaying or executing an IT project. Double circles correspond to final process states. Each text box depicts the stakeholder who is on charge of the phase. In the following lines we explain briefly the interpretation of the first 8 states, which compose the project portfolio; although we believe it is descriptive enough in itself:

- State 0. The applicant describes the project and its scope, the important dates (desired and deadline for project execution). Every applicant must fill other argument questions out, which are crucial to evaluate the necessity of the future IT project (beneficiaries, value, cost savings, risk and justification).
- State 1. The ITC staff validates the application, i.e., understands what the applicant needs and incorporates or excludes some components to the application in terms of technical requirements or constraints.
- State 2. The applicant should agree or not with this technical validation, and dialogue with ICT staff until there is a formal agreement. The applicant should ask for a sponsor (mandatory) who belongs to the board.
- State 3. The sponsor reviews the application, appoints a functional responsible (belonging to the business units) and makes some comments about its partnership viewpoint.
- State 4. The sponsor may reject the project in this state and the process ends.
- State 5. The functional responsible is notified by e-mail and have access to the intranet to know all the details about the application.
- State 6. Technical evaluation of the project, including effort in person/months, resources needed, etc.
- State 7. The CIO (IT Vice rector) classifies the projects into the three possible categories: Planned (pending of approval), Subject to availability (pending of resources) or Unplanned (pending of rejection); and sets the alignment of the project with the IT strategic and tactical objectives. After this classification and alignment, the CIO recommendation is presented to the board for the project portfolio final decision.
- State 8. The board approves (state 10), rejects (state 11) or delays (state 9) the project within the annual project portfolio meeting.

The remaining states correspond to the project execution phases for the planned projects once they are approved by the board (States 12 to 18). There is some chances to suspend (holding) or cancel approved projects during execution to several reasons, including technical reasons, applicant reasons, lack of resources or CIO suspension.

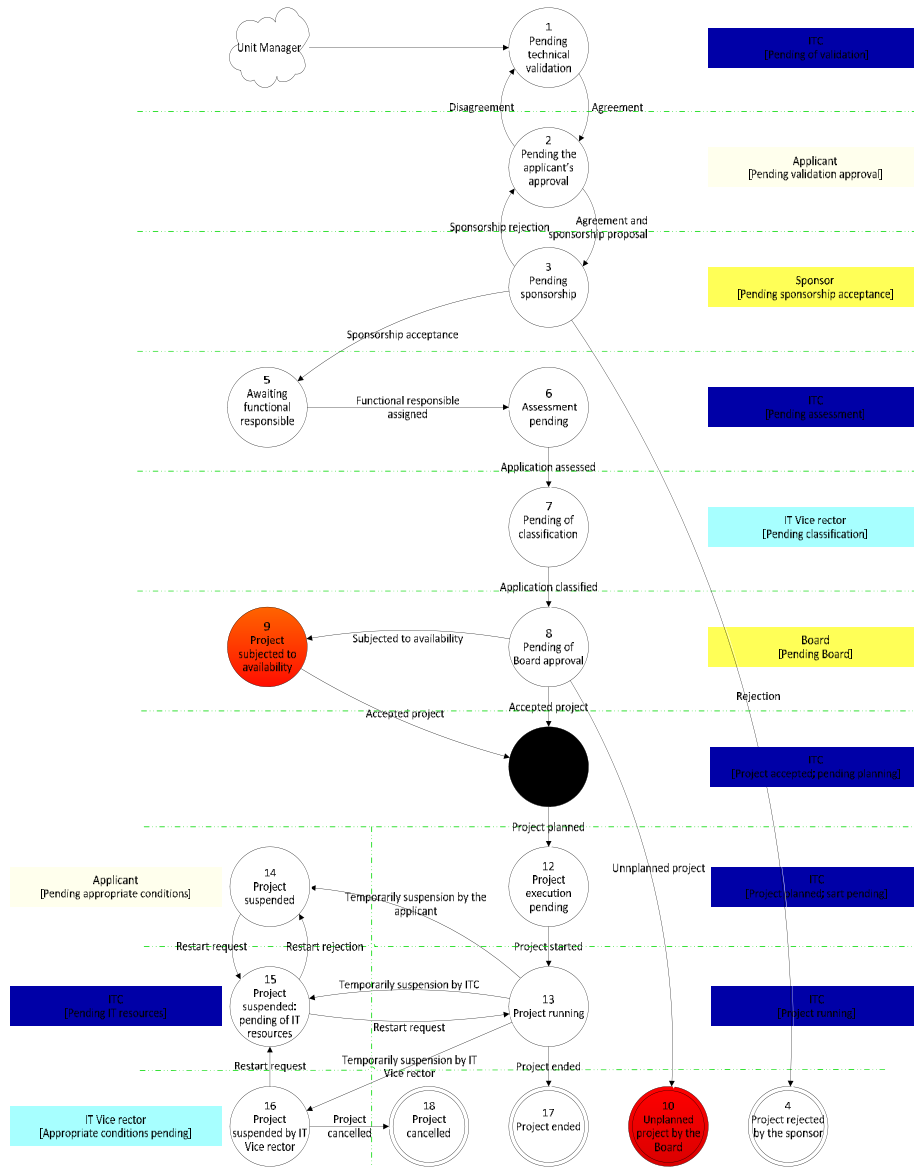


Fig. 1. Project Portfolio Approval Process.

3. Strategic Objectives and Tactical Goals

In order to ensure the alignment between strategy, tactics and projects the IT Vice rector assigns to each project the strategic objective and tactical goal (state 7 at Figure 1) that best fits and develops the future project implementation. In Figure 2, we may observe a summary of the strategic objectives of the IT Vice rector (and then for the UIB) for the period 2011-2014 (first column), tactical goals (second column) which can range from one to four years, and the project code (third column, we provide just one example).

This assignment of project alignment helps the board to follow the deployment of its plans through IT projects. Thus, the IT Vice rector may link objectives to projects in one snapshot by browsing the project proposal.

Of course, the final decision of the contents of the project portfolio does not correspond only to the IT Vice rector, it also corresponds to the board, but it is part of the IT Vice rector duties to keep the governance of information

technology. So the alignment between these technologies and plans of the board is a crucial activity to the board success, and consequently the success of the company.

As a result of the board decisions, the number of approved IT projects changes from one goal to another. Our work illustrates the distribution of planned, subjected to availability and unplanned IT projects for the year 2012. In fact, the main result of our work is that IT governance at UIB is based, partially, on the portfolio alignment with strategic and tactical objectives, i.e., the business, board and ITC alignment through selection of IT projects.

Since IT projects are defined as new solutions for users (including tasks, activities or larger projects), applicants usually request more than 100 projects per year at UIB. The 2012 portfolio contains 71 planned projects, 47 subjected to availability of resources and 32 unplanned (see Figure 3, upper left image).

STRATEGIC OBJECTIVES	TACTICAL OBJECTIVES	PROJECT CODE
0. Unaligned		
1. Change organizational culture by approaching to IT governance and IT management standard	1.1 Report progress through indicators of value	
	1.2 Develop IT management standards	
	1.3 Develop IT governance as a cultural change	
	1.4 Communicate and make management transparent to stakeholders	
	1.5 Modernize the IT Centre: building, real organizational chart and enhancing management clusters	
2. Progress in integrated management of the EHEA	2.1 Continue the adaptation of academic organisation software to the EHEA	
	2.2 Development of virtual computer rooms	
	2.3 Promote the virtual campus as an additional communication channel for teaching staff	
	2.4 Facilitate academic management tasks	
	2.5 Services development for UIBdigital users	
3. Develop common IT values	3.1 New corporate website development	
	3.2 Data integration and integrated interoperability	
	3.3 Development of external wifi	
	3.4 Launching of the housing and hosting services	
	3.5 Development of CanalUIB and webTV platform	
	3.6 Facilitate col-laborative work tools	
	3.7 Provide e-learning better support tools	
4. Improve use of resources to develop research and transfer	4.1 Develop an integrated management system of research	
	4.2 Assist the dissemination of research	
	4.3 Launch e-Labs	
	4.4 Provide software tools and hardware search	
5. Improve informatic applications for university management and eGovernment processes	5.1 Support of Administrative Process reengineering	
	5.2 Strengthen platforms for registration, processing, etc.	
	5.3 Initiate use of digital management tools: services and certificates. Digital Signature	
	5.4 Promote a single portal service-oriented	
6. Promote institutional knowledge-based management	6.1 Increase management applications integration in the corporate data warehouse	
	6.2 Data integration from different applications and subsystems	
7. Ensuring information security	7.1 Define IT security policy. Dispose of a secure and available infrastructure as well as reliable and scalable architecture.	
	7.2 Provides a contingency plan in case of IT disaster	
	7.3 Make appropriate actions to enforce national and EU laws and regulations.	
	7.4 Provide a system of "unique login" applications for university management	12ILOIDG01
8. Promote use of appropriate, ethical and supportive of IT	8.1 Continue improving the recycling program	
	8.2 Adapt Web content to persons of impaired capacity	
	8.3 Start reducing ICT power consumption	
	8.4 Complementary training offer	
	8.5 Increase transparency in IT acquisitions	
	8.6 Improve IT staff management	
	8.7 Promote an TTS integral customer service	

Fig. 2. Summary of strategic and tactical objectives for IT at UIB (2011-2014) and an example of the alignment

between objectives and a project.

4. Business/IT Alignment through IT Project Portfolio Approval

In this section, we show the results after the board decisions (see states 9, 10 and 11 at figure 1). Every histogram plots the number of planned, subjected to availability or unplanned projects. The planned projects should be developed for the ITC during the next year. The subjected to availability projects are only developed if circumstances change (markets require suspending a planned project, and then, maybe, there would be the conditions to select a project not selected during this approval process). Finally, the unplanned projects were not approved, so that they will not be developed during next year by the ITC. Thus, in Figure 4, the upper left image shows the distribution of IT projects and their coverage on the eight strategic objectives. The first situation that catches the attention is that there is larger demand for projects aligned with objectives 5, 7 and 2, respectively, than everyone else. Additionally, there is demand for projects not aligned with strategic objectives (target 0 in the histogram), and some of them were approved by the board. These projects are usually required, due to urgent compliance with external regulations coming from the administration or other institutions. For the rest of the objectives we may state:

- Strategic objective 1 will be developed just through projects aligned with improvements in IT management issues.
- The distribution of projects at strategic objective 2, are very different for any tactical goal.
- The strategic objective 3 is well covered through different planned projects.
- The strategic objectives 4 and 8 have no planned project, this year these objectives seem to have less preemption than others.
- In strategic objective 5, clearly, projects aligned with the tactical objective 5.1 are the more demanded. In this graph, there is one planned project aligned with tactical 2.5 (they nature is closer to the strategic objective 5 than strategic objective 2) and other project not aligned 0.0 but approved.
- Strategic objective 6 is well covered trough several projects. Only the tactical objective 2.4 has no planned projects, i.e. it has no approved project in the current portfolio.
- Projects aligned with strategic objective 7 are the ones more successful at the process of portfolio approval, as it is shown in the lower left image. These are mainly architectural and infrastructure projects.

5. Conclusions and Future Work

In this paper, we have presented the Business/IT alignment through the Project Portfolio Approval Process, as one of the mechanisms for implementing IT governance. We are using this process in our public company, i.e. the University of the Balearic Islands. The primary objective of the CIO is the alignment between business and IT. The key question for the University board is whether IT spending by their organization is in harmony with its strategic and tactical objectives (purpose, current strategy and business goals) and also creating business value. Our implementation of this project approval process not only can help to improve the communication between the University authorities (board) and IT staff, but also aligns strategic and tactical objectives with business unit demands for IT projects.

In order to understand the IT alignment we have overviewed our IT governance framework that our public university implements and how this approval process is included in this governance framework. Therefore, we also depicted the flowchart of the intranet application, in order to illustrate how different stakeholders are faced with the decisions to build the portfolio of IT projects. Finally, we have also presented the statistics about the alignment of the project proposals and the strategic and tactical objectives for the 2012 year.

In next works, we are going to present the validation of the process by the stakeholders' survey and the degree of satisfaction with the project portfolio selection. Additionally, the evaluation of the projects after their execution should be also published at the end of the year. Our IT governance framework shall be completed with these and other instruments in the future in order to continuously improve the governance transparency, following also some standards about good governance of public services requirements and users expectations.

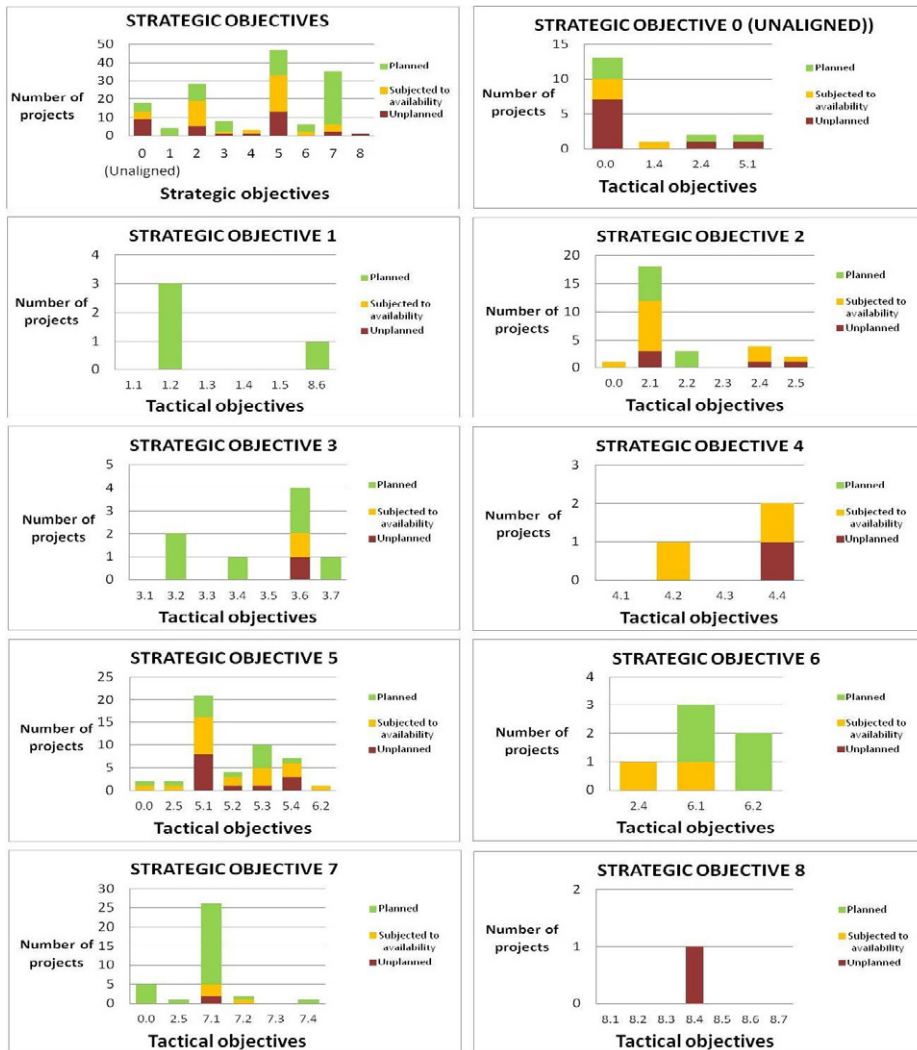


Fig. 3. Distribution of the IT project portfolio for strategic objectives

6. References

1. Holm, M., Kühn, M., Viborg, K. (2006) IT Governance: Reviewing 17 IT Governance Tools and Analysing the Case of Novozymes A/S. In Proceedings of the 39th Hawaii International Conference on System Sciences, IEEE Press
2. ISO-3 (2008). ISO/IEC 38500 ICT Governance Standard. <http://www.38500.org>
3. Juiz, C. (2011) New Engagement Model of IT Governance and IT Management for the Communication of the IT Value at Enterprises. Communications in Computer and Information Science Series, vol. 194, Springer
4. Weill, P., Ross, J.W. (2004). ICT Governance: How Top Performers Manage ICT Decision Rights for Superior Results. Harvard Business School Press
5. UIB website (2011). UIB Governança de Tecnologies de la Informació. Retrieved January 2, 2011, from: <http://governnti.uib.cat/> (in Catalan)
6. Feltus, C., Incoul, C., Aubert, J., Gateau, B., Adelsbach, A., Camy, M. (2009). Methodology to Align Business and IT Policies: Use Case from an IT Company. In Proceedings of the 2009 International Conference on Availability, Reliability and Security, IEEE Computer Society, pp. 762-767
7. Maes, K., De Haes, S., Van Grembergen, W. (2011). How IT Enabled Investments Bring Value to the Business : A Literature Review. In Proceedings of the 44th Hawaii International Conference on System Sciences