IT Governance Implementation – Case of a Brazilian Bank

Vilmar Grüttner  
*Federal University of Santa Catarina, gruettner@egc.ufsc.br*

Fernando Pinheiro  
*MBA Schulich School of Business, fernando_p_silva@yahoo.ca*

Anderson Itaborahy  
anderson.itaborahy@uol.com.br

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IT Governance Implementation – Case of a Brazilian Bank

**Vilmar Grüttnner**  
Federal University of Santa Catarina, Brazil  
Knowledge Management & Engineering Post-Graduation Program  
gruettner@egc.ufsc.br

**Fernando Pinheiro**  
MBA Schulich School of Business, Canada  
fernando_p_silva@yahoo.ca

**Anderson Itaborahy**  
anderson.itaborahy@uol.com.br

**ABSTRACT**

More than a way to create competitive advantage, IT plays a fundamental role in the banking market. IT Governance provides tools to manage IT structures and processes in order to appropriately support the business strategy. Implementing new IT Governance in a bank may be very challenging, especially when technical literature has not many examples in developing markets. Using an action research methodology, this paper intends to contribute to the body of knowledge by describing the phases of an implementation in a major Brazilian bank. Although some phases are not concluded, the proposed models and findings as the importance of a strong sponsorship, the workforce engagement, the commitment with new functions in order to bypass issues related to the reduction of “operational freedom” and power limitations are presented.

**Keywords (Required)**  
IT Governance, Banking, Implementation, Action Research, Strategic Alignment

**INTRODUCTION**

Over the last few years, Information Technology (IT) Governance has been a focus area for most executives of large companies. By recommending widely known practices for management, consistent IT Governance provides a framework for making IT decisions aligned with the overall business strategy of the company (Dallas and Roberts, 2006). Luftman (2000) writes that this alignment means to appropriately and timely apply IT in harmony with business strategies, goals and needs. For Goeken, Johanssen and Pfeiffer (2008), it is “the conversion of strategic objectives into applications and infrastructure procedures – at development and operations”.

To address usual markets challenges, such as constant economic changes, volatility of markets, and customer demands, companies have been required to improve management processes, aiming to make faster and more appropriate investment decisions. Considering that IT can transform industries and markets, its appropriate application is a way to achieve a competitive advantage (Luftman, 2000), related decisions could be crucial for the success of a company.

In this scenario, IT Governance plays an important role. A consistent IT Governance policy can provide the company with tools to ensure that IT investment drives business areas to meet their goals (Gerrard, 2006). Weill and Woodham (2002) registers that “as the importance of IT continues to grow and firms attempt to balance the benefits of entrepreneurship and time-to-market with the advantages of centralized control and standardization will also grow”. Specifically in banking, Ackermann, Yeung and van Bommel (2007) presents in their findings that “strong management and good governance of IT have a greater impact on its performance than scale of IT operations, bank`s home country, age of IT platform and amount of money spent on IT”.

Brazil is known as a benchmark for payment systems (Rumsay, 2009). The past of uncontrolled inflation forced local banks to build complex systems to support it (Accorsi in Maçada, 2001). Once inflation has been reduced significantly after 1994, Brazilian banks needed to reduce costs and offer new products and services in order to survive without significant floating gains (Salinas, Maçada and Santos, 1998). This was mostly made by huge investments in IT, turning it a fundamental part of any retail banking strategy in Brazil.

Although some papers about implementation of IT Governance in banks are found in the literature (Smith, 2008; Fonstad and Robertson, 2006; Hoffmann and Weill, 2004), mostly papers about this theme in Brazil are assessments of existing IT Governance practices (Cantón, 2008; Picada, Maçada, Rios e Santos, 2006). The contribution of this research, although
strongly praxis oriented, is focused on implementation issues observed during the process of changing an IT department in order to improve its governance.

This paper presents some partial findings of an implementation of IT Governance in a major Brazilian bank. Methodologically, this paper is based on action research. Baskerville and Myers (2004) defends the use of action research once it “provide one potential avenue to improve the practical relevance of IS research”.

The studied bank is presented in the first chapter, followed by a diagnostic of the IT department. After that, the scenario and the new model are described, as well as an implementation outlook and obtained results.

THE COMPANY

The company studied in this case is one of the leading banks in the Brazilian banking market. Its assets reached more than USD 250 billion and its workforce counts on more than 85 thousand employees. Approximately 15k service delivery locations cover the whole country.

37 departments compose the bank’s head office: 18 departments take care of the core business of the company, while the other 19 departments run supporting processes. IT has the second largest budget of the company and its workforce counts 3k people, excluding contractors. Approximately 85% of the IT budget is necessary for keeping the bank’s operations running and growing organically. The following table shows some information about investment, expenses and workforce in United States, Brazil and at the studied bank:

<table>
<thead>
<tr>
<th></th>
<th>USA Average</th>
<th>Brazil Average</th>
<th>Studied Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT expenses as % of revenue</td>
<td>4.7%</td>
<td>1.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>IT investment as % of revenue</td>
<td>1.2%</td>
<td>2.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>IT workforce as % of total workforce</td>
<td>6.8%</td>
<td>6.6%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

Table 1. IT Benchmarks (expenses, investment and workforce)

The company segregates IT into 2 sub areas: IT Infrastructure and Software Applications Development. The first sub-area is responsible for run IT infrastructure and systems, which includes IT architecture, change management, procuring and maintaining infrastructure contracts, and support for internal users. The second sub-area is responsible for managing and executing software application development projects, and for maintaining software engineering procedures.

IT DEPARTMENT DIAGNOSTIC

It is estimated that 90% of the demands for IT projects and interventions coming from business areas end up reaching the Software Application Development department. These projects are prioritized according to the following flow:

![Figure 1. Present IT project prioritization process](image)
Application systems are grouped by similarity of business and managed by an IT executive. For example, systems supporting all types of financing products, such as personal loans, mortgages and business working capital financing, were grouped altogether. Similarly, systems supporting data about clients and credit limits were grouped and supported by a second application development group, and so forth. There are 8 software application groups, each one counting on an average of 200 systems analysts and programmers in charge of maintaining and upgrading approximately 1000 computer system applications.

Any request of change or implementation of an IT solution must be negotiated by the business unit (BU) with the IT executive in charge of the group of systems analysts that supports that solution. This model resulted in each application development group having to manage a number of queues of requests, from different business areas, competing for the same IT resources.

Before a project starts, negotiation meetings are held until executives of business and IT areas can reach an agreement about the priorities. Usually, such meetings take place once a month, after which, a list of priorities are published. However, given the high frequency of the meeting and the willingness of BUs to request new IT projects, this list often changes, sometimes suspending or cancelling projects putting through all work already executed (from January 07 to October 08, approximately 19% of all IT requests were cancelled or suspended). These projects are classified into 4 categories:

- **Corporative projects**: Projects in this category are strategic, sometimes urgent, and demand large IT effort. Either the number of interfaces between system applications are high or the impact on IT infrastructure is significant, or both. This category of project usually brings a “heavy stamp” from the board of directors. Corporative projects have to follow market recommended project management practices, such as those from PMI, and are closely watched by the IT Committee. The company’s project management office (PMO) is responsible for gathering information about these projects and reporting them to the board.
- **Departmental projects**: Projects that demand medium to large IT effort. They can match the size of Corporative projects but their importance is usually limited to one business department, which is in charge of defining priorities for this type of projects.
- **Versioning**: small projects, up to 320 hours of development effort.
- **Consultancy**: projects where IT Department is demanded to support business areas in order to identify and propose IT solutions and improvement opportunities.

* Besides delivering the types of projects described above, IT department also executes the maintenance and operation of solutions.*

Unstructured interviews made with some BU executives showed their perception that the IT limitation in delivering projects might bring difficulties to achieve their business goals. Nevertheless, IT is considered a cost centre and which consequence is the inexistence of IT services chargeback. Another important point is that the bank does not request financial assessments of all projects and don’t account directly the business areas for the financial results of their projects.

These practices combined resulted in little commitment from business areas in adopting consistent criteria to select and request IT projects, pushing IT department to rush IT solution creation, many times compromising on quality and even on the scope of the project. In order to improve this situation, IT implemented changes like:
• **Project Management:** Some initiatives regarding project management include the adoption of market recommended practices and the creation of a PMO. These practices apply mainly to “Corporative Projects” (described above).

• **Software engineering:** the company adopted methods for requirements gathering and description (use case) and metrics for sizing software application development (function points), and created segregated teams for testing software applications. In addition, the company, based on the best software engineering practices, compiled a set of rules and deliverables that have to be followed and filled by software application developers.

• **Operations control & planning:** This area was created based on the industry concept of PPC (production planning & control). Among its roles & responsibilities are methods for planning changes in the production environment and capacity planning.

• **Sourcing:** In 2007 the bank created a department section to be in charge of managing IT related sourcing norms and of interacting with suppliers

• **Best practices:** a number of IT processes were adapted to comply with ITIL and CMMI concepts. Some of them are running according to ISO 20.000 and MPS.BR (CMMI-based framework, adapted to Brazilian reality).

Despite the fact that these initiatives show a clear trend towards improving IT management processes, other departments don’t perceive significant efficiency improvement. Some problems could already be determined:

• Little reuse of software applications and documented requirements.

• Software engineering rules and recommended documentation don’t fit well in all types and sizes of projects. In smaller projects, many of the produced deliverables is not useful for the programmer.

• Project managers have little influence on time or scope of a project, due to functional structure.

• Systems Analysts and Programmers perform a number of conflicting activities in parallel, such as providing support to users, maintaining systems applications, and taking part of a project

• Processes are not fully integrated.

**SCENARIO AND MOTIVATION FOR AN INTEGRATED IT GOVERNANCE MODEL**

Brazilian regulatory authorities have a historic tradition of a close and strict supervision over banks. Although Brazilian banks had not struggled during the subprime crisis and their consequences, concerns about risk and compliance increased significantly, not only because of the instability of the market since mid 2008, but also to protect the market value of major Brazilian banks that negotiate stocks in world markets.

The studied bank, despite being a leading player, started an aggressive growth strategy heavily based in acquisitions. These acquisitions added over US$60 billion in assets and more than 4 million clients. Business opportunities that came with such acquisitions came with significant complexity to integrate to the bank acquired businesses processes, IT operations, new branches, and new employees.

At the same time, decreasing interest rates forced banks to pursue operational efficiency (not only by making scalable growth possible, but also by increasing IT operations efficiency), explore new market locations and opportunities, and expand its services to social classes that were just partially assisted by the banking system. In all strategies, IT has a leading role.

A multidisciplinary team - composed by senior analysts from IT (applications development, infrastructure and project management), controlling, internal controls, human resources, security and strategy & organization - had as objective the transformation of IT focusing on improving agility, pro-activity and efficiency.

IT-Governance depends strongly on corporate governance and the whole corporative strategy, which means that IT processes should derive from IT strategy and also operational business process (Goeken et al., 2008). A very similar approach was used by the bank in its project: in order to meet regulatory requirements and to address strategic and operational issues, it is adopting a holistic point of view, not only based in best practices frameworks, but also in business needs and processes, considering the acquired experience managing IT over the last years. The bank decided also to follow COBIT recommendations, not only due to the best practices incorporated in it, but also because regulatory authorities audit banks based on this framework.

The main issues addressed by the bank were:

• High level of fragmentation of functions between different departments of the company

• High level of knowledge concentration in a few key people
• Lack of culture of managing projects by results
• Lack of culture of documenting or following processes
• Reactive behavior of IT towards business strategy and needs
• Unclear project prioritization process
• Lack of culture of planning on a long run

DEVELOPMENT OF A NEW IT GOVERNANCE MODEL

The project defined two main phases: Planning and Rollout. The Planning phase included identification of best practices and benchmarks, assessment of present situation, and definition of an appropriate IT Governance model for the company. The rollout phase included the fine-tuning and the implementation of the new IT Governance model.

During the Planning phase the Project defined fronts to oversee the following areas: Strategic Alignment (Alignment, Prioritization and IT-BU relationship), Operational Excellence (IT Controlling - Cost Management, Budgeting, Performance -, Service and Operations Management, Software Development, Project and Portfolio Management), Organizational Architecture, Human Capital, Change Management and Risk, Security & Compliance (RSC).

Still during the planning phase, each front selected a set of best practices to adopt as guidelines. Sources of information included not only scientific papers but also knowledge bases from consulting and business research companies. In addition, fronts also considered real case studies describing the implementation of these methods and frameworks in segments with an intensive use of IT.

Benchmark activity showed to be very challenging. Most of benchmark references of banking IT are from European and North American banks, which have quite different realities in comparison to Brazilian banks (Bernad, Lima e Souza, 2007). Nevertheless, all fronts found useful information from eight companies, five of them from banking & insurance sectors and from data sources like COBIT Online.

Major IT processes were assessed in order to identify its strengths and weaknesses. At this point, the Risk, Security & Compliance started assessing the maturity level of the 34 processes of COBIT (formalization, RACI, artifacts and indicators).

The gap between IT and Business strategies, which is one of the main issues, drives the design of most models. To design the new IT Governance model, the Project also took into consideration not only marked adopted frameworks but also successful practices that have already been adopted by the bank, and previous IT Governance experiences related to the specific market and business characteristics. The following guidelines oriented all model development:

• Increase Synergy between IT and Business Units
• Increase Transparency
• Specialization and Segregation of IT Functions
• Governance in IT Processes

To ensure the elevation of COBIT maturity level, fronts incorporated COBIT recommendations in all models. In addition, aiming further improvements, RSC front performed a second verification on main structures of each domain model and its processes, and started acting as a support for the other processes in order to ensure appropriate linkage between them.

The following topics briefly describe the most important models developed:

**Strategic Alignment**

- **IT Committee and Subcommittees**: At the level of Board of Directors, the IT committee defines the corporate IT strategy, watches for the alignment between projects portfolio and the overall company strategy, and prioritize major structural projects. IT subcommittees group Business Units by similarity of business processes in order to create a forum to prioritize BU’s projects. There are 10 Subcommittees, grouping a total of 37 BUs.
- **Strategic Alignment and Project Identification**: This model aims to create IT solution proposals to fulfill business needs. The model covers the identification of BUs’ strategic drivers and potential projects related to them. Before
submitting for appreciation by Subcommittees, business analysts assess the technical and economic viability of the projects, and categorize them according to their nature (innovation, growth, productivity and mandatory).

- **IT Project Prioritization:** Before submitting for appreciation by Subcommittees, business analysts assess projects proposals regarding their risks, technical feasibility, and economic viability. Then, projects are categorized according to their nature (innovation, growth, productivity and mandatory) and plotted to a matrix with benefit and risk axes in order to support the prioritization decision. Finally, Subcommittees decide about projects approval and prioritization.

- **Relationship between IT and BU:** In order to provide a stronger partnership and cooperation, this model proposed the implementation of the Business Analysis function in the company. Up until now, this role was only partially performed by systems analysts and programmers.

### Operational Excellence

- **IT Cost:** the developed model is an adaptation of traditional activity based costing (ABC) models. Resource groups were defined according to spending natures and benchmark studies, in order to provide external references to comparison. The second stage is composed by the main IT processes. Third stage costs (cost objects) were segmented in layers, providing costs of IT services (resource facing services), IT solutions & channels, and business products. Information produced by this model will support cost estimations in project design.

- **Sourcing:** based on a customized make-or-buy framework, this model aims to support outsourcing decisions and address bureaucratic issues related to it. Those issues require specific activities and processes in order to comply with contracting rules to which the bank is subjected to.

- **Service Level Management (SLM):** this model was developed based on best practices, but also considered the actual maturity level and specific issues in the Bank. A service catalog complements SLM implementation. Processes and templates to SLR (service level requirements), SLA (service level agreements), OLA (operational level agreements) and UC (underpinning contracts) were also defined.

- **Performance Management:** a set of indicators were developed for operational, tactical and strategic levels aiming to provide on time information about IT performance in all levels in customized dashboards.

- **Software Development:** will adopt clear software engineering processes, freeing developers from activities other than developing systems applications.

- **Portfolio and Project Management:** the actual model was reviewed to closely adhere to PMBOK guidelines. A program and portfolio management view was added to actual processes. This evolution is accompanied by the implementation of a more robust and customizable PPM (Project and Portfolio Management) tool.

### Organizational Architecture

- **Organizational Structure:** a new organizational structure was proposed to fit the new IT Governance models and roles. A premise to this work is to reconcile available resources, processes management, and functions segregation. Workforce size for each new department was defined by benchmark, historical data or by prototype (based on process complexity).

### Risk, Security & Compliance

- **Recommendations to maturity level improvement:** a set of recommendations to improve processes maturity to the level 3 (defined) were developed based on the assessment made on the previous phase. This set influenced the development of the previous models, although it cannot be completely fulfilled at the short run. Due to regulatory requirements related to maturity levels, specific plans were also developed and will be individually followed by a specific staff of RSC.

- **Interactions and Borders between IT Operations and IT Security:** following a best practice, the bank has segregated IT Development/Operations and IT Security areas. This model specifies clear roles and responsibilities in all fields of IT security and provides better links between security and operations areas.

These models support a new operational model for the IT department, which aims to implement a closer relationship between IT and business, changing the actual reactive behavior. This relationship means a partnership to come up with IT solutions that support the strategic goals of the company. Another objective is to segregate and to boost specialization of IT activities, in order to improve management and resource allocation, increasing efficiency and effectiveness. The designed operational model has 8 layers:
**Figure 3. Future Operational Model of IT**

- **IT Demand and Requirements Management** layer will manage the relationship between business units and IT. It should take part of the strategic planning activities and understand processes executed by these units, in order to identify their needs and to propose IT solutions on the form of project proposals to be included in the IT portfolio. Activities related to this layer are performed by Business Analysts.

- **Project Portfolio Management** should analyze alternatives to include projects in portfolios, identify potential conflicts and synergies, and facilitate IT subcommittees and corporative IT committee meetings. It is also in charge of project management and monitoring.

- **Solutions Development** develops application and infrastructure solutions required by the projects. There will be a specific function focused on solutions integration, aiming to promote the reuse of components, to facilitate integration with 3rd part solutions, and to maximize architecture integration layers.

- **Service Introduction and Monitoring** is responsible for quality assurance of every solution that will be released. Quality is assured by running effective tests, by getting BU approval, by following change and release management requirements, and by managing service level requirements.

- **Operations** should maintain IT environment and infrastructure at the determined availability and reliability levels. It is in charge of entire incident and problem management processes.

- **Architecture** will define actual and future standards of IT architecture and develop critical topologies. It should also support Demand & Requirements areas to identify recommended architectures or existent solutions to attend BU needs.

- **Governance** is in charge of providing instruments to improve IT management capabilities related to controlling (cost, budget and performance), to human capital, to IT strategic planning, to process and quality management and to RSC.

- **Security** will define strategies, policies, standards, and procedures to manage information security. It is part of Security department. IT Operations should run systems and infrastructure according to these rules.

**IMPLEMENTATION OUTLOOK**

The IT Governance Project started in September 2008 and should be concluded at the beginning of 2011. Ross and Weill (2004) point out that the process of changing existing governance is lengthy, once changes must be communicated and the new approach must be institutionalized.

The implementation has a 3 steps rollout. At the first step of rollout, the Project is implementing critical models in terms of size and impact, such as human resources. Although main lines of each model were already defined in planning phase,
additional revision of processes design, operational procedures and guides was necessary. Once a process is defined, it is implemented as a pilot to verify its behavior in terms of efficiency, effectiveness, workforce and time response. Pilot projects approach has been an important tool to provide real experience data, which allows fine-tuning of processes and models. Training teams for present and future allocations in the new functions is an important step of implementations. The implementation has a permanently support from Project front.

The second step should conclude models implementation and roll out the new organizational structure, making IT department to fully function according to the designed IT Governance model. Governance models will be detailed and implemented just in this phase.

Finally, in the third step, the Project will watch the new architecture, processes, and procedures running, in order to capture information that allows further improvement of models. It will also transfer model evolution issues to teams in charge of each function to solve them. At this time the exclusive team dedicated to the IT Governance implementation will be discontinued.

PARTIAL RESULTS
At the moment, the IT Governance Project is in the first step of rollout. Most processes regarding to “Strategic Alignment” vertical have already a pilot running, nevertheless there are still some definitions needed to detail the needed workforce for each process.

One key success factor in such implementation is Change Management. The company’s IT workforce usually welcomes changes that bring immediate results and almost no impact. This is unimaginable in projects like the implementation of a new IT Governance. Thus, Change Management front has to work hard to keep workforce well informed and involved in the change.

Although models were developed in partnership with IT and business areas teams and managers, it is still common to receive suggestions of deep changes in the models. These suggestions are mostly related to workforce size defined for executing the new functions, and to the new functions “modus operandi”. We observe that, although many teams are open to change, they also tend to execute new functions according to the old “modus operandi”.

The new model proposes some support and control structures and processes that do not exist actually. Some of these new functions may reduce the “operational freedom” of some areas and limit power of others. Because of these constraints, some focuses of resistance have been observed during the roll out of areas responsible for service introduction, demand & requirements management and governance.

Significant part of workforce is still very skeptical about the new IT Governance model. This is explained because some previous experiences in changing the IT department didn’t succeed as expected. Thus, part of the workforce is very reactive, waiting until the new model shows first positive results before they fully get engaged in the implementation.

These situations show that it is fundamental to have a clearly declared and strong sponsorship (C-level), not only to solve issues inside IT department, but also to solve issues involving business areas. Constant and consistent communication about obtained results helps to create a favorable environment. Showing that turning back to the old model is not an option, also helps to get people engaged, in particular during the transition between the existent and the new models when teams must execute actual and future activities. Personal and professional commitment of managers and their teams is key success factor for the implementation.

Although it has not a modeling approach, activities concerning human capital are also very important. The company has a strict human resource policy, which restrain to maneuver positions & salary standards. Nevertheless, some changes could be proposed to increase work satisfaction and improve organizational climate.

The presented results are just partial and may change during the next phases. It is expected that by the middle of next year, all three phases should be concluded and more consistent results and lessons learned could be obtained.

REFERENCES


