Introducing IT Cost Services Management in a small enterprise*

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Abstract

This paper shows a case study on the implementation of a financial management system related to IT services in a small enterprise whose core business is not IT-related. Process models (ITIL is the most popular) describe "what to do" but not "how to do". Moreover, small non-IT enterprises do not know the value of IT services provided by their providers, the value of the assets underlying the provisioning of those services, and the qualification of operational forecasting. Introducing Financial Management is the key to connect the business and IT in this way, getting operational visibility, and insight and superior decision making. This paper presents the first steps given in order to introduce IT Financial Management, enhancing decision making and obtaining operational control.

Keywords

Financial management, ITIL, non-IT small enterprise, IT costs, budgeting
This is a text document discussing the importance of IT investments and how they can be evaluated. It mentions the need for financial management of IT services, which is crucial for organizations to align their IT budgets with the real needs of the business. The document highlights the role of ITIL v3 (Information Technology Infrastructure Library version 3) in providing guidance on how to manage IT services effectively. It also mentions the importance of considering the financial aspects of IT investments in order to ensure that they are cost-effective and aligned with the organization's goals.

The research methodology section outlines the methods used to implement financial management in non-small enterprises. It includes reviewing process models, financial principles, and IT service management standards. The document emphasizes the need for a market-driven approach to IT services, which is located at the core of the ITIL Lifecycle and is the most relevant publication for financial management. It includes the following processes: Financial Management, Demand Management, and Management of Services Portfolio.

In conclusion, the document stresses the importance of aligning IT investments with the organization's goals and financial strategies. It advocates for a market-driven approach to IT services management that is focused on financial aspects and is aligned with the organization's overall objectives.

The document also discusses the concept of best practices for evaluating IT investments, which can be used as a reference for organizations looking to improve their financial management of IT services.
The financial management process of IT services is implemented through three main activities: budget elaboration and control, accounting and billing (also known as charging) [12]. Next a brief description of each is provided.

4 Financial Management

The financial management process of IT services is implemented through three main activities: budget elaboration and control, accounting and billing (also known as charging) [12]. Next a brief description of each is provided.

4.1 Budget Elaboration and Control

The goals to be achieved by budgeting are [7][12]:

- Predict and optimise the money necessary to deliver the IT services during a predefined period,
- Ensure that the business has enough funds to cover the needs of the IT services during the determined period,
- Ensure that the real expenses can be compared with the predicted expenses at any time,
- Allow for early warnings of excess or lack of resource use, and
- Ensure that income will be able to cover the forecasted expenses - in cases where charging is required.

Among the many different methods used to draw up a budget, the most usual are [7][12]:

- Zero-Based Budgeting: this type of budgeting does not take into account any historical data. It is needed to detail and explain all the outcomes, allocating the expenses and costs with existing resources and services provided. It is a costly activity and can be used a single time to define the first year’s budget and then use the Incremental Budgeting technique for following years, and
- Incremental Budgeting: consists of taking the previous year budget and modifying it according to the expenses forecasted by the IT department and the business management.

Once a method for budget implementation has been chosen, it is necessary to define the categorization for each cost element (associated to each service). This service categorization should be maintained over time to allow for follow-ups in future budget periods. Among the categories to be defined, it is needed to take into account all future costs that can be forecasted as well as existing contracts (i.e., Internet connection), real state rent, and staff salary, among others. Moreover, as much as possible, it is also needed to estimate all the known costs based on previous periods (i.e., overtime worked by the engineers in the previous fiscal year).

Table 1: Examples of Processes Vectors regarding IT Financial Management

<table>
<thead>
<tr>
<th>Process</th>
<th>Data Type</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Analysis</td>
<td>Descriptive</td>
<td>Internal/External</td>
</tr>
<tr>
<td>Budgeting</td>
<td>Financial</td>
<td>Historical/Projections</td>
</tr>
<tr>
<td>Accounting</td>
<td>Transactional</td>
<td>Real-Time/Cost Accounting</td>
</tr>
</tbody>
</table>

4.2 Accounting

The most relevant goals of this activity are [7][12]:

- Assess the money spent providing IT services and compare it with the forecasted budget,
- Identify and categorise the different cost elements (associated to services),
- Calculate the costs incurred by providing different IT services to both internal or external clients,
- Aid the business decisions based on the costs of IT services,
- Identify the costs associated to charges. Make daily decisions with full understanding of the implication regarding costs and risks,
- Offer detailed information regarding the sources of IT service expenses,
- Define an adequate profit strategy for acknowledging the benefits and costs provided by the use of technology and identify different working scenarios, and
- Perform a cost analysis and Return on Investment (ROI).

From the business point of view, the approach and definition of accounting and charging should consider the IT infrastructure strategy. As it has been discussed, among the main goals of accounting, it can be highlighted the tasks of defining the costs of IT and their association to IT services provided. Once the complete structure of the services has all costs associated by element, it is possible to determine the costs per service. Having this information, and depending on the accounting method defined by managers, it is possible to define the prices of IT services and finally to realise the billing of attribution of costs.

The main goal to apply an efficient cost control is to take into account these nature and to be able to assign, to each element of the IT infrastructure, the corresponding costs, following the definition of cost model defined by the enterprise.

4.3 Billing or Cost Attribution

The fact that the organization of IT implements a billing process or attribution of charges depends entirely on a business decision, according to its strategy and operation. If senior management decides that the organization of IT services should function as an independent business unit, receiving its full support, it would be possible to implement billing activities for:

- Recover all costs of the IT services provided, in a fair and accurate manner, from the customers that use such services, and
- Influence the behaviour of customers and users, making them aware of the cost associated to the IT services provided by the organization and encouraging them to make a good use of such services.

A billing or charging process should have the following characteristics [7][12]:

- Simple. The benefit of implementing the billing should begin with simple procedures, not complex ones. The complexity can lead to distort the current roles defined in the organization, prioritizing more administrative tasks that those of IT,
- Fair. There should be a balance between cost and charge, which will help in the search for efficiency, and
- Rest and development as an ingredient of the strategy of the business. If the business loses, the IT organization must not be inefficient and a drag for the business or the company's website to attract potential competitive customers.

Moreover, there are certain factors that should govern the requirements for charging policies to be implemented:

- Determine the required level of return from expenditures. If the organization of IT chooses to recover all costs, it may choose to function as an autonomous unit.
- Determine the desired degree of influence on the behavior of customers and users; this should promote more efficient use of resources without making the business less competitive, and
- Design the policy of charges to facilitate the recovery of the costs on the basis of use.

5 Case Study

THE COMPANY 91 SL (fictitious name for confidentiality reasons) is an organization with headquarters in Madrid founded in 1991. It currently employs 17 staff members and is organized around the following departments:

- Department of Accounting and Finance (DAF): is responsible for providing financial consultancy and the accounting of the company's clients, as well as its own accounting.
- Department of Labor (DL): is responsible for carrying out payrolls, TCI, update the Social Security status of the company's clients, as well as all the activities related to its own human resources.
- Department of Mortage Management (DMM): is responsible for everything related to the management of real estate certificates, deeds and processing of inheritance of the company's clients.
- Department of Legal (DC): is responsible for carrying out legal advice, issuing criminal certificates, wills, and everything related to the efforts related to the Division of Motor Vehicles (as, for example, renewal of a driving license).
- Department of IT (DIT): responsible for providing support to the rest of departments. In addition it is also responsible for ensuring compliance to ISO Quality 9000 and LOPD (Organic Law of Data Protection).

With respect to the infrastructure, THE COMPANY has a midrange server for hosting data and applications, 16 personal computers and 2 laser printers (all connected through the internal LAN). Each department only can have access to the applications needed for performing their daily work which are installed in the server. There are 4 matrix printers needed for printing official documents. Table 2 summarizes the infrastructure of the company.

The company also maintains a web site that provides all the services of the company, on the company's web page. The web site is hosted at a third-party ISP server, which also provides storage space. The company's web page is updated daily with official documents.

<table>
<thead>
<tr>
<th>Departments</th>
<th>Count (D)</th>
<th>Count (L)</th>
<th>Count (M)</th>
<th>Count (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Labor</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Legal</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Mortgage</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>IT</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>9</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 2. Infrastructure of the company by department

5.1 IT Services

The Department of IT consists of a single person (an engineer in computer science). The engineer is responsible for maintaining the infrastructure of the company, as well as solving the incidents and problems of the users of both staff and web users. So, the Department of IT provides the following services to the rest of departments of the company (see Table 3).

5.2 Financial Management of IT Services

The company currently works in an ad-hoc manner with regard to IT and only accounts for the overall costs of the different services and the staff of IT, also, it has no control of IT costs per department. Therefore, in the next sections the accounting of IT for the year 2009 is carried out, and based on it, an incremental budget is proposed for the year 2010.

5.2.1 IT Costs, Financial Year 2009

In 2009, the total costs incurred by the company were of €53,041.42 out of which €42,000 was related to the salary of IT staff. Facilities rent for external services such as electricity or water bills were not included in these figures.

Table 4 shows the costs of external service providers by each of the IT services during the year 2009. The column Service indicates the service in question, the column Provider indicates the name of the external supplier (fictional name) of the service, the column Price Costs indicates the corresponding fixed costs for the payments to external suppliers, the column Effort indicates the effort in hours devoted by IT staff to carry out a given activity (it is the effort by the engineer of the IT Department to carry out updating and maintenance of relevant services).

Table 4 shows the cost breakdown of the IT services for the year 2009.
Literature


Author CVs

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He has attained a BSc in Computer Science in Brazil at the Pontificia Universidade Catolica do RS (PUCRS). The nightly lectures of his undergraduate course allowed him to work during the day for major multinational companies such as Hewlett-Packard and Telefonica where he exercised his skills as a software developer and tech leader. He has further enhanced his technical abilities attaining a number of certifications, namely SCEA (Sun Certified Enterprise Architect), OCUP (OMG Certified UML Professional), SCWCD (Sun Certified Web Component Developer), and SCJP (Sun Certified Java Programmer). Currently Filipe Albero Pomar is finishing his graduate studies of MSc in Software Engineering at the Universidad Politécnica de Madrid. Filipe can be reached by e-mail at the following address filipe.albero.pomar@alumnos upm.es.

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