Improving Architecture of Legal System by using TOGAF-ADM

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ABSTRACT

The article takes a case study of a state-owned utility company, XYZ, that provides nationwide electricity and serves her major contractors around Indonesia. Since year 2020 with Covid pandemic, the company has taken a hybrid work (work-from-home and work-from-office) for all her staffs. The article addresses the legal department where the entire process has been done manually with minimum computer system involvements. The hybrid work has made slow response of the staffs to serve other units and external clients, where it causes major dissatisfactions of the management of the company. Since last decade, XYZ directors have promoted digital transformation program in all her business units, including legal department. The article examines the use of enterprise architecture approach (TOGAF ADM) to support the digital transformation program that enables legal staffs to work in a hybrid mode and expect the similar work performance as offline work. The article addresses improving business process in legal department that ready to accommodate the latest IT trends. The outcome of the article is expected to address common issues related to digital transformation in legal department.

Key words*: Utility Company, Digital Transformation Program, Legal Department, Enterprise Architecture, TOGAF ADM, Hybrid work (WFH and WFO).

1. INTRODUCTION

In recent years, we have witnessed the fast growth of national economy in Indonesia. Consequently, the needs for electricity have increased exponentially. With the average growth of 4-6% annually, Indonesia needs major investments in utility industry. The government has targeted to build additional 30-50 GW power within 10 years. It is a challenging task that needs to be provided by XYZ company, as a state-owned utility company that provides electricity. To fulfill these needs, it needs cooperation with local and foreign contractors in installation, operation, maintenance, and distribution. Since 2020 started with the rise of Covid Pandemic, XYZ company has introduced a hybrid work, that enables all staff to Work from Home (WFH) and Work from Office (WFO). The XYZ management plans to maintain the hybrid work to improve flexible and productive works.

The hybrid work initiative also supports the corporate digital transformation program, that should be applied in all business units. The article addresses the manual work that is conducted within legal departments. The legal department was selected due to its slow digital adoption. Currently, there are thousands of contractors that are affiliated with XYZ company. They range from Small Medium Enterprise (SME)s to large corporations. Managing legal matters within a hybrid work is not an easy task, since the legal department has minimum exposure to digital technology, where major works are still conducted based on paper-work and manual system. The hybrid work has slowed down the performance of the work of legal departments and deliver impacts to the major contractors and investors. Major disappointments have been filed in the legal department. The slow performance of legal departments has received directors' attention and has become corporate program to introduce transformation digital in legal departments. The article examines the urgency of applying a new IT legal system for revising the business process in legal departments by using enterprise architecture approach. The article applies the TOGAF method that has advantages to provide systematic steps to assist the organization to implement digital transformation in legal department.

2. LITERATURE REVIEW

2.1. Enterprise Architecture (EA)
Enterprise Architecture (EA) is defined as interrelated principles, methods and models that used for design and realize organizational structures, business processes, information systems and corporate infrastructure [1]. Schekkerman addresses that EA is a blueprint, which is used to define the current condition of the company systematically and completely and the desired condition (target) [2]. The use of EA supports the integration of information flow and business processes, along with the information system that supports it. EA enables to remove duplicate data and support inter-operability system and avoid high costs for maintenance [3].

Enterprise focuses an area of activity and purpose in one organization or several organizations, where there is an exchange of information and other resources [4]. Architecture is the way in which a system consisting of network, hardware and software is structured. Architecture basically tells how the construction of a system, how each

component of the system is arranged, and how all the rules and interfaces (connecting systems) are used to integrate all the existing components. The architecture also defines functions, descriptions of data formats and procedures used for communication between each node and workstation [5]. EA enables to support rearranging the business architecture within a business environment that manages and operates every component of the business such as policy, operational, infrastructure, information [6]

2.2. Enterprise Architecture Framework

A framework refers to a blueprint that explains how the elements of IT and information management work together as a whole [1]. An enterprise architecture framework has three essential architecture such as:

1. Business architecture represents business model and structure of the company. It comprises of common business tools such as organisation structure, workflow, business process management, and so-on depicts how the organisation work.

2. Information system architecture comprises two major components such as data and application architecture. Data architecture describes how data is managed starting from collection through to transformation, distribution, and consumption; while application architecture describes the patterns and techniques that used to design and build an application.

3. Information technology architecture is a series of principles, guidelines or rules used by an enterprise to direct the process of acquiring, building, modifying, and interfacing IT resources through the enterprise.

The article applies the TOGAF framework to support the hybrid work in legal departments.

2.3. The Open Group Architecture (TOGAF)

TOGAF was introduced as The Open Group's Architecture Framework in 1995. Initially TOGAF was used by the United States Department of Défense (DoD), and further developed in various fields, such as: banking, manufacturing, and education [7]. TOGAF has been widely used in the industries, especially dealing with the advance technologies adoption. TOGAF is an open-source platform and provides a systematic method to build, manage and implement enterprise architecture, or known as Architecture Development Method (ADM) [8].

Figure 1: Architecture Development Phase Method [9].

The TOGAF ADM enables to utilise advance cloud technology and mobile application to support hybrid work. The application of TOGAF ADM is expected to provide the legal department to have flexible and effective work through digital technology.

3. METHODOLOGY

3.1. TOGAF ADM

The TOGAF ADM comprises of:

1. Preliminary stage examines current situation and expected conditions. Current legal work depends on manual work with traditional offline working mode. Management expects to migrate to a hybrid work that promotes flexibility and efficiency.

2. Architecture vision utilises the advance technologies such as: cloud computing and mobile application. The hybrid work will be integrated with corporate mobile applications.

3. Business Architecture depicts how an organisation is structured and can clearly demonstrate how elements such as capabilities, processes, organisation, and information fit together. The article examines business architecture revision to adapt with trend technology adoption.

4. Information Systems Architecture is a formal definition of the business processes and rules, system structure, technical framework, and product technologies for a business or organisation information system. The key elements of information systems architecture are data and applications in legal departments.

5. Technology Architecture relates to deployment of application components on technology components. The technology components to be discussed are cloud computing and mobile applications.

6. Opportunity and Solutions relates to potential benefits that can be developed through technology adoption. The article examines the benefits of hybrid work that enables legal staffs to develop productive works as effective as off-line work.

7. Migration Planning addresses important steps needed to be taken to ensure the hybrid work run smoothly.

8. Implementation Governance relates to new governance role to manage the implementation of new system.

9. Architecture Change Management relates to new paradigm to manage a hybrid work that can ensure all staffs' requirements are accommodated properly.

10. Requirement Management is a dynamic process that accommodate all requirement changes. All requirements in each stage are identified, stored, and fed into and out the relevant ADM phases. Requirement management links with corporate KM portal that enables to assist the migration process to hybrid work.

3.2. Data Gatherings

The article examines the TOGAF application in legal departments to apply hybrid work. With the hybrid work, legal staff are equipped with necessary working tools and procedures to assist their work. The data gathering has been conducted to key persons in legal departments, such legal managers, and selected staffs. Current complaints will be addressed within TOGAF design.

4.   FINDINGS

4.1. Preliminary

Based on the preliminary study in legal departments, we found several findings such as:

1.   Online works need to be facilitated to cloud access. Legal staff can work in the remote area and still connected to his/her colleagues in the legal office (branch) or HQ.
2.   Legal staff need technical assistance to carry out their works.
3.   Security measures need to be taken to ensure all staff fulfil security requirements.
4.   Regular audits need to be introduced to ensure security measures have been applied with no loopholes.

4.2. Architecture Vision

Architecture vision of legal system combines current business architecture and information system architecture. The information system architecture comprises of application (software), technology (infrastructure), and data (information). It is shown in Figure 2. Legal applications will be managed in HQ with its own cloud-based data center. The legal system integrates with HQ business process and work structure.
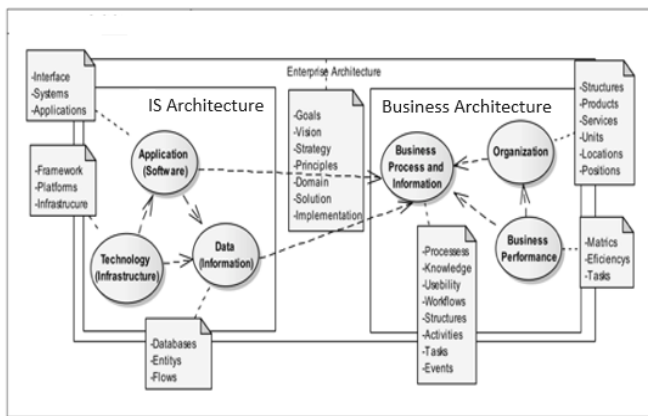

Figure 2: Architecture Vision of Legal Departments.

4.3. Business Architecture

Business Architecture comprises of:

a.   Corporate applications have documented goals, vision, strategy, principles, business domain, solution, and implementation. This data dan applications are stored in the cloud, and legal staff are granted access to these documentations.
b.   Current business process in HQ can be reused in hybrid work such as:
  i.   digital business process and information that is stored in e-portal and KMS that comprises of: processes, knowledge, usability, workflows, structures, activities, tasks, events.
  ii.   organization archives such as: structure, products, services, business units, locations, positions.
  iii.   Business performance indicators such as: KPI metrics, efficiency programs, tasks monitoring.
c.   Further improvement of attendance system and work activity reporting. It can be described as follows: (See Figure 3).
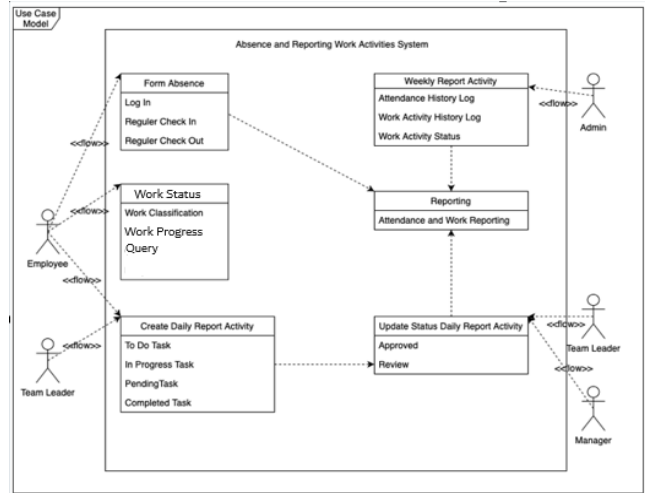

Figure 3: Business Architecture of Attending and Working System in Legal Department.

Figure 3 shows the mechanism of managing hybrid work:

1.   Attendance management manages who will take Work-from-Home (WFH) or Work-from-Office (WFO).
2.   User can take attendance (absence), report work status, and with team leader to create daily report activity.
3.   The form absence comprises of log-in procedure, check-in and check-out mechanism. The admin in HQ can monitor the reporting and weekly report activity to ensure the security measures have been implemented.
4.   Team leader supervises the daily report activity comprised of to do task, in progress task, pending task, and completed task. Team leader (remote) can deliver report status as approved or review status. Review status means further discussion amongst legal team is required, either it should continue in the local branch or in HQ team. If the discussion involves with HQ team, the team leader can consult with his/her supervisor in HQ to verify the report (review or approved).
5.   All status (review or approved) is stored in log files along with reporting logs. This security measures will be audited regularly.

4.4. Information System Architecture.

Information System Architecture comprises of:

a.   Corporate applications (software) that applies business process and information. Applications also manage all interfaces, systems interconnected applications.
b.   Technology (infrastructure) integrates corporate frameworks, platforms, and infrastructure.
c.   Data (information) covers databases, entities, and workflows (within business process and information).

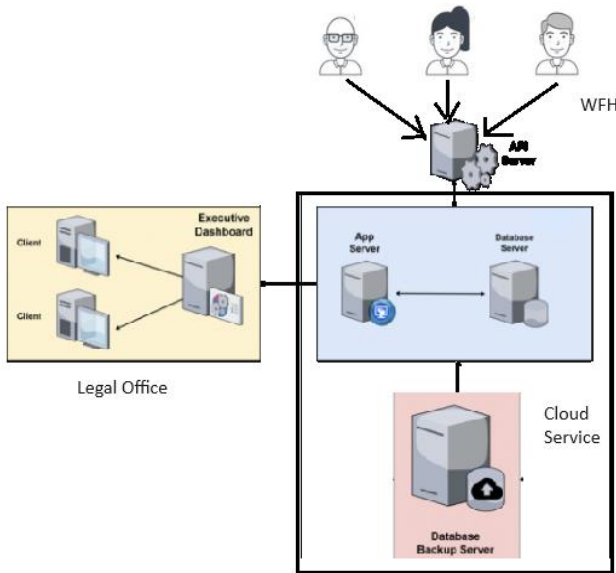## 4.5. Information Technology Architecture.

Figure 4: Topology IT Legal System.

We propose the topology of Legal IT system as follow:
- The remote staff calls to corporate applications through API access (Cloud service).
- API server establishes connection that allows mobile application (user) to corporate applications.
- API server carries out authorisation and authentication mechanisms and record all activities.
- Legal staff in local legal branch can collaborate in the applications with the facilitation of executive dashboard. Data in legal branch will be automatically duplicated in the cloud. The two separate system is maintained to ensure whenever there is interruption in cloud service will not disturb local operation.
- Cloud service comprises of corporate applications server and database server. Microservice feature is built-in current corporate application to assist easy feature development, operation, and maintenance.
- Regular database backup is conducted in database backup server (cloud service).
- All transaction can be monitored directly in GM Legal Office in HQ.

4.6. Opportunities and Solution.

The current cloud service is built-in with Robotic Process Automation (RPA) system that enables to synchronize all documents updates [10]. The monitoring attendance system within cloud enables to verify the authorization and authentication of each user to cloud access to ensure the security measures have been applied. Secure access provides comfortable access for offline staff to collaborate effectively with on-site staff. Legal staff can work with his/her colleagues on the rural sites. This feature enables easy and flexible access for legal staff to work with the nearest legal office (branch office) and HQ.

4.7. Migration Planning.

Migration planning has proceed with following steps as follows:
- Having all legal staff to sit in IT transformation program (cloud service and IT security).

- Simplify corporate HR regulations that enable hybrid work. All staff are provided with a schedule to conduct hybrid work.
- A comprehensive monitoring system is introduced to all hybrid programs to ensure effective work is achieved.
- Synchronization hybrid and onsite works are done regularly.

4.8. Implementation Governance.

Figure 5: Internal Audit Mechanism.

To ensure the IT legal system has been fully supported hybrid work. We propose a regular internal audit mechanism to develop and further adjust all necessary procedures and system. The audits are scheduled regularly once within 3 months (see Figure 5):
1. Arrange the meeting with random legal staff with his/her supervisor.
2. Fill the forms and checklists such as: audit IT legal operation checklist, security and usability audit report form, and attendance roster.
3. Standardize the audit assessment for all legal offices to ensure IT legal system can be implemented properly.
4. Getting feedback from auditees for further improvements.

Improving the IT legal system and regular audits are program improvements to support digital transformation initiatives in XYZ. Management has taken the initiative to apply COBIT 5 (business process integration) framework to integrate to create smooth program transition from top level strategy to all units.

4.9. Architecture Change Management.

The digital transformation program has covered the use of mobile applications, cloud services and simplified the business process and organization structure. Currently, the new Digital Transformation Office (DTO) has been established to ensure all business units have embraced the latest trend of IT technology. The TOGAF framework plan and implementation will be reviewed annually to ensure all complaints have been accommodated.

5. CONCLUSION

Since last decade, XYZ company has taken digital transformation initiatives in all its business units. The article takes a case study of digital transformation in the legal

department. The legal departments were selected due to their strategic position in XYZ company, where they deal with thousand national and foreign contractors nationwide. During Covid pandemic in 2020, the legal departments have received the most complaints due to their slow responses and it slows down the XYZ business process. XYZ directors have targeted the legal departments should be ready with digital transformation initiatives. The transformation is needed since the digital exposure in legal department is still dominated with manual works. The article proposes TOGAF framework to support the hybrid work that allows legal staffs to work online and offline simultaneously. With high security measures, the hybrid work is expected to produce productive results.

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