



ENTERPRISE ARCHITECTURE AND CORPORATE GOVERNANCE – A COHESIVE APPROACH TOWARDS CLOUD MIGRATION IN THE BANKING INDUSTRY

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Abstract

In this article, author aims to present a generic framework that can be used for the migration of processes from legacy delivery model to a cloud delivery model. The framework takes into account all of the organization's governing policies, laws and other internal or external factors that shape its activity. The study shows the importance of a cohesive approach between multiple organizational frameworks and the thorough analysis of the processes that are to be migrated. This will help the architects or business analysts to map business processes with all the implications from the business, legal and technical perspectives. Because Enterprise Architecture implementations can become very complex, frameworks must be tailored to fit the need of the organizations instead of trying to fit the organizations into frameworks. Even though Enterprise Architecture frameworks are designed to include other existing frameworks, we demonstrated that for the ease of use of our framework, organizations need to use it outside the Enterprise Architecture. This way, our framework can be applied in a simplified manner on a process by process basis without the need to build the whole Enterprise Architecture.

Keywords: Cloud, business models, corporate governance, enterprise architecture

INTRODUCTION

In our previous research articles, we presented a more generic view of the implications of the changes in the business models of organizations. These research articles aim to briefly introduce the implications of migrating legacy services, internal or external (offered to customer), to new service delivery models like the cloud.

In the previous article “*Developing cloud architectures in an enterprise framework*”, we proposed a new draft version of the framework containing a set of activities or steps to be performed in a migration. These activities revolved around Governance to underline its importance. (Zota et al., 2014)

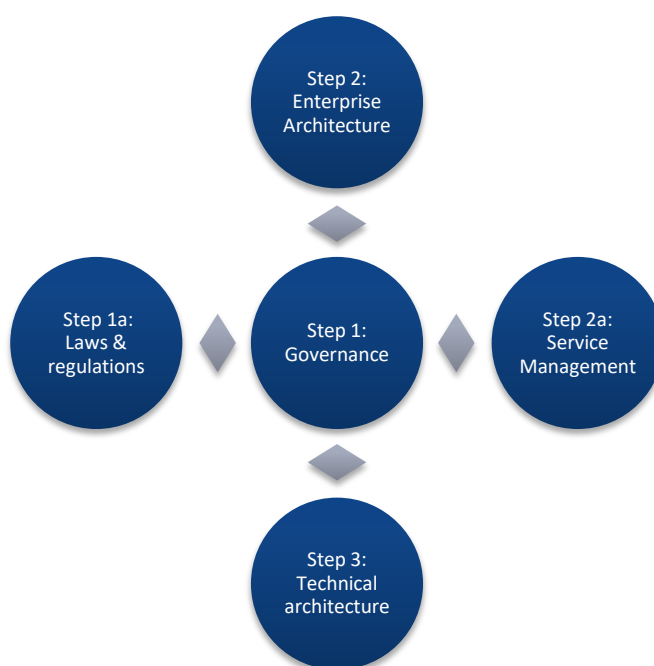


Figure 1. Standard cloud adoption steps (Zota et al., 2014)

The current research focuses on the Financial sector, analyzing how can our migration framework be applied to a bank’s governance framework.

Corporate governance and Enterprise Architecture

The corporate governance represents the framework of rules and practices by which a board of directors ensures accountability, fairness, and transparency in a company's relationship with its all stakeholders (financiers, customers, management, employees, government, and the community).

The corporate governance framework consists of (1) explicit and implicit contracts between the company and the stakeholders for distribution of responsibilities, rights, and rewards, (2) procedures for reconciling the sometimes-conflicting interests of stakeholders in accordance with their duties, privileges, and roles, and (3) procedures for proper supervision, control, and information-flows to serve as a system of checks-and-balances. (BusinessDictionary.com. Retrieved May 10, 2020)

Corporate governance has its direct implications on the strategy of every department linking their activity to one business direction.

Enterprise Architecture (EA) frameworks such as TOGAF often refer to the EA as being the representation of the entire enterprise that encompasses all of its information and technology services, processes, and infrastructure. (Executive overview, TOGAF, 2020)

In the banking industry, this approach makes the EA inseparable from the corporate governance and therefore in our study EA is included in the Corporate Governance.

Cohesive approach

From the beginning of our study we tried to understand how to better fit our framework within the organization. In the specific case of banking it is easier as the corporate governance comprises most business, legal and technical requirements and the key stakeholders of the organization.

Typically, IT supports all business areas of an organization and in most of the cases is a key stakeholder in the governance bodies.

The scope of EA in a bank (financial institution) is to align the corporate governance with the business strategy, the operating model and with the information systems. The EA should be able to contain the architecture vision across the entire organization. This cohesive approach should enable organizations to easily harmonize how technology is designed, implemented and operated with the corporate governance requirements.

Our framework integrates all the steps needed to be taken to design, implement and operate a service that is migrated from a legacy business model to a cloud business model.

Step 1 from Figure 1 refers to the analysis of the elements from the corporate governance that affect the service that is planned for migration. Step 1A refers to the laws and regulations that are linked to the corporate governance in general and to our service in particular.

Step 2 is referring to the analysis of our service from the Enterprise Architecture (EA) perspective if the EA exists or the creation of a similar model if it doesn't exist.

Step 2A analyzes the performance requirements of the service if they are already defined or defines a set of requirements.

Step 3 analyzes or defines, or both, the Technical Architecture of the service. This study usually includes all technical and security aspects.

Practical approach

Based on our previous studies and on studies like “The Corporate Governance Impact On Banking Performance Increase” by M. Bunea (Bunea, 2015), we acknowledged the main players in the Romanian market as BCR, CEC, ING Bank, BRD, Raiffeisen, Unicredit etc. We established that more relevant to the Romanian market are the banks that come from a local or state ownership such as BCR, CEC, BRD or Unicredit.

For the purpose of this study we have chosen to study the BCR Corporate Governance and how our framework could relate to it.

All of the corporate governance documents are public for the bank’s customers, stakeholders and regulation bodies. All of the material used for the purpose of this study remains the bank’s property and will be mentioned as such where the content from the Governance will be cited.

From BCR’s perspective, Corporate Governance means all rules, systems and processes implemented with a view to establish the relation between shareholders, management, clients, employees, suppliers and other parties involved in setting the objectives and the manner to achieve them, for increasing economic performance and, implicitly, the Bank’s value. It also highlights the efficiency of the management systems, namely the role of the Supervisory Board and of the Management Board, the responsibilities and remuneration of these structures’ members, the creditability of the financial statements and the efficiency of control functions. (BCR, Corporate governance report, 2016)

In respect of the migration of a process we will show how to apply the framework steps and conclude how the gathered data should be used. The actual process could generate, of course, more data than the one publicly available to us but it would be out of scope for our research as it will take too many resources to exhaustively go through all the processes.

The example process below shows how the information should be gathered in order to migrate from a legacy business is the Customer Relationship Management (CRM) which all the financial institutions have in some form. Based on the application of our proposed framework we will get an idea on how the information needed for migrations should be gathered.

Table 1. Data Gathering example for the CRM migration

| | | |
|---|--|----------------------------------|
| Process | Customer Relationship Management | |
| Version | 0.1 | |
| Authors | | |
| 0.1 | Fratila Alexandru | Initial creation of the document |
| N | | |
| 1. Corporate Governance | | |
| 1.1. LOB involved | Operations & IT, Retail & Private Banking, Financial, Risk | |
| 1.2. Approvals | Costs and Investments Committee/ Risk Committee of the Management Board | |
| Values | Client first, Transparency etc. | |
| 1A. Laws and regulations | | |
| 1A.1. Describe the laws that apply here | Law no. 31/1990 Government Emergency Ordinance no. 99/2006 Data privacy: (UE) 2016/679, (UE) 2016/680, Regulamentul nr. 679/2016 | |
| 1A.2. Do the laws affect the migration | YES/NO | |
| 1A.3. What are the affected LoB (Line of Business) | List Line of Businesses (stakeholders) here | |
| 1A.4. Recommendations | Necessary steps to be taken for compliance with the applicable laws | |
| 2. Enterprise Architecture | | |
| 2.1. Is an EA in place | YES/NO | |
| 2.2. Is EA in scope | YES/NO | |
| 2.3. Framework | TOGAF/OWN/Other | |
| 2.4. If EA is in place | A model of the Enterprise Architecture should be included here. A reference to the Architecture Repository can also be mentioned if the organization has one in place. | |
| 2.5. If no EA in place | Describe the process to be modeled or paste the existing model. | |
| 2A. Service Management (SM) | | |
| 2A.1. Is the process currently part of a SM initiative | YES/NO | |
| 2A.2. Is the migrated process going to be part of a SM initiative | YES/NO | |
| 2A.3. Is the service going to be defined at this step (NO if defined in the EA) | YES/NO | |
| 2A.4. Processes considered for this migration | List the processes used here | |
| 2A.5. Process maps | Paste in the process maps for the processes involved | |

3. Technical architecture

Table 1...

| | | |
|--|--|--|
| 3.1. Functional architecture | The model of the functional architecture should be displayed here | |
| 3.2. Functional requirements | All functional requirements are to be concluded here. These requirements are to be based on the internal customer need, the corporate governance and the regulations defined on the previous steps. If the organization has or will have an Enterprise Architecture the requirements can be linked with the Business Architecture. | |
| 3.3. Security architecture | Security architecture specifications and/or model should be described | |
| 3.4. Security requirements | All security requirements are to be concluded here | |
| 3.5. Technical Architecture | Technical model should be pasted here | |
| 3.5. Technical requirements | All technical requirements should be concluded based on the previous two requirements | |
| Approvals | | |
| Operations & IT | Costs and Investments Committee | Risk Committee of the Management Board |
| GO/NO GO | GO/NO GO | GO/NO GO |
| <NAME, Signature> | <NAME, Signature> | <NAME, Signature> |
| Recommended actions | | |
| Operations & IT | <fill in if necessary> | |
| Costs and Investments Committee | <fill in if necessary> | |
| Risk Committee of the Management Board | <fill in if necessary> | |

One such form should be used for both the existing process and the desired process. These forms can also be used as inputs for the baseline and target architectures as well for further developed architectures of TOGAF ADM. Version numbers should be iterated accordingly.

CONCLUSIONS

In our study we wanted to show the importance of a thorough analysis of the processes that are to be migrated from a legacy delivery mode to a cloud delivery model. We managed to show how many implications there are from the business perspective, to the legal and to the technical perspectives.

During the research we developed a thorough yet simple to apply framework that works on most organizations and that should be part of the review process for any cloud migration nowadays.

Generally, Enterprise Architectures can include or integrate with other frameworks. TOGAF for example could integrate the steps and methods in our framework but we wanted to keep it as generic as possible. TOGAF can be tailored and applied to any type of organization needing an enterprise architecture but to some organizations it's not desired or it's too complicated or not cost effective to create an Enterprise Architecture.

Keeping our method outside the Enterprise Architecture will give organizations the freedom to use it in a simple process by process approach or in more advanced ways, connecting to other frameworks or methods.

Architects should always keep in mind that the frameworks represent a way to structure work and to use best practices to maximize the benefits to the enterprise in the designed architectures. There is a general consensus in the enterprise architecture community that the architecture frameworks should always be tailored to fit the organization's needs. Any unneeded parts of the frameworks need to be removed to avoid unnecessary efforts while working with them.

Also, there is no need in going in a cross-organization EA design unless there is a specific need to do so. There is also some community consensus that you should add processes gradually to the EA's Architecture Repository only when they need to undergo a (digital) transformation.

There is no right or wrong approach to migration if it is done in a governed and structured way, always looking to meet the business need, the timeline and the budget.

Further research will include all the documentation needed for the adoption of the framework as well as step by step guides and typical use case scenarios for the some of the most important industries. Given the fact that cost efficiency should be at the foundation of any decision to transform a service, besides other legal or business factors, the framework will include a simple financial mechanism realize a Cost-Benefit Analysis.

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