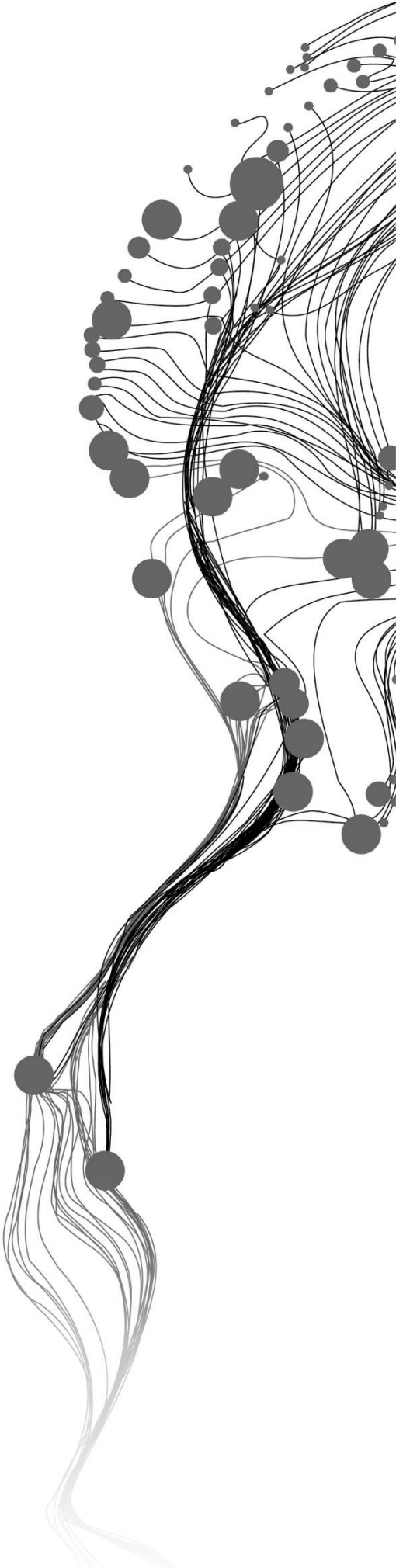


ASSESSMENT OF A LAND ADMINISTRATION SYSTEM: A CASE STUDY OF THE SURVEY AND LAND REGISTRATION BUREAU IN BAHRAIN

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March, 2018

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Dr. D. Todorovski
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DISCLAIMER

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ABSTRACT

Implementing good land administration functions are considered a key success factor for a country's development. To achieve this, countries that have best practices in land administration conduct a regular assessment for their land administration systems. Different assessment frameworks are designed for this purpose from different dimensions. The organizational assessment is one of the crucial dimensions that took the place of discussions by many researchers over the last two decades.

Land administration in Bahrain had started about 80 years ago and evolved through several stages. Recently, Bahrain is expecting to have major changes in the land administration sector due to the establishment of a Real Estate Regulatory Authority (RERA). Despite such drastic changes, no organizational assessment has been carried out to evaluate the current human resources, logistics and expertise of the Survey and Land Registration Bureau (SLRB), as to whether it is capable of dealing with these changes or not. Thus, the overarching aim of this research is to assess the current land administration system in Bahrain from an organizational perspective.

Based on existing literature, an assessment framework is designed to assess the case of Bahrain as the primary case study and Dubai as a best practice from the region. This framework consists of five dimensions and sixteen indicators. Primary data for this assessment are collected through interviews and analyzed using thematic analysis. The analysis is segmented into three levels of the organization; policy level (which covers decision makers), management level (which covers middle management) and administrative level (which covers operational staff). Outcomes are presented according to the SWOT matrix which highlights strengths, weaknesses, opportunities and threats of each dimension of the assessment framework.

Findings from this research show that SLRB is supported by sufficient legislation, good strategic plans and an adequate ICT base. However, the land administration system needs improvements in the clarity of legislations that support the mandate of land administration, efficient execution of strategy, stakeholder's policy and in the institutional stability. Thus, recommendations are developed to improve the current land administration system in Bahrain through the SLRB. These recommendations include the provision of detailed interpretation of legislation, the creation of a planning and partnership directorate, adoption of standardized processes, transforming to a fully digital environment, set a business model, reform institutional support policies and adopting of the designed assessment framework to conduct an organizational assessment for land administration organizations.

Keywords: Organizational assessment, Survey and Land Registration, Land Administration Assessment Framework, land administration

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LIST OF ACRONYMS

DLD	Dubai Land Department
ICT	Information and Communication Technology
KPI	Key Performance Indicator
LAS	Land Administration System
RERA	Real Estate Regulatory Authority
SLRB	Survey and Land Registration Bureau
SWOT	Strengths, Weaknesses, Opportunities and Threats
UAE	United Arab Emirates

1. INTRODUCTION

1.1. Background and justification

Land administration system (LAS), like any comprehensive systems, requires adequate capacities to deliver services and products. These services and products are managed by relevant organizations that, perhaps, not sharing the same structure in all countries. The management of organizational functions which vary between countries could be based on: registration system (title or deed), administrative system (centralized or decentralized), surveying system (general boundaries or fixed boundaries) or legal system (statutory or pluralism) (Bogaerts & Zevenbergen, 2001). In addition, some governments suffice to ensure that land administration organizations maintain their core functions of securing and providing reliable land information. However, others argue that LAS must not only stick to its core functions but also should provide integrated land administration services (Agunbiade & Kolawole, 2016).

The significance of having an assessment for LAS is that land administration functions are closely associated with other socioeconomic factors which could have a direct impact on the country. Ultimately, LAS aims to provide security of land tenure for society by establishing reliable land information and land-based transactions. Therefore, LAS organizations should have a regular assessment to ensure whether they are achieving the national objectives for the country or not (Ali, 2013). This evaluation could provide a transparent view for stakeholders about the status and thus outline areas that need to be improved. It can also lead to a reduction in the number of required procedures, transaction time, and cost, which in turn facilitate related services such as: access to credit, issuing building permits, and acquiring for infrastructure services (World Bank, 2015).

Literature has mentioned several assessment tools for LAS. Examples of these tools are: Land Governance Assessment Framework (LGAF) from World Bank (Deininger, Selod, & Burns, 2012), and Doing Business also from the World Bank (World Bank, 2017a). However, none of them are dealing specifically with LAS as an organization (Sergei, Burdyco, & Miroslave, 2017).

As organizations that deliver products and services, LAS need to be assessed in terms of performance concerning their mandate. Although there are some attempts to create assessment models for LAS, there is no standardized model that is accepted internationally. This is mainly due to contextual differences that reflect the social and cultural components of each society. Hence, it is difficult to create a unified model for all these distinguished systems (Steudler, Rajabifard, & Williamson, 2004). In the same context, recognizing that selecting an assessment tool is not a straightforward decision, designing a specific tool for a case study could increase the efficiency of evaluation (Lusthaus, Adrien, Anderson, Carden, & Montalvan, 2002).

Accordingly, researchers tried to build assessment models that can be suitable for some areas or conditions. Some of the common concepts in evaluating LAS are effectiveness and efficiency. Effectiveness means that whether LAS achieves required objectives or not, while efficiency means whether if LAS is fulfilling its aims with best manners or not (Giff & Crompton, 2008). Although both concepts are important, this research will focus on the efficiency concept as it can distinguish more between organizations that have better management of their resources (Bartuševičienė & Šakalytė, 2013).

One way of assessing LAS is comparing one system to best practices in another country. Several studies have referred to the development of LAS in different countries to get evidence for improvement. On the practical side, several countries are considered to have good practices in implementing land administration, which comes as a result of having in place a functional and efficient organization. An example in the middle east, for instance, is United Arab Emirates (UAE), and particularly Emirate of Dubai which ranked first in the middle east in easiness of registering property in Doing Business report and 11 on the world (World Bank, 2016). This may be attributed to the high growing rate, a dynamic legal framework that recognizes people rights, and one of the easiest places to buy and sell properties (World Bank, 2017b). However, focusing only on one-dimension classification (i.e., title system, technical aspect) might not be enough to describe the efficiency of LAS in a country. Hence it is necessary to discuss the organizational framework that processes are carried out in (Zevenbergen, 1998).

Therefore, LAS can be seen as an organizational system which includes the management of people, technology, and process in as fundamental elements for the organization (Chen & Popovich, 2003; Ravichandran & Rai, 2000). In addition, the organizational system is the main part of any organization to implement their mandates. So, developing the technical system for the organization in isolation of the organizational system is not enough to get successful results (Ali, 2013). Accordingly, seeing the LAS from an organizational point of view could add another dimension to the shape of the organizational system as a service provider that could affect the outcomes of the assessment.

A good organizational system could create harmony between carrying processes and providing adequate services to maintain societal needs. Thus, an organizational assessment is required which is considered as a systematic process to get information about the organization with regards to factors that affect its performance (Donaldson, Azzam, & Conner, 2013). This will improve the performance of the organization and avoid any possible risks. Hence, developing the right organizational assessment tools for LAS will play a significant role in this context. Some researchers argue that the evaluation of LAS should be conducted internally, while others argue that it should be carried out by an outsourced independent body (Lusthaus et al., 2002). In addition, others indicate that an organization could be seen on different levels, thus, the policy level, management level and administrative level (Steudler et al., 2004).

Among the tools commonly used is SWOT analysis which can be performed for the purposes of evaluation (Taleai, Mansourian, & Sharifi, 2009). It can identify the strengths, weaknesses, opportunities, and threats for an organization in a way that it can define the current situation for it. Furthermore, the output from SWOT analysis is presented in a matrix that can provide a well-structured base for setting organization's strategy (Houben, Lenie, & Vanhoof, 1999). Hence, suggested strategies can be formulated to define the recommended direction for the organization.

1.2. Land administration in Bahrain

Land administration in Bahrain dates back to 1924 when it was established. Since then it has evolved through several phases of development in the organizational structure at the different epochal moment in time (SLRB, 2017a). Currently, two leading organizations are responsible for a land administration which are:

- Survey and Land Registration Bureau (SLRB): which is the authority in charge of all survey (cadastral, topographic and hydrographic) and land registration business in Bahrain. Land titles, land certificates, ownership information, land value, topographic maps, and hydrographic charts are the main products and services provided by SLRB. Bahrain has full coverage of cadastral and topographic maps. In addition, all country's lands considered as 100% registered as state land (government) or private ownership.

- Ministry of Works, Municipalities Affairs and Urban Planning (MoWMAUP): which is the ministry with the mandate and responsible for all activities regarding planning, zoning, and building. MoWMAUP has launched the National Planning Development Strategy (NPDS) in 2007, which is considered as the land use policy for Bahrain (MoWMAUP, 2007). Zoning plans, master plans, and developing permits are the main services provided by MoWMAUP.

1.3. Problem definition

In the Kingdom of Bahrain, where land administration started more than 80 years ago, the land administration sector has passed through several stages beginning with “general survey” and recently reached a new version of land registration law through changes in administrative, technical and technological levels (SLRB, 2017b). Ongoing parliamentary discussions for change in the land administration domain include the establishment of a Real Estate Regulatory Authority (RERA) (Trade Arabia, 2017) and adoption of a taxation law which will be implemented at the beginning of 2018 (BNA, 2017).

In recent times the government has put in place some austerity measures, and this has resulted in reduced budget allocations for a land administration which affected staff recruitment drastically reducing workforce compared to increasing mandate (Reuters, 2016). Although lately, the government has intervened considerably in the land administration sector, however, there has been no assessment of the current land administration structures to identify its strengths and weaknesses towards addressing present and future challenges. This study, therefore, seeks to assess the LAS of Bahrain at the organizational level by comparing with best practices of the case of Dubai and using SWOT analysis.

1.4. Research objectives

The research has main and sub-objectives as it is shown below.

1.4.1. Main objective

This research is aiming to assess the current land administration system in Bahrain from an organizational perspective.

1.4.2. Sub-objectives

In order to achieve the objective of the study, the following sub-objectives have been defined from the main objective:

- Design a suitable framework to assess land administration organization.
- Define the current status of land administration organization in Bahrain through selected dimensions.
- Define the current status of land administration organizations in Dubai which is considered to be a best practice with respect to selected dimensions.
- Assess the efficiency of LAS in Bahrain according to the selected dimensions.
- Provide recommendations for organizational improvement for SLRB based on SWOT analysis.

1.5. Research questions

The outlined sub-objectives are replied to through answering the following questions for each sub-objective:

- Design a suitable framework to assess land administration organization.
 - What are the suitable indicators to assess land administration organization?
- Define the current status of land administration organization in Bahrain through selected dimensions:

- What is the role of Survey and Land Registration Bureau in supporting the land administration in Bahrain?
- What is the relation between SLRB and stakeholders?
- How does SLRB respond to each indicator from the assessment framework?
- Define the current status of land administration organizations in Dubai which is considered to be a best practice with respect to selected dimensions:
 - What is the organizational system for LAS in Dubai?
 - What is the relation between Dubai land authority and its stakeholders (i.e., private and public sector)?
- Assess the efficiency of LAS in Bahrain according to the selected dimensions:
 - What are the main differences between the LASs in Bahrain and Dubai with regards to the selected indicators?
- Provide recommendations for organizational improvement for SLRB based on SWOT analysis:
 - What are the strengths, weaknesses, opportunities, and threats for SLRB with respect to selected indicators?
 - What alternative strategies could be developed to improve the organizational system SLRB to support LAS in Bahrain?

1.6. Conceptual framework

Figure 1 shows the focus of the research into three main concepts: land administration, organization, and efficiency, where each of these concepts is discussed with consideration to the LAS that they could be applied. The knowledge of these concepts needs to be designed in a way that leads to an efficient land administration organization. Thus, selection for the adequate land administration assessment framework is required to define the gap between these concepts to reach the required destination.

For this research, the concepts for this study are discussed in the light of different papers in the way that serves the study more. On the one hand, the land administration and the organizational framework are reviewed as adoption of Zevenbergen (1998) who indicates that the land administration has three main frameworks; legal, organizational and technical. While the organizational framework consists of institutional arrangements and administrative practice, where administrative practice could be discussed through efficiency (Zevenbergen, 1998).

On the other hand, the literature indicates that organization's efficiency could be studied according to various dimensions that depend mainly on the purpose of the assessment. Here follows the conceptual framework for the land administration assessment framework.

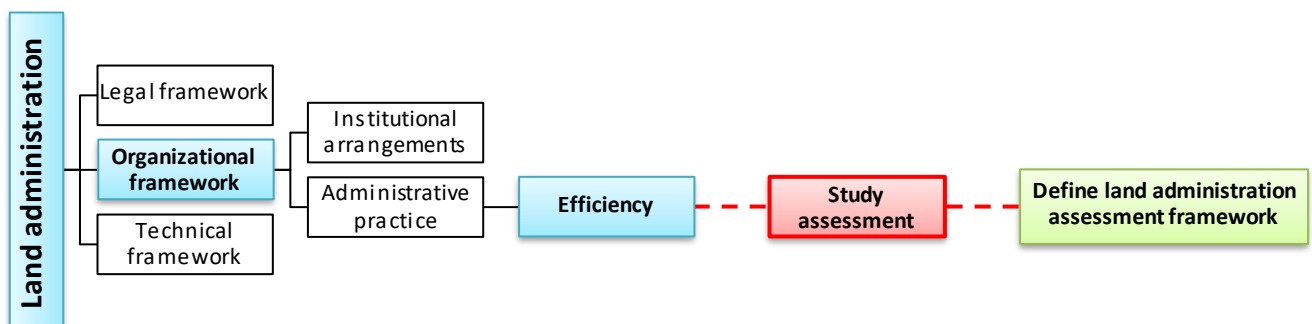


Figure 1 Conceptual framework for the land administration assessment framework

Accordingly, further investigations are required to identify suitable assessment framework that could achieve the purpose of study more. Several assessment frameworks have been reviewed which were developed by: the International Federation of Surveyors (FIG), the World Bank and the United States Agency for International Development (USAID), the Doing Business, and Steudler (2004). Based on the overall situation and based on every specific case in view, a new assessment framework has been created, which is similar to assessment framework developed by FIG (2008). In addition, this conceptual scheme is further elaborated in section 2.6.

1.7. Research matrix

The research matrix has been developed as a summary of objectives, questions, selected methods and the anticipated results. In addition, it aims to define required indicators to measure objectives. Table 1 shows the research matrix for the research.

Sub-objective	Research questions	Data needed	Collection Method	Respondents	Anticipated Results
Design a suitable framework to assess land administration organization	What are the suitable indicators to assess land administration organization?	Data about available land administration assessment frameworks.	Literature review	-	Designed assessment framework
Define the current status for land administration organization in Bahrain through selected dimensions	What is the role of Survey and Land Registration Bureau in supporting the land administration in Bahrain?	Data about processes, organizational system, functions and relationships with other authorities in Bahrain	Interview Secondary data	Policy Staff Managerial staff Administrative staff	Description of the relation between SLRB and other land administration functions in Bahrain and how do they relate to each other
	What is the relation between SLRB and stakeholders?		Interview Secondary data	Management level staff	Description of the nature of the relation between SLRB and stakeholders which includes primary data about communication method and current feedback
	How does SLRB responding to each		Interview		Description of SLRB LA system

Sub-objective	Research questions	Data needed	Collection Method	Respondents	Anticipated Results
	indicator from the assessment framework?				which is used as a primary data in the analysis phase
Define the current status of land administration organizations in Dubai which is considered to be a best practice with respect to selected dimensions	What is the organizational system for LAS in Dubai?	Data about processes, organizational system, functions and relations with other authorities in Dubai	Interview Secondary data	Policy Staff Managerial staff Administrative staff	Primary data about the organizational system situation in Dubai with regards to the assessment framework that has been defined in the literature
	What is the relation between Dubai land authority and its stakeholders (i.e., private and public sector)?			Managerial staff	Primary data about role of Dubai land authority in dealing with their stakeholders which include the communication method and how do they measure the feedback of them
Assess the efficiency of LAS in Bahrain according to the selected dimensions	What are the main differences between the LASs in Bahrain and Dubai with regards to the selected indicators?		Thematic analysis	-	List of main identified differences between LASs in Bahrain and Dubai
Provide recommendations for organizational improvement for SLRB based on SWOT analysis	What are the strengths, weaknesses, opportunities, and threats for SLRB with respect to selected indicators?	Primary data about the organizational situation for SLRB in Bahrain and Dubai	Thematic analysis SWOT analysis	-	List of the main strengths, weaknesses, opportunities, and threats facing SLRB in Bahrain

Sub-objective	Research questions	Data needed	Collection Method	Respondents	Anticipated Results
	What alternative strategies could be done to improve the organizational system SLRB to support LAS in Bahrain?		SWOT analysis Thematic analysis	-	Conclusion and recommendations including list of prioritized strategies that suggest to improve the organizational performance for SLRB in Bahrain

Table 1 Research matrix

1.8. Work plan

According to achieve research objectives, a work plan has been prepared showing research tasks and their periods (see figure2).

No.	Activities	2017												2018																			
		September			October					November				December				January				February			March								
		11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5						
1	Literature review																																
2	Preparing interview questions																																
3	Field preparation																																
4	Field work																																
5	Organize data and interviews transcript																																
6	Define organizational situation in Bahrain and Dubai																																
7	Mid-term presentation																																
8	Comparison analysis between Bahrain and Dubai																																
9	SWOT analysis for Bahrain																																
10	Christmas break																																
11	Finalizing discussion																																
12	Recommendation and Conclusion																																
13	Review and finalize thesis																																
14	Thesis submission																																
15	Thesis defense																																

Figure 2 Research work plan

1.9. Research structure

Chapter One – Introduction:

This chapter provides an introduction to the research. It consists of background about land administration organizations and problem definition, research objectives, research questions, and the conceptual framework. The research matrix has been developed showing the criteria for achieving research objectives.

Chapter Two - Literature review:

This chapter is aiming to provide literature review about the research problem as it is explained in the conceptual framework. It includes reviews from other scholars on the research problem. In addition, this chapter will present the suitable assessment framework according to the literature review. In addition, this chapter shows recommended indicators to assess land administration organizations in Bahrain.

Chapter Three – Methodology:

This chapter explains the methodology used in this study. It explains the sources of data, processes of data collection and analysis.

Chapter Four – Land administration organization in Bahrain

This chapter shows the organizational status for the LAS in Bahrain using the assessment framework that has been adopted in chapter two. In addition, aspects of LA organizations in Bahrain are explained according to the assessment framework.

Chapter Five – Land administration organization in Dubai

Similar to chapter four, this chapter will show the organizational status for the LAS in Dubai using the same assessment framework. In addition, aspects of LA organizations in Dubai are explained according to the selected assessment framework.

Chapter Six – Assessment of Survey and Land Registration Bureau in Bahrain

This chapter discusses the similarities and differences in Bahrain LAS compared to best practices from the literature review and Dubai situation. SWOT analysis is conducted in this chapter to define strengths, weaknesses, opportunities, and threats facing SLRB in Bahrain. In addition, LAS gaps in Bahrain are defined in this chapter.

Chapter Seven – Conclusion and recommendations

This chapter will outline final recommendations and conclusions to improve the organizational situation in the LAS in Bahrain according to defined gaps and suitable strategies.

2. LITERATURE REVIEW

2.1. Introduction

This chapter shows the literature review on key concepts of this research. It aims to present the designed assessment framework that is implemented for case study areas. This is done by addressing the concepts of land administration from different aspects, explore the land administration as an organization and review existed land administration assessment models. The designed assessment framework is then presented.

2.2. Concept of land administration

Land administration is a fundamental concept for making the land sector in countries in operation. Similarly, implementing a sufficient LAS can support the sustainable developments for the countries. Several definitions of land administration can be found in the literature, which refers to dealing with it from different aspects. For instance, the United Nations Economic Commission for Europe (UNECE) defined land administration as a “process” of recording and disseminating information about land’s ownership, value and use to achieve certain objectives (UNECE, 1996). Peter Dale and John McLaughlin (1999) developed a definition for land administration as “public sector activities” that is needed to enhance core functions of land which includes land transfer, land use, land development and land valuation (Dale & McLaughlin, 1999). Furthermore, Food and Agriculture Organization of the United Nations (FAO) defined land administration as “set of systems and processes” that leads to conduct effective land tenure (FAO, 2002). In addition, another aspect that has been identified in the literature is the regulatory framework for the LAS that concerns land information (Lyons & Satish, 2001). What is common in these definitions is that LA is described as a process, meaning, it is dynamic in nature, evolving and requires periodic assessment.

2.2.1. A global land administration perspective

Williamson et al. (2010), presented the land administration functions from a global perspective. This was done based on the Land Management Paradigm (LMP) which includes a broad range of processes that manage land tenure, land value, land use and land development. In addition, the land management paradigm allows moving the meaning of the land administration beyond its normal functions of conventional land surveying and registering (Williamson, Enemark, Wallace, & Rajabifard, 2010) (see figure3).

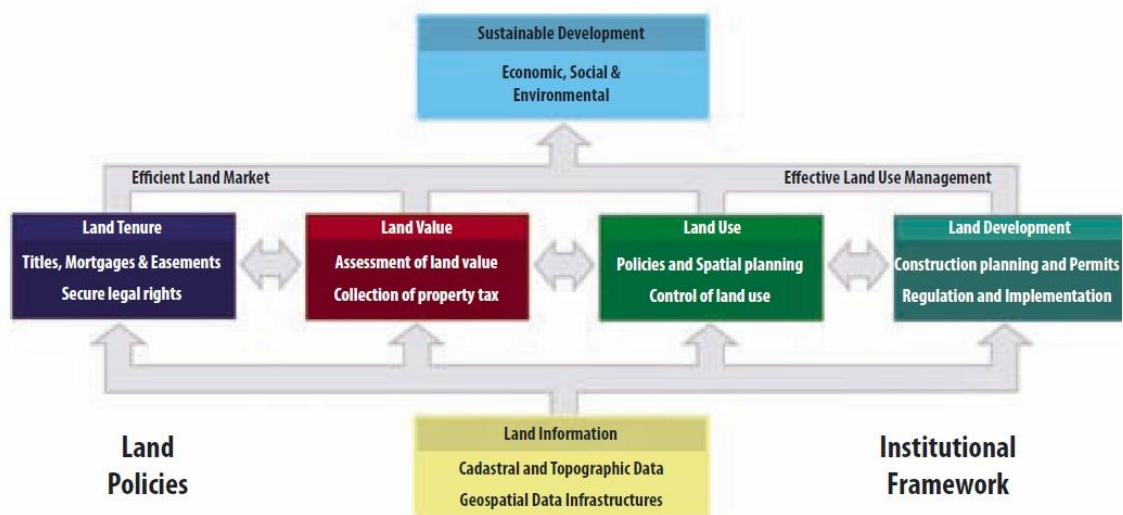


Figure 3 A global Land Administration perspective, adapted from (Williamson et al., 2010)

It is worth to mention here that these land administration functions are different from each other in several aspects such as required profession and amount of work. In addition, Williamson et al. (2010) have described the four functions as follows:

- **Land tenure:**
This function includes the process where the property is held or have secured access to people such as: ownership of land, a survey of boundaries, management of disputes, loan access to land and legal rights and responsibilities of owners and users.
- **Land value:**
Land value function includes a specified process of valuing the properties to get the suitable value for taxation and market purposes.
- **Land use:**
This includes the process of adopting and changing the uses of lands according to specific laws and regulations to get the optimal utilization of lands.
- **Land development:**
This function includes the process of constructing buildings or infrastructure for public and private purposes (Williamson et al., 2010).

2.2.2. Land administration benefits

The UNECE (1996), has listed ten ultimate benefits for land administration in their land administration guidelines which are: (1) guarantee of ownership and security of tenure, (2) support for land and property taxation, (3) provide security for credit, (4) develop and monitor land markets, (5) protect state lands, (6) reduce land disputes, (7) facilitate rural and land reform, (8) improve urban planning and infrastructure development, (9) support environmental management, and (10) produce statistical data (UNECE, 1996).

2.3. Land administration aspects

LAS consists of a mix of different aspects. Each aspect has its own perspective to deal with the LAS according to the required objective. It is important to take into consideration the effect of other aspects as these aspects are interrelated in one way or another (Ali, 2013). Moreover, Zevenbergen (2002) indicates that LAS have at least legal, technical and organizational aspects. Hence, maintaining these aspects functioning well with their interactions is not a straightforward task (Zevenbergen, 2002). Accordingly, this research will discuss the LAS from these three aspects.

Legal aspect

The legal aspect refers to all laws and regulations related to land. Mainly, it explains the relation between the person and the land which supposed to be supervised by another part (i.e., government). Moreover, these legislations could have various forms such as customary and statutory formats which both are essential in their environment. Furthermore, availability of a legal framework in a country is a fundamental requirement for LAS as it establishes a uniform approach to register land rights and to add protection to them (Zevenbergen, 2002).

Technical aspect

The technical aspect is the main part of creating and managing LAS processes, data and systems. It is essential to understand the objectives for the LAS in a country before discussing technologies and tools that are applied as they have a cause and effect relation. In addition, it is essential to include the community awareness and requirements in dealing with the technical aspect (Steudler et al., 2004). Furthermore, most of the technical issue in LAS relate to dealing with Information and Communication Technology (ICT) and matters related to surveying and mapping issues (Zevenbergen, 2002).

On the other hand, the design of the LIS is a primary component in the technical aspect as data needs to be secured, updated, and completed. In addition, the effectiveness of the LIS relies on the quality of ICT and update process (Tuan, 2006).

Organizational aspect

Organizational aspects relate to public and private authorities, organizations and administrative processes that are involved in LAS (Zevenbergen, 2002). This could cover the way that the organization is structured, the way of conducting LAS functions and the nature of relationships with stakeholders in the best way. Moreover, having an organizational view of an organization could be achieved from different perspectives. For example, the organization could be seen according to the control level as policy level, management level, and administrative level as it represented in figure 4 (Steudler et al., 2004).

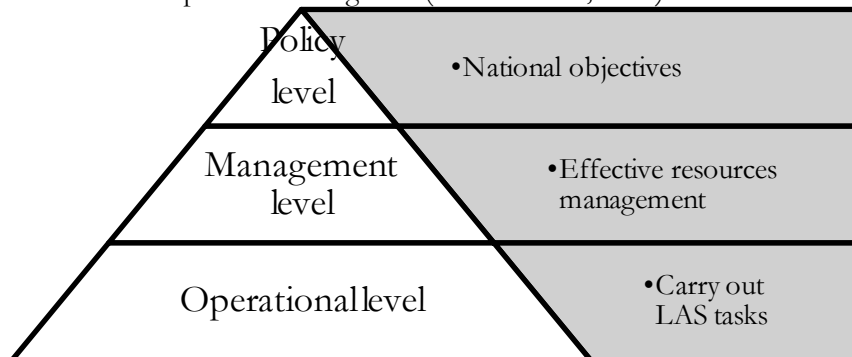


Figure 4 Management control levels, adapted from (Steudler et al., 2004)

2.3.1. The land administration as an organization

In many countries, the land administration responsibilities are under one organization or distributed among several agencies. This distribution could be among governmental and non-governmental authorities where they could also share similar responsibilities within the same administrative territories (van Oosterom & Lemmen, 2015).

The responsibility for managing these organizations differs from country to country due to different backgrounds. For example, the United Nations (2005) mentioned that in some countries the registering of lands and properties is subjected to the supervision of courts, while other countries delegated this responsibility to an administrative body under the government. Commenting on this, the practice of assigning the court to register lands experienced delays as the nature of working in courts takes more time to resolve registration issues. On the other hand, the latter practice experienced better performing as it takes over the registration process and keeps the court only for disputes cases (United Nations, 2005).

In the same context, according to best practices in this field, it is suggested that government should take responsibility for supporting the funding and conducting of the first registration and survey for lands (United Nations, 2005). Similarly, the government is the responsible body to manage the adequate relationship between public organizations between each other, and public organizations and private organizations, which includes the operational costs for LAS whether it should be self-sufficient or partly recovered by the customers and type of partnership with the private sector (United Nations, 2005). In addition, in some countries such as Finland and Sweden, the government is responsible for the legal process, while the private sector is handling the administrative process (United Nations, 2005).

2.4. Land administration assessment models

Several criteria have been developed by different organizations to assess the functionality of LAS. Although there are some attempts to create an international evaluation framework for LAS in countries, none of these frameworks apply globally well in all situations. This is mainly due to political, social and cultural effects on shaping the LAS in a country (Steudler et al., 2004). Each criterion for assessment is designed to fit particular geographical, economic and political contexts. In addition, this shaping creates a unique characteristic for the LAS which makes it difficult to compare it with another system (Ali, 2013). For example, until 2015, Doing Business from the World Bank was measuring the easiness of registering property through 3 indicators; time, cost, and a number of procedures. These indicators show that France has a lengthy and costly transfer property process. However, after changing the indicators in 2015, the LAS in France has been seen as transparent, effective, and with a reliable mechanism for dealing with land disputes (World Bank, 2015). This example shows how indicators could derive the results to another destination.

To explore these issues more, the following section shows some initiatives that have been carried out to assess land administration systems from several perspectives.

2.4.1. Assessment framework developed by International Federation of Surveyors (FIG)

FIG suggested general principles to evaluate LAS which were security, clarity and simplicity, timeliness, fairness, accessibility, cost, and sustainability (FIG, 1995). These criteria were adopted based on customer interests, and they can assess the effectiveness of LAS (Chimhamhiwa, Molen, Mutanga, & Rugege, 2009). Similarly, FIG commission⁷ tried to build a model within the scope of these previous criteria, but it has not been implemented in sufficient cases (Steudler, Williamson, Kaufmann, & Grant, 1997). In 2002, the same commission made some amendments to the assessment criteria which made it more detailed (see table 2).

Principle	Indicator
Cadastral principles	Indicator 1: Nature of registration systems
Cadastral statistics: population and parcels	Indicator 2: Surveyed parcels to population
	Indicator 3: Strata units
	Indicator 4: Percentage of registered parcels
Cadastral statistics: professionals	Indicator 5: Nature of relation between surveyors and lawyers
<i>Descriptive analysis</i>	
Educational and professional bodies	Indicator 7: Capacity building
Cadastral reform issues and current SDI initiatives	Indicator 8: Cadastral innovations and reform

Table 2 LAS principles and indicators, adopted from (Rajabifard, Williamson, Steudler, Binns, & King, 2007)

In 2008, FIG issued capacity guidelines to assess LAS, the objective of which was to create a base for the land administration functions in the country that allows for defining areas that need improvements. The guidelines presented the assessment framework under three categories: a land policy framework, institutional infrastructure, and human resources and professional competence, where each category is responsible for measuring a specific aspect from LAS.

Under the institutional infrastructure framework, FIG (2008) declared that its indicators concerning “how is LA organized?”. These indicators are; (1) allocation of mandates, (2) business objectives, (3) work processes, (4) information and communication technology (ICT), and (5) proper management (FIG, 2008).

2.4.2. Assessment framework developed by the World Bank and the United States Agency for International Development (USAID)

The World Bank and the USAID conducted a study for developing specific indicators about LAS which was based on analyzing LASs in more than 20 countries (World Bank, 2007). This framework consists of quantitative and qualitative indicators to assess the efficiency and effectiveness of LAS (see figure 5).

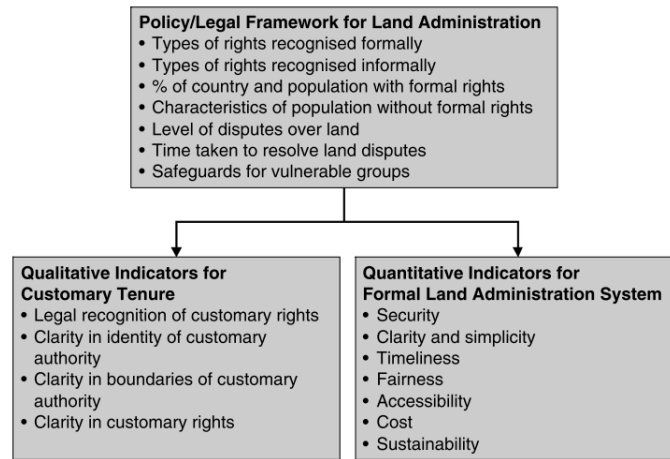


Figure 5 Framework to Assess Land Administration Efficiency and Effectiveness, adopted from (World Bank, 2007)

However, in literature comments can be found on this study that some of the required data for the indicators are difficult to capture and thus they might not reflect the exact situation for the LAS in the country (Burns, Grant, Nettle, Brits, & Dalrymple, 2006). As a further step, some additional indicators have been suggested to add to the World Bank model.

2.4.3. Assessment framework developed by the Doing Business

In the same context, Doing Business from World Bank (2016) has developed indicators to measure the efficiency of the LAS, which measures the following five elements:

1. **Reliability:** which means the way that the LAS is dealing with cadaster and land registration information in case of having trust in the land information infrastructure. This includes practices of reducing risk errors of data, standardize the procedures and deal with LAS data in an adequate ICT infrastructure.
2. **Transparency:** this indicator measures the way that the government is dealing with LIS, whether they are publicly available with easy access, fees to get data and transactions are transparent to be seen or not.
3. **Coverage:** this indicator measures the coverage of cadaster and land registration records for a country. If the LAS does not cover these records, it cannot provide sufficient protection for properties in these areas.
4. **Dispute resolution:** this indicator measures the easiness of people to claim about land conflicts. This includes providing enough information about rights and responsibilities to the public (see figure6) (World Bank, 2016).

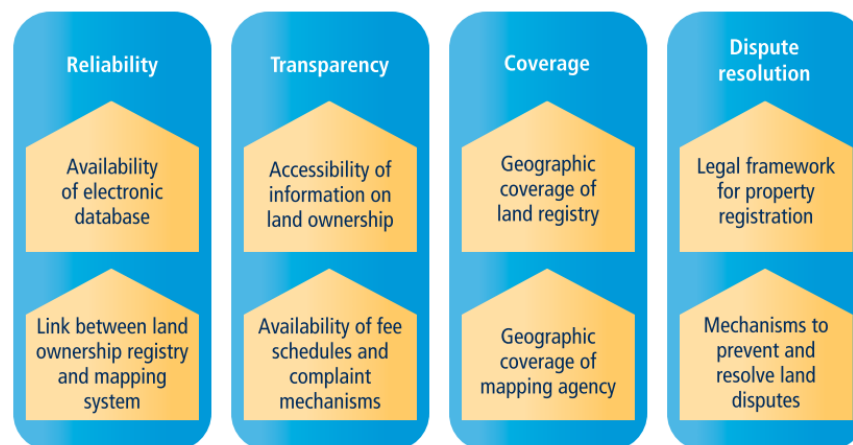


Figure 6 Doing Business assessment framework, adapted from (World Bank, 2016)

Although these indicators are subjected to review and update according to the World Bank observations, they are not focusing more on measuring the technical processes implementation more than the organizational environment. In addition, the UN-ECE Working Party on Land Administration (UN-ECE WPLA) (2001) has sought to come out with a vision that would improve the performance for LAS in countries, but could not be implemented as the consultant team conducted the study on an international level which will not fit with a specific country (Steudler et al., 2004).

2.4.4. Other initiatives

Literature indicates to some individual attempts to evaluate the LAS from various point of views. In order to have an accepted international assessment tool for LAS, it should take a holistic approach. Among other initiatives, Steudler (2004) came with a framework to assess LAS from different aspects through various indicators. These indicators came under five levels; policy level, management level, administrative level, external factors, and review process (Steudler, 2004) (see table 3).

Evaluation areas	Aspects and possible indicators (not detailed and exhaustive)
Policy level	Land policy aspects and objectives
	Historical, political and social aspects
	Land tenure and legal aspects
	Financial and economic aspects
	Environmental sustainability aspects
Management level	Strategic aspects
	Institutional and organizational aspects
	Human resources and personnel aspects
	Cadastral and land administration principles
Operational level	Definition of users, products and services
	Aspects affecting the users
	Aspects affecting products and services
External factors	Capacity building, education
	Research and development
	Technological supply
	Professional aspects
Review process	Review Process
	User satisfaction
	visions and reform

Table 3 Land administration assessment framework, adapted from (Steudler, 2004)

2.5. Selected dimensions for assessing land administration organization

According to previously presented assessment frameworks, it has also been noted that there was a multiplicity of models which reflects multipurpose of each of them. In addition, the variation of the degree of detail in each model was obvious as some of them were having one-dimension assessment while others were adopted multi-dimensional approaches. Moreover, the quantity and quality of indicators were the main factors that effect on the steering of the assessment framework as they are representing different issues in the LAS in the country (Ali, 2013). Thus, the purpose of the assessment should determine what and how the indicators should look. Accordingly, it shows that there is some common dimensions between the above-presented frameworks namely: (1) organization core mandate, (2) objectives and strategies for

organization, (3) adopted processes, (4) technology, and (5) management system. These dimensions are presented in this section.

2.5.1. Organization core mandate

The mandate of the organization was a common dimension to be measured. Defining the mandate requires legislative support to it and specific distribution of its roles among the organization (Agency Governance Secretariat, 2008). According to FIG (2008), countries where mandates of land issues are separated between organizations have more confusions to understand the land administration system in their areas. In contrast to, having recognized mandates for the land administration functions is enhancing the efficiency of the adopted functions (FIG, 2008). Furthermore, organizations without clear and manageable mandates might be vulnerable to overlapping in their mandates and the efficiency of the performance cannot be sure (Albano, 2003).

2.5.2. Objectives and Strategies for organization

Defining the mandate of the organization is one thing, knowing how to reach it is another. According to Kaplan & Norton (2001), the organization is highly advisable to work with specific strategy and objectives that determine the organization destination. These objectives and strategies need to be translated into operational actions in order to improve the efficiency of the organization. In addition, maintain the momentum of implementing strategies and objectives will ensure aligning the organization with them (Kaplan & Norton, 2001).

2.5.3. Adopted processes

Adopted processes are the critical role in managing the organization. According to FIG (2008), in some countries, processes in the land administration domain tend to be vague and complicated. Organizations that provide a clear explanation of their processes are more affordable to increase their efficiency. These processes should cover the whole services and products of the organization in a transparent way. In addition, the organization can standardize their processes in order to improve the clarity and reviewing to them. Talking about the efficiency (in terms of cost, quality and time) in the land administration domain is at stake. This is mainly due to its highly effects on the public people and stakeholders on the one hand and dealing with obstacles that are facing the organization on another hand. Thus, the land administration organization is advised to implement reasonable and justified practices to the public in term of the efficiency of its products and services. For example, it is recommended to the organization to adopt processes in a cost-effective way (FIG, 2008).

2.5.4. Technology

According to Kwanya (2014), managing the land administration information required huge efforts due to its amount and flow. For example, the organization which handles the land registration is required to monitor the land records, land taxation, survey data and the land use information. This management cannot be efficient without having an automated system to deal with them (Kwanya, 2014).

Moreover, referring to FIG (2008), fixing hardware and software in the organization is not enough to run the organization efficiently. These hardware and software need to be supported with the definition of the workflow of the organization, providing sustainable maintenance and selecting the adequate hardware and software for the organization business (FIG, 2008).

2.5.5. Management system

Management system means the way how the organization is managing itself. The more functions that the organization have, the more efforts need to be invested in managing them. According to Enemark (2005), establish clear guiding principles for the land administration organization is enhancing the management of

the organization resources. This clearance should be supported by transparent allocating of duties in the organization and an adequate organizational structure that ensures adequate distribution of tasks among the organization. In addition, the interaction between the organization and its stakeholders is one of the successful approaches to improve the satisfaction of stakeholders to the organization (Enemark, 2005).

On the other hand, the organization obtained required staff and expertise to handle its mandates. This staff should be supported by sufficient responsibility from one side and power and allocated budget from another side to put organization mandates and strategies into practice. Thus, it is recommended to the organization to be institutionally stable in terms of human and finance resources (FIG, 2008).

2.6. Designed assessment framework

Based on the common dimensions presented from the discussed above assessment frameworks, a new assessment framework is created, which is similar to the assessment framework developed by FIG (2008). This dimension consists of five dimensions which are: (1) organization core mandate, (2) objective and strategies for the organization, (3) adopted processes, (4) technology and (5) the management system of the organization. Each dimension contains certain indicators to measure it. In addition, these dimensions are considered as the themes that chapter 6 is based on them in the discussion (see table 4).

Dimension (Theme)	Indicator
Organization core mandate	Laws and legislation are recognized and support the mandates of the organization
	Organization's mandates are clearly formulated and manageable
	Organization has no overlapping with other entities in achieving its mandates
Objective and Strategies for organization	Strategies and objectives of the organization are clear and specific
	Strategies and objectives have an efficient execution plan
Adopted processes	The organization is conducted by sufficient processes to achieve its objectives.
	Processes are conducted in an efficient manner
	Processes are clear, simple and standardized
	Processes are monitored and regularly reviewed
Technology	The organization is based on a well ICT infrastructure
	The organization is supported by sufficient technological support (i.e. full electronic flow).
Management system	The organization is managed according to clear guidance principles
	LAS functions have an efficient relationship with stakeholders.
	Organizational structure is well designed in a way that it achieves organization's objectives
	Organization has adequate skills and capacity building plan to achieve its tasks
	Organization is institutionally stable (i.e. financially and administratively)

Table 4 Organizational assessment framework for land administration systems

2.7. Summary

A land administration system has several meanings depending on different perspectives. A global land administration perspective is reviewed showing the main benefits of an efficient land administration system. Among other land administration aspects, particular attention has been taken to land administration from an organizational aspect. In addition, several LAS assessment models have been discussed such as assessment models developed by FIG, the World Bank and the USAID, Doing Business and Steudler (2004). Based on this, a new assessment framework has been created that shows the common dimensions between the discussed assessment framework, which is similar to the FIG (2008), taking into consideration what has been discussed in the literature. In the next chapter, the methodology to apply this research is discussed in order to develop an adequate approach to implement the defined assessment framework.

3. METHODOLOGY

3.1. Introduction

In this chapter, the methodology for collecting and analyzing data of the research is presented. It shows the approach of this research, a sampling technique that was adopted and methods of collecting and analyzing the primary and secondary data. In addition, it includes the flow that the research will follow.

3.2. Research approach and methodology

This research is done using a case study design. Adopting a qualitative approach allowed the understanding of the study environment and context of the organization which cannot be captured by quantitative methods (Bryman, 2012). In addition, the qualitative approach provided detailed results of the research with more flexibility in analyzing the data (Bryman, 2012; ILL, 2009).

3.2.1. Methods of Data Collection

The study used primary and secondary data. For the primary data, semi-structured interviews are conducted to identify in-depth information about the working environment in Bahrain and Dubai in order to acquire sufficient data. The secondary data are collected as annual reports, laws, by-laws, process manuals, strategy booklets, internal studies for the organization that are provided in the interviews. Consequently, the interviews conducted in Bahrain and Dubai based on three levels: policy level, management level and administrative level. In Bahrain, these levels are subdivided into different departments and sections of the organization (see figure 7).

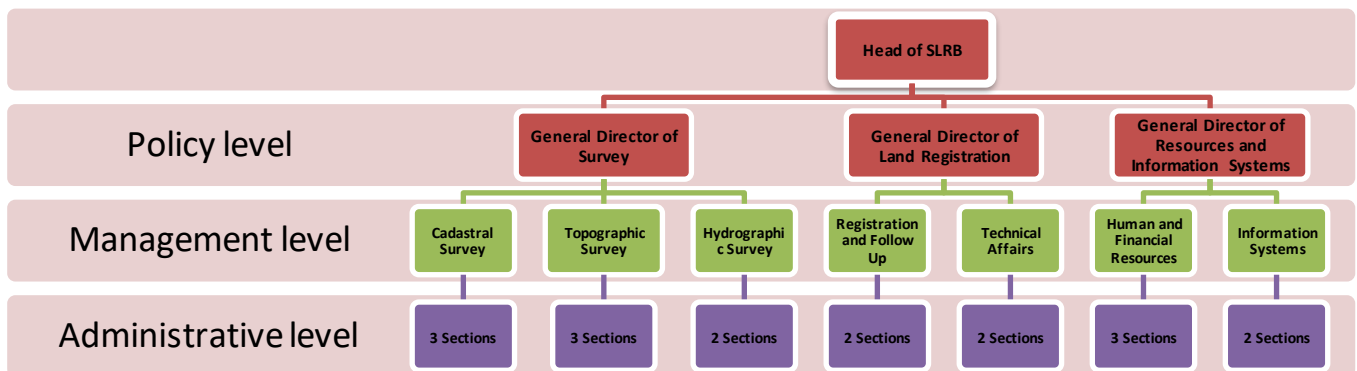


Figure 7 SLRB organizational hierarchy

3.2.2. Sampling Technique

Respondents for the interviews are obtained using purposive sampling technique with typical case sampling where the participants are selected according to the dimension of interest. This sampling technique enabled to interview the people who can provide the needed information.

The interviewees in Bahrain were divided into two main groups: internal participants group and external participants group. The internal participants group is selected as they have a minimum of 5 years' experience, they have an active role in the organization and from diverse departments. On the other side, the external participants group is selected as one from each group of the key stakeholders.

In Dubai, as the focus needs to be more within the organization and due to the limit of time, the interviews were conducted with only internal participants following the same criteria in Bahrain. Hence, the interviews were in Bahrain and Dubai with a total number of 26 (see figure 8).

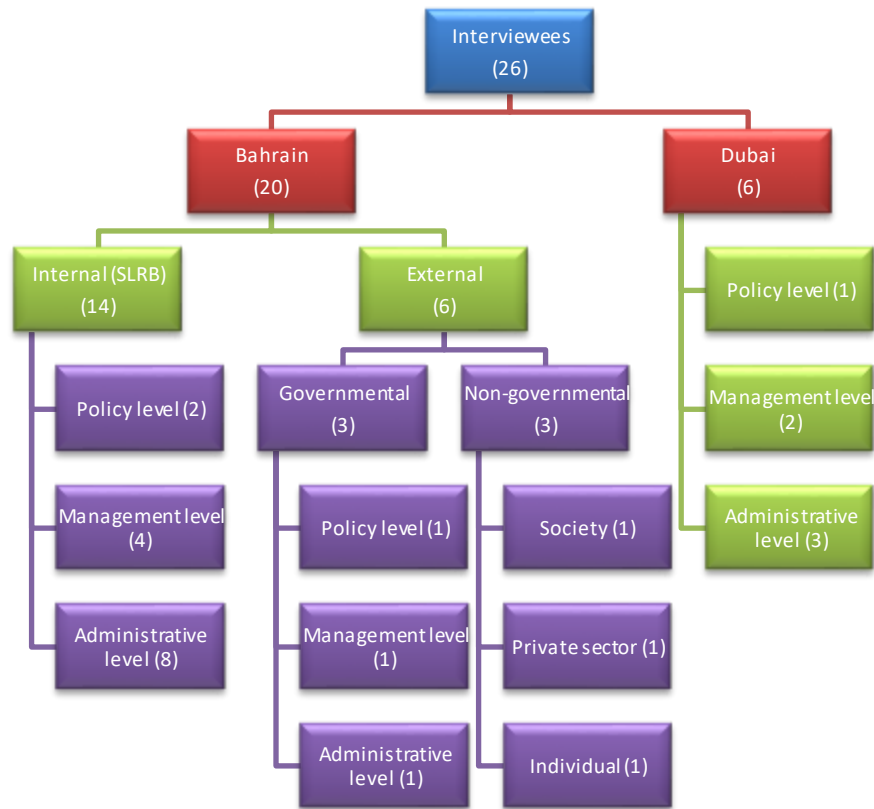


Figure 8 Research interviewees

3.2.3. Data Analysis

The data is analyzed in chapter 6 using thematic analyses to explore the way the organizations operate and then define the patterns between results. After analyzing the data, outcomes for LAS in Bahrain is then compared with Dubai as a best practice, using the assessment framework, to define main differences and similarities between Bahrain and Dubai organizational LASs. In addition, the thematic analysis is supported by SWOT analysis.

According to Martz (2008), SWOT analysis is a common method that is used to assess organizations. It allows the organization to improve itself internally through knowing its strengths and weaknesses and externally through identifying its expected opportunities and threats (Martz, 2008).

Strategies can be generated based on the SWOT analysis that might improve the performance of the organization as the following: (1) SO: strategies used the strengths of the organization to benefit from expected opportunities, (2) WO: strategies used expected opportunities to minimize\eliminate the weaknesses, (3) ST: strategies using the strengths to avoid expected threats, and (4) WT: strategies used to minimize\eliminate weaknesses and avoid expected threats. For this research, SWOT analysis is used to assess the efficiency of the organizations based on the result of the thematic analyses.

3.2.4. Data preparation

The first phase is the data preparation phase for conducting the research where the objectives of this research are explained, literature review, selecting adequate indicators for this research and formulate

interview questions. This stage is based on literature review acquired through using desktop research. This is including books, journal articles, scientific papers, the internet, etc. According to the findings of the literature, the indicators of evaluating the organizational system for LAS in Bahrain have been selected in chapter 2.

3.3. Research flow

In order to achieve the objective, the research passed through three phases as it is shown in figure 9. The first phase was where the objectives and the problem of the research are formulated. Then, desktop research is conducted through literature review for the research. After that, two main processes are conducted in parallel as to analyze the literature review and set the assessment framework and, in the same way, interview questions are prepared in order to start the fieldwork (see Appendix 1).

In the second phase, the fieldwork started in Bahrain by interviews with the SLRB and its stakeholders as planned. Then, interviews are conducted in Dubai with the land authority to get the required information. In the final stage, collected data are analyzed and discussed.

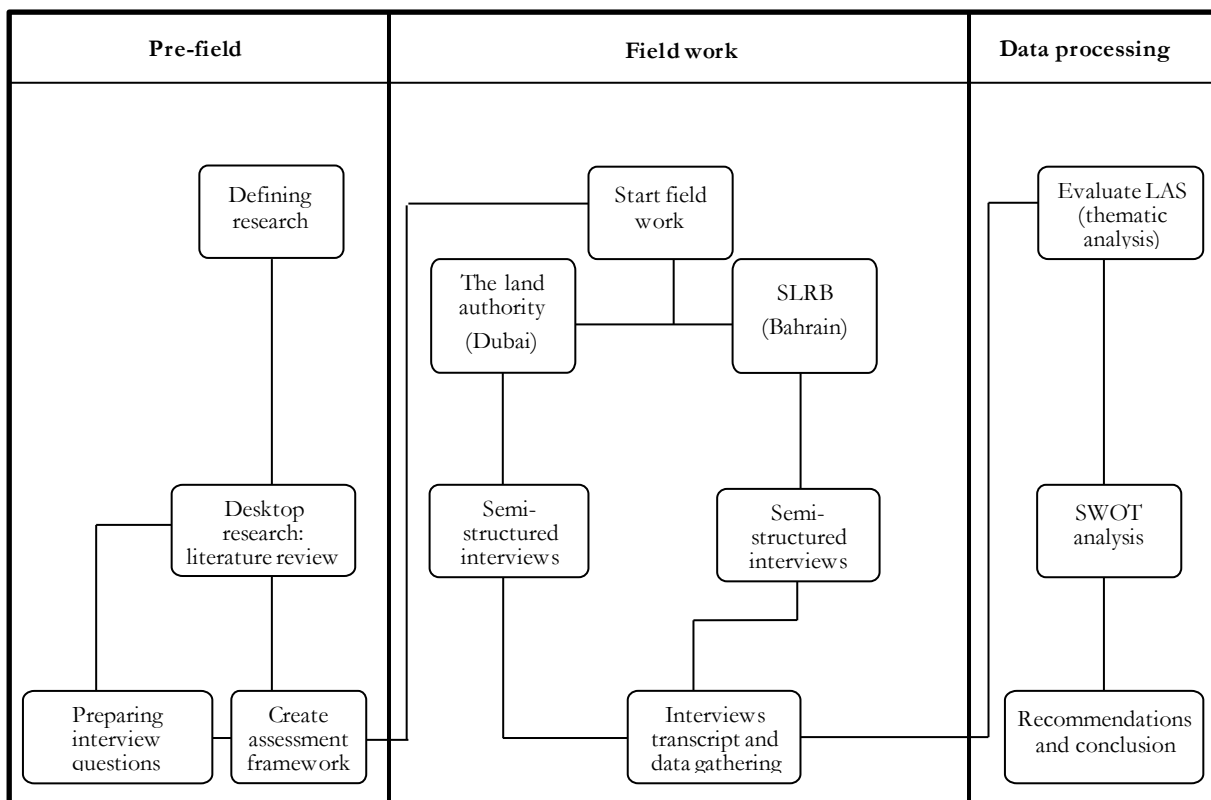


Figure 9 Research flow

3.4. About study areas

3.4.1. The Kingdom of Bahrain

The Kingdom of Bahrain is an independent monarchy in the Arabian Gulf region in the Middle East. It had a total area of 760 KM² and was colonized by the United Kingdom until 1971 (SLRB, 2017a) (see figure10). Bahrain is known as a stable country that enjoys an open community, liberal economy and most of the modern life features (BP, 2017). The ruling system consists of 3 levels of power; the legislature, executive and judiciary. The estimated population of 2014 was 1.45 million people (Alwatan, 2017).

3.4.2. The Emirate of Dubai

Dubai is a constitutional monarchy emirate in the UAE which is located in the Arabian Gulf in the middle east with an area of 4,114 KM² and population of 2,106,177 inhabitants (see figure10) (Dubai, 2017).



Figure 10 Bahrain and Dubai geographic location, exported from (Google Maps, 2017)

Dubai is known as one of the most modern cities in the world and a business hub in the region. It has an efficient infrastructure and is characterized as a multi-cultural city. In 2016, the contribution of the real estate and construction sector amounted to 20% of the GDP (Alittihad, 2017).

3.5. Summary

In this chapter, the research approach and methodology are presented as qualitative approach with interviews methods, showing the sampling method that is adopted in the research. In addition, fieldwork phases are explained as data preparation phase, fieldwork phase and data analysis phase as thematic analysis and SWOT analysis. As a summary, the research flow was presented showing main research steps. In the next chapter, results from field work are elaborated as it explained in the research methodology.

4. LAND ADMINISTRATION IN BAHRAIN

4.1. Introduction

This chapter presents the empirical findings on operations of land administration organization in Bahrain which is the Survey and Land Registration Bureau. During data collection, primary data are collected through semi-structured interviews with officials from a policy level, management level and administrative level and stakeholders of the organization. The secondary data are collected as annual reports, laws, by-laws, process manuals, strategy booklets, internal studies for the organization and other supportive documents provided in the interviews. The findings are presented according to the framework developed in chapter 2. Each dimension and indicator of the assessment framework is discussed in detail.

4.2. Assessment of the Survey and Land Registration Bureau

There are five dimensions that constitute the assessment framework namely; (1) organizational core mandate, (2) objectives and strategies, (3) adopted processes, (4) technology, and (5) management system. For each dimension, results from the SLRB in Bahrain are presented with respect to its efficiency.

4.2.1. Organization core mandate

The organizational mandate is measured according to three indicators which include, (1) the laws and legislations that establish the organization, (2) clarity of the organizational mandate and (3) overlaps in the organizational mandate. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from policy, management and administrative levels and SLRB governmental stakeholders, while the secondary data are collected as the land registration law no. 13/2013 and its by-laws.

Laws and legislations

Land administration organizations are often established by legislations which spell out, the organizational mandate and stakeholders needed for its operations. In Bahrain, the SLRB is established by the land registration law no.15 which was passed in 1979 and amended by law no.13 in 2013. According to the law the SLRB *“shall undertake surveying, registration and land valuation for lands in the whole kingdom of Bahrain, in accordance with the provisions of this law, bylaw and the resolutions issued in implementation thereof. It is the primary reference for all lands in the Kingdom of Bahrain, including the maintenance and updating of the land information database”* (SLRB, 2013). Thus, from the land registration law, the core mandates of the SLRB include, surveying, registration and valuation. For each of these mandates, the law also established directorates (departments) to handle them (see figure 11).

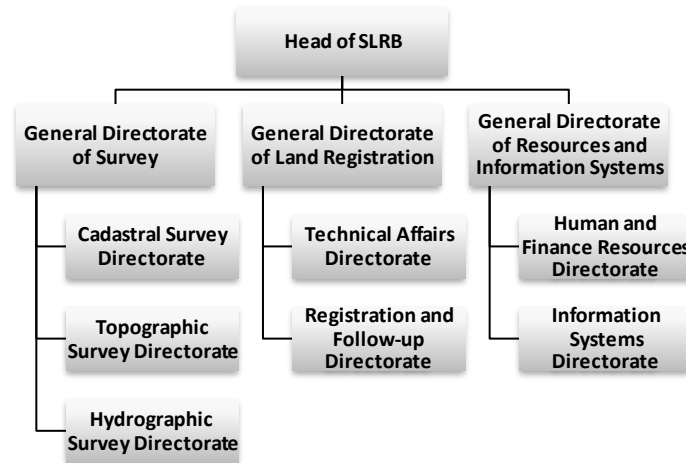


Figure 11 SLRB organizational chart, adapted from (SLRB, 2013)

For other legislations, SLRB has issued the bylaw no. 10/2016 for the land registration law followed by a number of ministerial orders (issued by the head of SLRB) that ensures the applicability of the law. However, during interviews with officials from the management level, it was acknowledged that some duties of SLRB directorates are stated in a generic way, either in the law, bylaws and ministerial orders. For example, the cadastral survey directorate is responsible for undertaking all cadastral surveying tasks in Bahrain.

Clarity of organizational mandate

From the interviews, a majority (12 out of 14) of the officials of the SLRB from all levels said that the mandate of the organization as stated in the land registration law and SLRB's legislations are clearly formulated and manageable. However, the needed administrative capacity in terms of personnel and expertise to translate the law into practice are somewhat inadequate as it is mentioned by officials at the management level. This is referred to that the translation of law is created without an efficient involvement of the administrative officials of the SLRB.

Overlaps in the organizational mandate

Despite the explicit statement of the SLRB's mandate in the land registration law, during the interviews, responses from some officials from the policy, management and administrative levels of the SLRB revealed overlapping duties between different directorates of the SLRB and also between the SLRB and other government organizations. The internal overlapping duties arise from the unclear definition of specific duties for the different directorates. For example, the information systems directorate and the technical affairs directorate are in overlapping duties regarding the management of the "Case file application" server which is used for updating the land registration records. Whereas senior officials of the technical affairs directorate in an interview claimed that the management of the server would allow the directorate to provide better services to the public, the information systems directorate, on the other hand, claimed that the management of the server is its core duty. This resulted in confusion in understanding the mandate of each directorate.

The external overlapping duties pertain particularly to the collection and management of spatial data in Bahrain. Organizations outside the SLRB acknowledge this function as the mandate of the SLRB, however, because the SLRB is not able to meet their data needs, they try to collect and maintain their own databases. This led to create multiplicity and overlaps among them as it is mentioned in interviews with stakeholders of SLRB. This is resulted in having different versions of maps of Bahrain.

In addressing the overlapping functions between the SLRB and the other organizations, the government through the ministerial order no. (15) in 2017 has established the National Geographic Information Governance Committee which is supposed to coordinate all government entities dealing with spatial data. From responses of stakeholders, they trust that the establishment of the committee will help to eliminate the overlaps between the SLRB and the other organizations.

Concerning the internal organizational overlaps, (2 out of 4) officials at the management level of SLRB claimed that there is some discussion to solve them, however, no practical actions have been taken to deal with them.

4.2.2. Objective and Strategies for organization

The objectives of an organization give it a general direction to its goals, while the strategies provide specific guidelines for the achievement of the organizational objectives. It is covered according to two indicators of this dimension which are: (1) clarity of objectives and strategies and (2) efficiency of the execution plan. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from policy and management levels, while the secondary data are collected as: (1) the land registration law, (2) Bahrain vision 2030 brochure, (3) government action plan (2014-2018), (4) SLRB strategy booklet, and (5) study about SLRB conducted by the Ordnance Survey International.

Clear objectives and strategies

According to the land registration law no. 13/2013, the main objective of the SLRB is to provide quality services in surveying, land registration and land valuation to the public and the private sector in order to secure tenure and to facilitate investment in Bahrain. During interviews with officials at the policy level, Bahrain vision 2030 brochure, government action plan (2014-2018) and SLRB strategy booklet, it is mentioned that the conducted strategies to achieve this broader objective in SLRB emerge from three sources which are hierarchical in nature starting from the Bahrain economic vision 2030 as the national plan for the country (FDPM, 2008), followed by the government action plan as the governmental direction (FDPM, 2015) and then the SLRB strategic plan as the implemented strategy by SLRB (SLRB, 2016c).

According to the study about SLRB developed by the Ordnance Survey International, it mentioned that the SLRB strategy consists of six strategic factors as it is shown in figure 12.

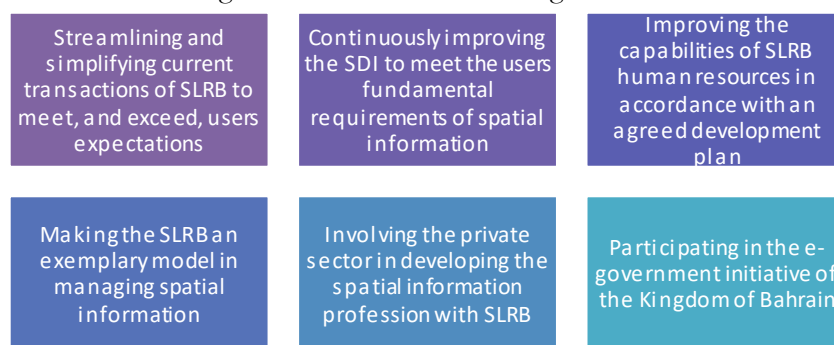


Figure 12 SLRB strategy factors, adopted from (SLRB & Ordnance Survey International, 2013)

According to official respondents at the policy level of SLRB, the SLRB strategic plan is aligned well with Bahrain economic vision 2030 and is capable to handle the governmental action plan for every four years. This has been translated into the SLRB mission and vision. According to SLRB (2016b), it states the mission of SLRB as “*The Bureau is mandated as the official body that regulates, registers and documents all records and certificates related to spatial and real estate services represented in land survey, topographic survey and hydrographic survey, registration of real estate transactions and the protection of property ownership in the Kingdom of Bahrain, in addition to managing,*

maintaining and collating fundamental spatial information in these areas”. While it states the vision of SLRB as “*SLRB vision is to provide trusted high-quality land information services, expertise and to be a model for government sector management through investing in excellence to support the future needs of the Kingdom of Bahrain*” (SLRB, 2016c).

On the other hand, most (4 out of 6) the respondents from the policy and management levels are of the view that the objective and the strategic plan of the SLRB is clear, however, the disposition of some officials is dissonant to the objective of the SLRB. Because of this, the strategic plan is yet to be fully implemented.

Efficiency of execution Plan

According to responses from the policy level of the SLRB, the SLRB has a plan to implement its strategy (see Appendices 2, 3 and 4). This plan is broken down into six critical success factors of SLRB, where each factor has been assigned to a team of officers from different directorates of the SLRB (see figure 13).

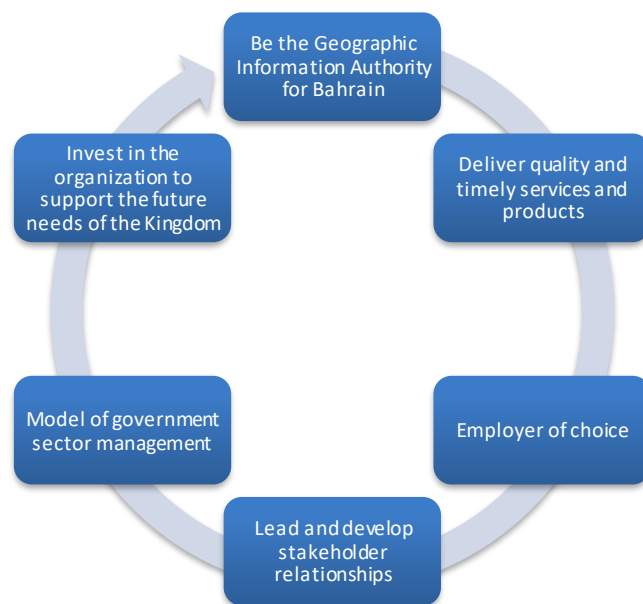


Figure 13 Critical success factors for SLRB strategy, adapted from (SLRB, 2016c)

However, these teams are yet to start their tasks for a number of reasons; (1) there are no guidelines for their operations (2) these tasks are additional to the original tasks which increase the workload (3) no budget allocations have been made for their operations. This has, therefore, made the execution of the SLRB strategy less efficient.

4.2.3. Adopted processes

The processes that have been adopted by the SLRB are explained according to the four indicators of this dimension, namely; (1) conducted processes, (2) efficiency of processes, (3) standardization and clarity of processes, and (4) processes reviewing. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the management and administrative levels and SLRB stakeholders, while the secondary data are collected as the land registration law, SLRB process manuals and the SLRB governance annual report (2016).

Conducted processes

According to the land registration law no. 13/2013, SLRB handles land registration, surveying and valuation. From interviews with officials from the management and administrative levels, the SLRB process is implemented in a semi-digital environment as it has a digital interface from recent reforms which are still

based on an old manual system. The aspects of surveying and valuation serve as input in the actual registration process. Thus, an example of the land registration workflow is presented (see figure 14).

With regards to the process manual for the land registration directorate, the registration process consists of a number of steps which starts with the approval of the application, payment of fees, preparation of the cadastral plan, preparation of deed and registration of the deed and updating of the digital system (SLRB, 2016b).

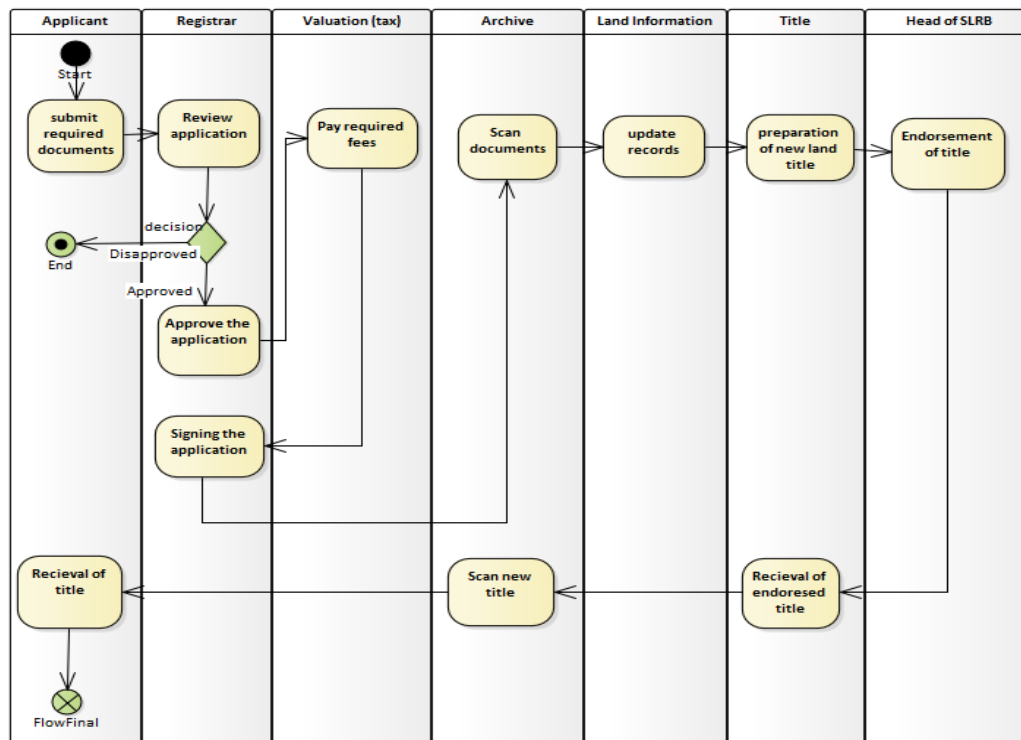


Figure 14 Land registration processes, adapted from (SLRB, 2016b)

Efficiency of processes

According to respondents from the SLRB management level and stakeholders, SLRB processes vary in their efficiency. For example, the registration process for a new transaction is about 30 days and seven days for a transfer of ownership. The cost of registration for a new transaction is about BD 32 (approx. € 68)¹ and for a transfer, BD 6 plus 2% of property value. With regards to the quality of services, stakeholders through interviews acknowledged a high level of satisfaction with costs and security of the title produced by the SLRB, however, they are not satisfied with the length of the time to process the transaction. Responses from officials at the management level (4 out of 4) indicated that the SLRB is incurring much cost in the registration process and that the fees will be adjusted upward. Currently, the SLRB has reviewed its processes with a consulting firm to reprice provided services in a cost-effective manner.

Within the SLRB, some officials complained that some current processes are not coherent and need to be amended. For example, the cadastral survey directorate provides the technical affairs directorate with parcels information in CAD format which has to be converted into geospatial formats by the technical affairs directorate for spatial analysis.

¹ Exchange rate at BD 1= € 2.13 as of 27th January 2018

Regarding administrative processes, most officials (12 out of 14) expressed their dissatisfaction with the administrative processes as they are lengthy and unpredictable, but the administrative departments argue that their nature of work requires contacting other entities, coordinating, follow up and taking approvals for them which requires time.

Standardization and clarity of processes

According to processes stated in the operational manuals and responses from interviews within the management level of SLRB, it shows that the standardization and clarity of SLRB processes vary from one department to another. For example, the survey processes were built according to some international standards. Thus, the cadastral survey processes are in line with ISO 19152:2002 – Land Administration Domain Model (LADM). In addition, the Hydrographic Survey Directorate, which is a member of the International Hydrographic Organization (IHO), aligns its processes with “S57 Marine Data Exchange” standards.

For administrative processes, the different directorates of the SLRB are obliged to follow national regulations from different authorities and ministries. For example, the Information Systems Directorate aligns its processes with ISO certification 27001:2013 for IT Security and also follows the regulations of the e-government authority. In spite of these standards operational manuals, most (5 out of 8) administrative level officials mentioned that some of the processes in the manual are not followed.

Processes reviewing

According to the SLRB governance annual report (2016), SLRB reviews all processes through the Key Performance Indicators (KPIs) that have been developed for each directorate and particularly for each service. Figure 15 shows adopted KPIs for SLRB and figure 16 shows a sample of its KPIs dashboard (SLRB, 2016a).

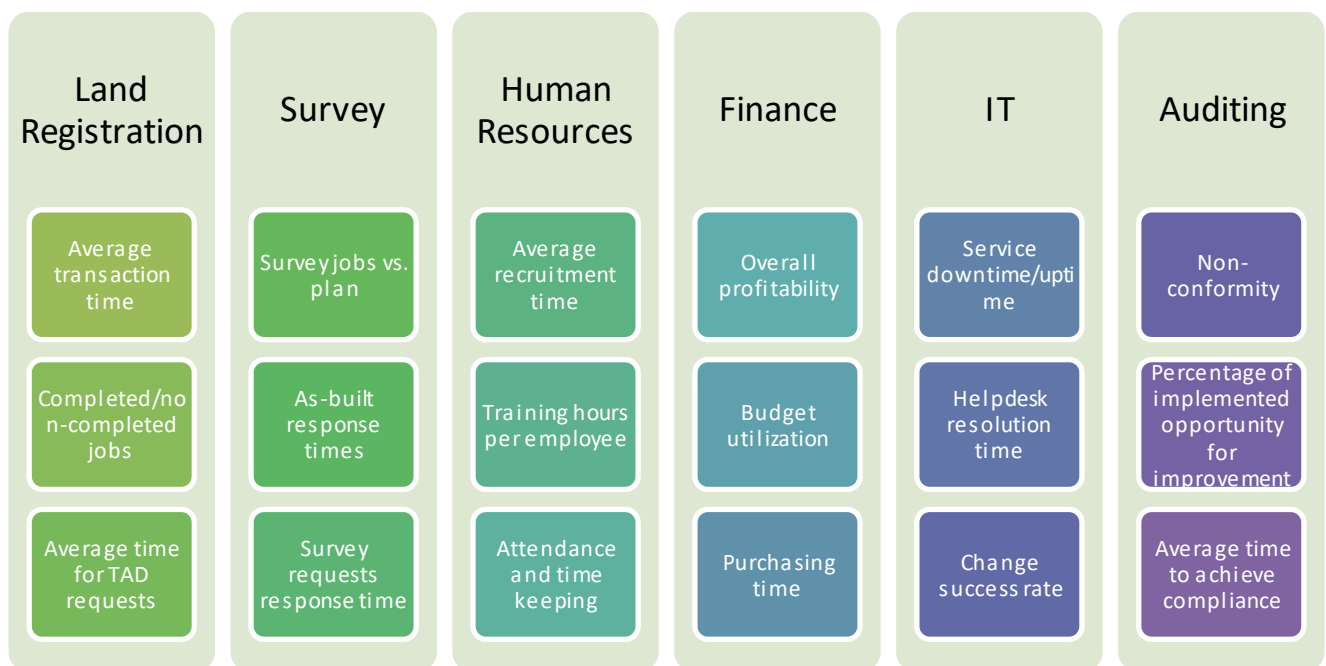


Figure 15 SLRB adopted KPIs, adopted from (SLRB, 2016a)

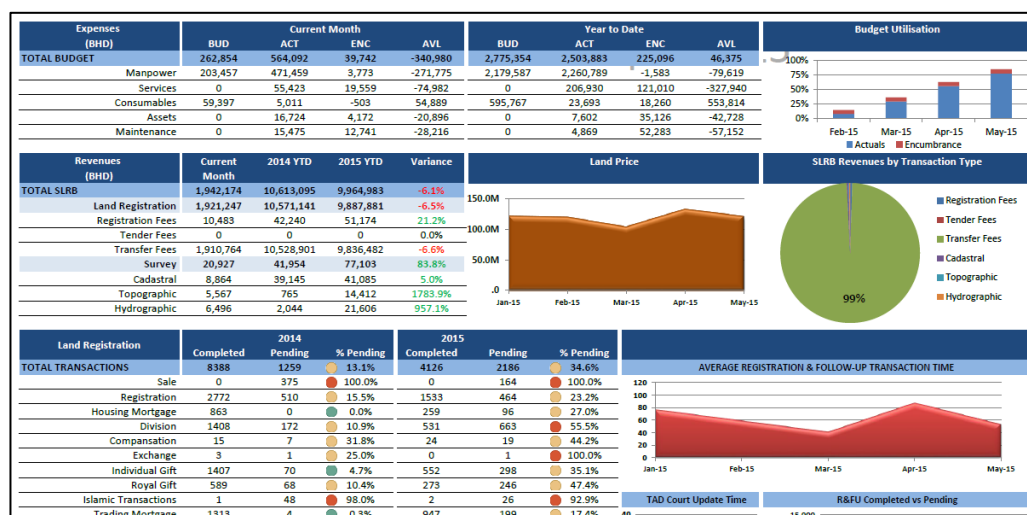


Figure 16 Sample of KPIs monthly dashboard, adopted from (SLRB, 2016a)

These KPIs are presented in the monthly governance meeting (governance meeting is elaborated in section 4.3.5 management system).

4.2.4. Technology

Organizations use technology to deliver products and services. The technology that is adopted by SLRB is presented according to the two indicators of this dimension which are: (1) ICT infrastructure and operating systems, and (2) support and technological development. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the management and administrative levels and SLRB stakeholders, while the secondary data are collected as the annual report of the information systems directorate (2016).

ICT infrastructure and operating systems

Most (3 out of 4) respondents from SLRB's management level claimed that SLRB is developing gradually in terms of technology. SLRB has sufficient hardware and ICT infrastructure. This is evidenced by the availability of servers, networks, storage, sufficient computers, printers and scanners. On the operating systems side, SLRB has got various systems that are internally developed (see table 6).

No.	Name	No.	Name
1.	Property Registration Systems	10.	HR Trask Tracking
2.	Bahrain Tide Network	11.	Correspondence System
3.	RFID	12.	Real Estate Data System
4.	E-Archive	13.	Customer Service Portal
5.	Financial resources management system (ERP)	14.	E-Title Portal
6.	E-Store	15.	As-Built Portal
7.	Resources Booking System	16.	Budgeting System
8.	Decision Maker Portal	17.	Valuation Committee System
9.	Quality Management		

Table 5 Systems developed by the SLRB, adapted from (ISD, 2016)

Moreover, some officials from the management level in SLRB claimed that some of the directorates developed their systems without the involvement of the information systems directorate. For example, senior officials from management level in SLRB raised that updating and developing the GIS systems in technical affairs directorate is carried out with the current staff internally as it allows them to provide better service to customers.

Support and technological development

The support and technological development is the ability of SLRB to provide sufficient maintenance and developments to ICT systems. It is presented at governmental and non-governmental levels. On the governmental level, respondents from the management level claimed that all systems are linked to each other internally and externally if necessary. For example, the ministry of works, municipalities affairs and urban planning has got a direct link to the cadastral survey database that ensures access to cadastral parcel data. Each software has a different development plan according to user's requirements. For example; the cadastral survey directorate is introducing Bentley Map for their cadastral works to supersede outdated software (i.e. Surveyor4, Data manager and Cadastral Information System).

However, some (3 out of 4) respondents from the management level claimed the lack of technical support regarding spatial data management due to lack of expertise. For example, there is a lack of GIS specialists to get benefits from new technologies such as crowdsourcing and mobile technology. In addition, survey directorates cannot benefit from some technologies according to lack of budget and skills such as LIDAR and drones.

Another issue has been raised by the same respondents about lack of administrative support to the ICT development in SLRB. For example, SLRB might lose their ICT infrastructure as some of the maintenance contracts are not renewed from the human resources and finance directorate due to lack of budget (i.e., preventive maintenance).

On the non-governmental level, all (3 out of 3) non-governmental stakeholders raised that they do not have a shared platform with SLRB to exchange data. In responding to this issue, officials from the management level claimed that there are some ongoing initiatives towards exchangeable and e-services. For example, SLRB launched a "Fast-track" service to issue titles at a higher speed for extra fees and stakeholders are highly satisfied with this initiative. In addition, in 2014, SLRB launched the "e-title" which includes written and processed titles electronically (SLRB). In spite of this, some of the stakeholders revealed their dissatisfaction with the "e-title" initiative of SLRB as they believe that it does not save time and what has been changed is only the typing method.

4.2.5. Management system

The management system is the way that the organization is managing itself to achieve its objectives. In this section, results are presented according to the five indicators of this dimension namely: (1) the organization guidance, (2) stakeholder relationship, (3) organizational structure, (4) capacity building and (5) staff adequacy and institutional stability. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the policy, management and administrative levels and SLRB stakeholders, while the secondary data are collected as: (1) the governance annual report (2016), (2) SLRB organizational chart and job descriptions, (3) the standard financial manual of the ministry of finance (2006), (4) the civil service bureau guiding principles for human resources (2015) and (5) the land registration law no.13/2013.

Organization guidance

According to respondents from the policy level, SLRB has centralized all survey and land registration tasks, which are managed from one location, except some of stores and survey equipment are in other places (see figure 17).

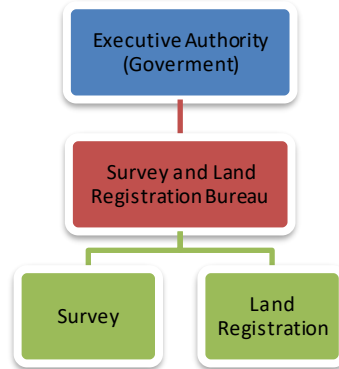


Figure 17 SLRB governance structure

At the national level, according to the land registration law no.13/2013, SLRB is obligated to follow regulations of the civil service bureau for the human resources issues and ministry of finance for the financial resources issues (CSB, 2015; MOF, 2006; SLRB, 2013).

The majority (3 out of 4) of respondents from the management level mentioned that SLRB is receiving clear guidance on managing their resources such as: staffing, employment, retirement, salaries and budget.

In like manner, most (10 out of 13) of respondents from management and administrative levels claimed that, on the organizational level, they are getting clear guidance from the top management which comes from two directions:

a. Formal communication:

This includes all formal letters (i.e. requests) sent to SLRB and verbal directions which facilitate the day to day work.

b. Governance board:

According to the governance annual report (2016), SLRB has established three governance boards which are responsible for conducting strategical and operational tasks handled by SLRB:

- **SLRB Board:** this board is chaired by the head of SLRB and includes general directors of the bureau. It is responsible for ensuring that SLRB is achieving its strategy and its tasks on the national level through supervising the other two boards.
- **Projects and Investment Board (PIB):** this board is chaired by one of the general directors and consists of all directors. It is responsible for supervising all projects conducted by SLRB and discusses all strategic issues.
- **Operational board (OB):** similar to PIB, this board is chaired by one of the general directors and consists of all directors. It is responsible for governing the production work on the daily basis and ensures that SLRB works as required. All committees need to report to this board (see figure 18).

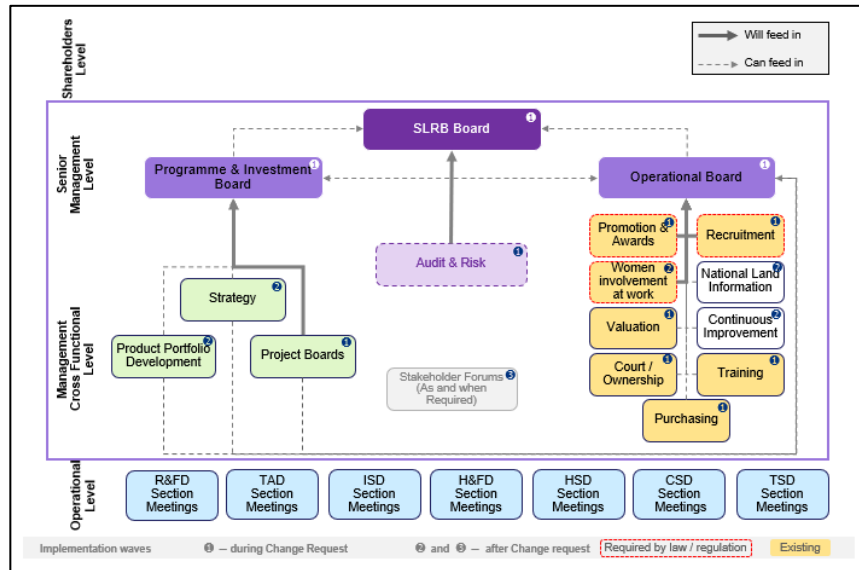


Figure 18 Governance boards structure, adapted from (SLRB, 2016a)

During interviews with officials from management and administrative levels, most (10 out of 13) respondents indicated that the SLRB has sufficient support from the top management with vision and willingness to change.

Stakeholder relationship

The majority (5 out of 6) of respondents from SLRB stakeholders acknowledged that they have a good relationship with SLRB. In addition, SLRB is improving its relationship with stakeholders through participatory approaches. An example of the participatory relation can be seen between hydrographic survey directorate and the United States Navy in Bahrain. SLRB is providing hydrographical data to them while the United States Navy supports the hydrographic survey directorate by surveying the territorial waters and provide updated satellite images. However, stakeholders are not entirely satisfied with their relation with the SLRB. For example, some stakeholders stated that the currency of updating maps does not meet their requirements, they are not provided with sufficient data from SLRB and they find it difficult to have access to land information. In response to these issues, officials from policy level in SLRB said that they understand this issue and there is a plan to improve the SLRB data policy.

Organizational structure

With regard to the SLRB organizational structure, it consists of three general directorates, seven directorates, about twenty sections and more than forty units (SLRB, 2014). Some significant concerns were raised by respondents from the management level. These include; (1) the changes in the structure is not in alignment with strategic objectives, (2) the remuneration of SLRB does not attract the specialized academic and talents as salaries do not match market salaries, and (3) the randomization of accommodating employees where some employees are accommodated in directorates other than they are working in due to vacancies in other directorates. Thus, the organizational structure is not reflecting the existing situation in the bureau.

Capacity building and staff adequacy

During interviews, most (3 out of 4) of respondents from management level claimed that they are not satisfied with the quality of training in SLRB which is compounded by lack of providing technical and specialized training courses. In addition, some (4 out of 8) respondents from the administrative level claimed that they are not being updated with the latest technology in their professional domain. On this point, some

directorates are doing independent practices such as conducting targeted researches and training programs internally. This is claimed by officials from the management level.

In response, officials from human resources and finance directorate respond to this claim by saying that SLRB had conducted successful practices in this regard. For example, SLRB trained more than 35 professional engineers in surveying fields abroad for BSc and master studies with follow-up training programs. There is a scarcity of specialized programs in Bahrain's training market with a limited training budget. Moreover, there are cultural challenges in sending staff for training as some officials in different directorates believe that sending staff for training courses cannot be done without impacting the work.

On the other hand, most (17 out of 20) respondents from SLRB officials and its stakeholders reported in interviews that SLRB has got capable and professional staff. However, some (2 out of 4) respondents from management level in SLRB argued that there are some employees that are not providing the expected production due to lack of responsibility, awareness, resistance to change, lack of commitment to rules and cultural challenges. This is compounded by not having the necessary authority that allows them to manage their resources efficiently. In addition, according to respondents from the management level, (3 out of 4) raised their concerns about losing some key staff, due to their retirement, without providing satisfactory alternatives.

Institutional stability

During interviews, the majority (3 out of 4) of SLRB respondents at the management level claimed lack of institutional support (i.e. budget, staff) for doing their tasks. Human resources and finance directorate responded to this claim that they are facing difficulties in convincing the civil service bureau and ministry of finance about the uniqueness of the field of survey and land registration when they ask for extra resources. In addition, they referred to the rigidness of the ministry of finance regulations in dealing with the governmental entities. For example, according to MOF (2006) and CSB (2015), it mentioned that all governmental entities are not allowed to their financial income, except the allocated budget by the ministry of finance (CSB, 2015; MOF, 2006).

In addition, respondents from policy level raised that SLRB is looking forward to move from the operational role to the regulatory role in order to increase its institutional stability. However, no actions were taken in this regards due to the need for approval on a higher level.

4.3. Summary

This chapter described the land administration system within Bahrain according to the assessment framework developed in Chapter two. It presented the core mandate of the SLRB, strategies and objectives that are adopted by SLRB and its implementation, administrative and technical processes that are done in SLRB, implemented technology and ICT systems that are used and the management system of the organization. In the next chapter, the results from the best practice country (Dubai) are presented following the same criteria and the designed organizational assessment framework for a land administration system for Bahrain.

5. LAND ADMINISTRATION IN DUBAI

5.1. Introduction

This chapter presents the empirical findings on the operations of land administration organization in Dubai, which is the Dubai Land Development, as a best practice in the region of the UAE. During data collection, primary data are collected through semi-structured interviews with officials from a policy level, management level and administrative level of the organization. The secondary data are collected as annual reports, laws, by-laws, process manuals, strategy booklets and other supportive documents that are provided in the interviews. Similar to the case of Bahrain, results are presented according to the framework developed in chapter 2. Each dimension and indicator of the assessment framework is presented in detail.

5.2. Assessment of the Dubai Land Department (DLD)

Land administration functions are conducted in Dubai through two main organizations; Dubai Land Department (DLD) which is responsible for land tenure, land value and land development activities and Dubai municipality which is responsible for the land use. For this study, the focus is on DLD.

DLD, which was founded in 1960, is the governmental body that is responsible for registering and organizing the land sector in Dubai. DLD has achieved high rankings at global and local levels. On the global level; DLD ranked 11th globally in Doing Business 2017, ranked the 4th fastest in property registration speed in 2017 (World Bank, 2017b) and Dubai Real Estate Institute, the training institution under DLD, achieved "quality of education" accreditation from the Association of Real Estate License Law Officials (ARELLO) (DLD, 2017). On the local level, DLD achieved several recognitions. It received the awards of "Creative Idea" and "Innovative Leader" from the Government Excellence Program, won the "Best New Government Service" reward for "e-Mart" service and received accolades in its quality of customer services from "e-Government Excellence Awards" (DLD, 2017).

The presentation of results follows the same five dimensions of the assessment framework namely; organizational core mandate, objectives and strategies, adopted processes, technology, management system. For each dimension, results from the DLD in Dubai are presented with respect to its efficiency.

5.2.1. Organization core mandate

The organizational mandate is measured according to three indicators which include: (1) the laws and legislations that establish the organization, (2) clarity of the organizational mandate and (3) overlaps in the organizational mandate. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from policy, management and administrative levels, while the secondary data are collected as the law no. 7/2013 and its by-laws.

Laws and legislations

According to the law no. 7/2013 concerning the land department, the mandates of DLD are as the following:

1. Set the policies and strategies to develop and regulate the land sector in Dubai.
2. Register properties in Dubai using latest international systems in the land registration field.
3. Regulate real estate activities such as development, brokerage, and valuation services.
4. Take all necessary actions to encourage the investment in the real estate markets in Dubai.
5. Provide stakeholders with information and statistics about the real estate sector.
6. License real estate dealers in Dubai and supervise them.
7. Set necessary tools to protect the real estate market in Dubai.
8. Conduct land survey activities and produce national maps.

9. Conduct required training for real estate dealers to qualify them.
10. Develop a unified central database for the Real estate activities and make data accessible to stakeholders within specific policies.

In alignment with the law no. 7/2013, seven departments are established to perform these mandates as the following:

1. Dubai Real Estate Institute (DREI):

DREI is the educational institute of DLD. Its primary objective is to educate professional staff in the real estate market in Dubai and to increase the performance of the stakeholders.

2. Real Estate Regulatory Agency (RERA):

RERA is the regulatory arm of DLD. The core mandate of RERA is to regulate the real estate activities (i.e., brokerage, valuation, development) through licensing and monitoring them and to ensure the quality of them.

3. Real Estate Registration:

The only authoritative entity in Dubai to conduct land registration services and provide land information to the stakeholders.

4. Taqeem (Dubai Real Estate Appraisal Centre):

After the global financial crisis, Dubai established “Taqeem” to ensure the quality of property valuation and provide professional valuation services to the market.

5. Real Estate Investment Management & Promotion Centre:

This department is the investment arm of DLD on both local and international level. It plays an active role in attracting investors to invest in Dubai land market.

6. Emirates Real Estate Solutions (ERES):

ERES is the technical arm of DLD that provides IT solutions to DLD and creates and provides a fully digital environment in dealing with stakeholders.

7. Dubai Rental Dispute Centre²:

This department is the judicial arm for DLD that provides flexible and professional conflict resolution mechanism regarding issues occurring in the Dubai land market (DLD, 2013).

For other legislations, the law states in article no.14 that: “*The chairman of the Executive Council will issue the resolutions required for the implementations of the provisions of this law*” (DLD, 2013). Thus, the DLD relies on the executive council resolutions of the DLD to translate the law into practice.

From interviews, a respondent from the policy level claimed that the executive council resolutions are covering all aspects of the DLD law and all of them are in practice.

Clarity of organizational mandate

According to the interviewees, the majority (5 out of 6) of DLD respondents claimed that their work is supported by clear and manageable laws and policies. This is referred to the availability of sufficient staff and expertise to translate laws into practice and the involvement of all DLD staff and relevant stakeholders in developing all supportive legislations and bylaws.

Overlaps in the organizational

According to the interviewees, most (4 out of 5) respondents from the management and the administrative levels claimed that their work has no overlaps with any other entities either within or outside DLD due to

² According to interviewees, Dubai courts have a separate department named “Real estate courts” which is an independent department under the Ministry of Justice. However, they thought that it is wise to have rental dispute resolution under DLD due to frequency of these conflicts and their effects on the Dubai real estate reputation.

the availability of sufficient explanatory documents to tasks that are mandated by DLD. On the other hand, some respondents from the management level referred to “minor” practices of overlaps within the DLD that allows departments to make the received data fit for their usage.

5.2.2. Objective and Strategies for organization

The objectives and strategies of the DLD are explained according to two indicators of this dimension which are: (1) clarity of objectives and strategies and (2) efficiency of the execution plan. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from policy and management levels, while the secondary data are collected as the law no. 7/2013 and objectives and strategies section in the DLD website.

Clear objectives and strategies

According to the DLD strategy booklet, the department has stated its own mission, vision and values as it is shown in figure 19.

Mission	Vision	Values
<ul style="list-style-type: none"> • <i>"To create an innovative and sustainable real estate environment that will promote Dubai as the world's happiest city through:</i> <ul style="list-style-type: none"> - <i>Smart services.</i> - <i>Professional human and financial resources.</i> - <i>Integrated real estate legislation."</i> 	<ul style="list-style-type: none"> • <i>"To position Dubai as the world's premier real estate destination and a byword for innovation, trust and happiness."</i> 	<ul style="list-style-type: none"> • <i>"Ensure transparency in information and procedures.</i> • <i>Strengthen national identity standards.</i> • <i>Provide a suitable environment to meet the requirements of stakeholders.</i> • <i>Appreciate and value efforts of employees.</i> • <i>Consolidate the culture of creativity and innovation.</i> • <i>Provide professional real estate services.</i> • <i>Integrate systems and procedures at Dubai Land Department."</i>

Figure 19 DLD mission, vision and values, adopted from (DLD, 2016a)

During interviews, a respondent from the policy level explained that DLD is subjected to three levels of strategies: federal level, emirate level and DLD level respectively. At the top, the strategy is adopted on the federal level between the seven emirates. After adopting it, each emirate in the UAE (i.e. Dubai) starts to set its strategy according to the federal level. After that, each entity in the government (i.e. DLD) develops its strategy to meet the emirate level. Currently, DLD is committed to Dubai government with a hexagonal plan (2016 – 2021) (see Appendix 5).

For objectives, respondents from the management level said in the interviews that DLD sets its objectives for every six years according to the Dubai government plan. For example, by 2021, the DLD is looking to increase the integration between the electronic applications and systems, expand the domain of the online services and increase the efficiency of the land information to meet the market needs. For both objectives and strategies, respondents (3 out of 3) from the policy and management level claimed that the DLD has clear formulated objectives and strategies for the organization.

Efficiency of execution Plan

According to interviews from a policy level, senior officials claimed that the DLD strategy had been translated internally into two operational phases, three years each, as they believe they get more control over it. In addition, the “Partnership and Cooperation Department” is responsible for: (1) transferring the completed projects from the project track to the operational track, (2) ensure that all departments in DLD have an effective partnership, and (3) ensure that the DLD have an effective partnership with local and international stakeholders.

Respondents (2 out of 2) from the management level claimed that DLD has a flexible execution plan that can be easily reflected the work. For example, an official from the management level raised that the DLD had defined its priorities to be included in the plan of 2015-2018. However, in 2016, Dubai’s government set a plan to have the blockchain technology to be implemented by 2020. Due to the flexibility of the DLD execution plan, no severe risk was noticed in reorganizing the specified priorities and accommodate the blockchain technology in the execution plan.

In addition, respondents (2 out of 3) from the policy and the management level claimed that DLD has a vivid mechanism in dealing with challenges and obstacles facing the implementation of the strategy. For example, allocating sponsors and changing their priorities of the projects are some of the practical methods in dealing with financial challenges.

Equally important, respondents from policy and management levels claimed that having an easy to use and the digital environment (i.e. mobile applications) is a critical success factor to implement efficient strategies for DLD as it makes the progress of achieving the strategy on mobile applications rather than having long conventional meetings.

5.2.3. Adopted processes

The processes adopted by the DLD are presented according to the four indicators of this dimension, which are: (1) conducted processes, (2) efficiency of processes, (3) standardization and clarity of processes, and (4) review processes. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the management and administrative levels, while the secondary data are collected as the DLD process manuals and the law no. 7/2013.

Conducted processes

According to the DLD law no. 7/2013, the DLD handles land registration, surveying, land valuation, land development and regulates the real estate market in Dubai. With regards to the conducted processes, it states that: “*the DLD processes should be implemented to best practices*”. According to World Bank (2017), DLD is listed in the top 10 registration authorities for providing accurate and swift information by the World Bank (World Bank, 2017b).

For land registration, one respondent from the management level claimed that a land transfer process takes less than 30 minutes after submitting the application. In addition, the new land registration process takes one day to produce the title according to a number of steps which starts with the approval of the application by the trustee’s office, preparation of the cadastral plan and add the cadastral plan to the title (see figure 20) (DLD, 2014a).

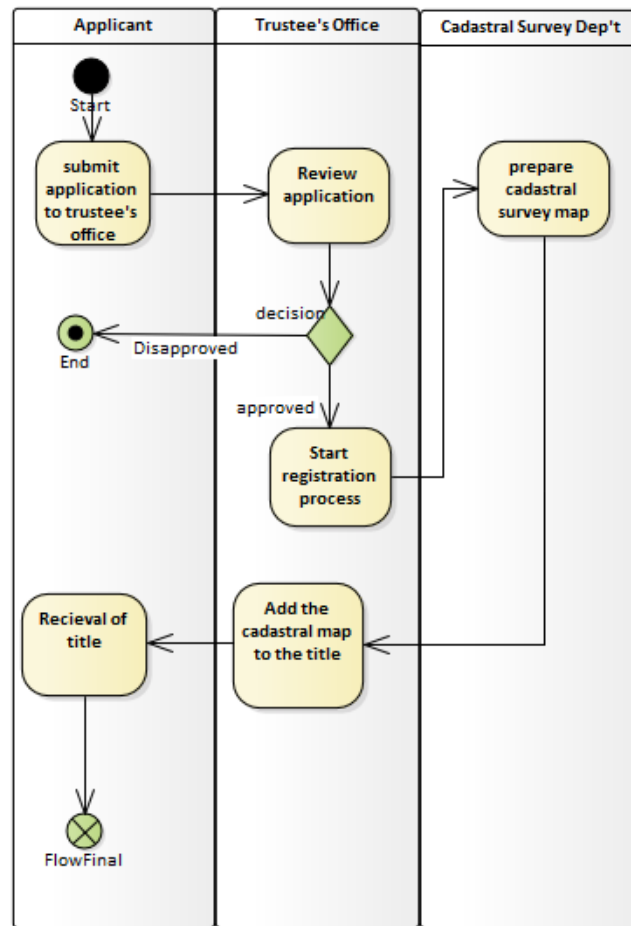


Figure 20 New land registration process in DLD, adapted from (DLD, 2014a)

Efficiency of processes

With regard to the efficiency of DLD processes, respondents (2 out of 2) from the management level claimed that most of DLD processes are conducted in an efficient way. The cost of a new registration is about AED 5,000 (approx. € 1100) + 0.125% of property value (i.e. tax). For the transfer fees, it costs 2% of the property value + AED 2,000 (approx. € 440) if the property value is less than AED 500,000 (approx. €110,000) and AED 4,000 (approx. € 880) if the property value is more than AED 500,000³.

In addition, the respondents indicated that DLD is moving forward to implement the cost recovery concept for its processes in order to improve the quality of its provided services, however, no details were provided about its mechanism.

Standardization and clarity of processes

According to provided process manuals, processes in DLD are following either international standards or DLD standards. The following international standards are implemented: The European Standard certificate for Innovation Management (TS 16555), ISO Global Certificate 9001:2008 (Quality Management System), Project Management Institute (PMI) standards, OHSAS 18001:2007 (Occupational Health and Safety) and ISO Global Certificate ISO 20000-1:2011 (Service management system requirements). For the DLD standards, the respondent (1 out of 2) from the management level raised that these processes are done mainly in according to the agreement with staff on them (under the supervision of the director).

³ Exchange rate at AED= € 0.22 as of 29th January 2018.

Process reviewing

No information about reviewing the processes within DLD is provided. However, according to interviews with officials from the policy level, DLD could review their processes according to the business model within the light of its productivity and market requirements which could be discussed at the DLD monthly meeting.

5.2.4. Technology

The adopted technology by DLD is explained according to the two indicators of this dimension namely: (1) ICT infrastructure and operating systems, and (2) support and technological development. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the management and administrative levels, while the secondary data are collected as the DLD process manuals, products brochure of the “Emirates Real Estate Solutions” department and the law no. 7/2013.

ICT infrastructure and operating systems

In DLD, the use of technology is based on the force of the law as it has been mentioned previously. All (6 out of 6) of respondents from the DLD claimed that DLD has a satisfactory use of technology where all ICT services are provided by the “Emirates Real Estate Solutions” department. Table 6 shows the primary systems that are used by the DLD and its stakeholders (ERES, 2017).







No.	System	About the system	Users
1.	 DLD	“DLD” is a smart application that allows the user to apply and track services about the department.	Real estate Owner
2.	 (eMart)	“eMart” is an electronic market in a smart application that allows all interested professionals in the real estate sector and stakeholders to buy and sell their properties without the need to visit DLD.	Broker, Investor, Real estate owner
3.	 Ejari	“Ejari” is a smart application that provides a digital environment for the relationship between tenants and owners.	Real estate owner, Tenant
4.	 Investment Map	“Investment Map” is a portal that aims to attract investors to the off-plan projects in Dubai.	Investor
5.	 Dubai Brokers	“Dubai Brokers” is a smart application that provides information for investors about brokers and brokerage agencies.	Broker, Real estate owner
6.	 Rental Dispute Centre (RDC)	“RDC” is a system aims to facilitate the process of applying and following up on rental disputes.	Real estate owner, tenant

Table 6 DLD most used systems, adapted from (ERES, 2017)

Support and technological development

According to respondents from the management level, it was claimed that the DLD had passed the semi-digital stage within their work. Thus, it is moving forward to the fully digital stage. In addition, the Emirates Real Estate Solutions provides technical support to DLD through three platforms: (1) Counter desk: which includes the software that is used by the staff within DLD, (2) Outer office: which includes software that is used by stakeholders of DLD and is under DLD supervision, and (3) Smart solutions: which includes online services and mobile applications developed by DLD.

During interviews, official respondents from the management level claimed that DLD has a solid ICT support for its services. This is referred to: (1) having support for a variety of systems to meet customer expectations, (2) having support to systems to read from one database, (3) using open source systems technology and (4) adopt agile software development which is supported by having different integration with other entities (i.e. municipality).

With regards to stability of the ICT support, responses showed that the DLD is implementing stabilized systems for their services. For example, DLD is providing support for the ArcGIS software to manage the parcels and AutoCAD for planning for the survey and land registration duties. In addition, in the latest Gulf Information Technology Exhibition (GITEX) 2017, DLD has launched their Blockchain technology plan as the first land registry authority in the world to adopt it (Dubai Future Foundation, 2016).

With respect to the future plans of the ICT support, respondents from the management level claimed that the DLD is looking to: (1) adopt more integration between their systems., (2) get more legislation that supports smart solutions, such as electronic signature and fully computerized notary system, and (3) implement blockchain technology.

5.2.5. Management system

In this section, the management system is explained according to the five indicators of this dimension namely: (1) the organization guidance, (2) stakeholder relationship, (3) organizational structure, (4) capacity building and (5) staff adequacy and institutional stability. For this dimension of the framework, the primary data are collected using semi-structured interviews with officials from the policy, management and administrative levels, while the secondary data are collected as: (1) the DLD annual report (2016), (2) DLD organizational chart, and (3) the DLD law no.7/2013.

Organization guidance

According to respondents from the policy level, DLD has a centralized governing structure where all transactions regarding land tenure, land value and land development are handled (see figure 21). These departments were enlarged and prepared to support the DLD staff and its stakeholders under certain regulations. In addition, the department is moving towards decentralizing its services. For example, there are up to 20 decentralized licensed offices distributed in Dubai to provide notary services.



Figure 21 Governance structure for DLD, adapted from (DLD, 2014b)

According to interviews with officials from the management level, it was claimed that that DLD is managed according to clear guidance, which goes hand in hand with the strategic plan, through several practices. One of the essential practices is the DLD monthly governance meeting which is chaired by the head of the DLD. The purpose of this meeting is to ensure that the strategy is on the right track and to discuss all obstacles facing the implementation of it (DLD, 2016b).

Stakeholder relationship

During interviews, respondents from the management level mentioned that the DLD has three categories related to partnership: (1) strategic partnership: this covers all stakeholders that DLD is coordinating with them in order to achieve its strategy. This might include a partnership with government entities to achieve specific projects, (2) operational partnership: which covers DLD relations with stakeholders to do specific tasks, and (3) membership partnership: which covers regional and international relations of DLD in various fields (i.e., training, researches, accreditation). For example, DLD has a partnership with the International Real Estate Federation (FIABCI), Royal Institution of Chartered Surveyors (RICS) and the Massachusetts Institute of Technology (MIT) as to exchange knowledge and training programs with them (DLD, 2016b).

Respondents (2 out of 3) from policy and management levels claimed that DLD has good relationships with stakeholders by having the “Partnership and cooperation department” which plays a crucial role in dealing with stakeholders, offering VIP service that includes a registrar traveling to the customer and complete the transaction with extra fees (AED 5,000 approx. to 1100 euro). In addition, most of the transactions between DLD and stakeholders are done online.

Furthermore, officials from management level raised that DLD is offering specialized services for its stakeholders through different channels. For example, people with special needs and elderly are provided by personal assistants for the whole transaction time, specialized facilities and wheelchairs. In addition, DLD takes special care of media campaigns on the local and international level which includes reaching out to stakeholders in exhibitions and conferences. In addition, according to UAE Vice President, Prime Minister and Dubai Ruler Shaikh Mohammed bin Rashid Al-Maktoum instructions, all doors of managers in Dubai’s

government (i.e., DLD) should be physically open all the time. Similarly, officials from management level claimed that among other indicators, customers waiting time, number of claims and the escalating upwards cases with high priority as ordered by the top management.

On the other hand, (1 out of 2) respondent from management level claimed that according to a variety of DLD stakeholders, involving all stakeholders in a particular issue and exchange responses with them is one of the most significant challenges facing the department.

Organizational structure

With regards to the DLD organizational structure (2014), the DLD has seven departments, more than fifteen directorates and about sixty sections (DLD, 2014b). Respondents (2 out of 2) from the management level claimed that DLD has a sufficient organizational structure that serves the objectives of the department. The following reasons were given: (1) specialized structure through the diversity and independence of departments under DLD, (2) coordination between departments that ensures avoiding duplication of work within DLD and enhances the integration between departments, while tasks are divided adequately between them, and (3) flexibility to respond to changes from the internal and external environment of the organization and its impact on the workflow.

Capacity building and staff adequacy

Respondents (2 out of 2) from the management level claimed that DLD has the required expertise and skills to achieve its tasks. However, due to the workload in some periods, DLD contracts with offices from the private sector to acquire specific services.

Moreover, DLD has a specialized department which is the “Dubai real estate institute” to provide professional courses to the land sector for Dubai and the middle east region. According to a respondent from the policy level, the institute aims to educate capable staff in the public and private sector and to increase the awareness of the real estate and land sector. In addition, the institute is legally bound to represent DLD internationally in conferences and exhibitions and ensure that DLD is keeping pace with latest technologies and benefits from international best practices. For the DLD, the institute supports the building capacity plan and training needs of DLD.

Institutional stability

On the administrative and financial resources, although the Gulf region is experiencing financial difficulties, respondents (2 out of 3) from policy and management levels claimed that the DLD is still administratively and financially stable. This is referred to the multiplicity of income sources for DLD (i.e. governmental budget, sponsors and part of its revenue). In addition, no obstacles were addressed regarding hiring required employees or requesting extra budgets.

5.3. Summary

This chapter has shown the implementation of the land assessment framework in the best practice country Dubai. It discussed the core mandate of the DLD, strategies and objectives that are adopted by DLD and its implementation, administrative and technical processes that done in DLD, implemented technology and ICT systems that are used and the management system of the organization. In the next chapter, discussion of these results is conducted through identifying the main differences and similarities between the land administration system in Bahrain and Dubai as it has explained in the research methodology.

6. ASSESSMENT OF SURVEY AND LAND REGISTRATION BUREAU

6.1. Introduction

In this chapter, the results of SLRB (chapter 4) are discussed according to what is explored in the literature review (chapter 2) and from the DLD case in Dubai (chapter 5). The discussion is conducted according to the themes of the assessment framework supported by a SWOT⁴ analysis for each dimension showing internal factors (i.e. strengths and weaknesses) and external factors (i.e. opportunities and threats) that are followed by supporting strategies for each theme. Thematic analyses are used to explore the way the organizations operate with respect to the five themes of the assessment framework.

6.2. Assessment of Survey and Land Registration Bureau (SLRB)

The discussion of the results is presented according to the five themes of the assessment framework namely: the organization core mandate, objectives and strategies of the organization, adopted processes, technology and the management system. Each discussion is supported by SWOT analysis and recommended strategies for each theme.

6.2.1. Organization core mandate

The theme of the organizational mandate is discussed according to three indicators which include, (1) the laws and legislations that establish the organization, (2) clarity of the organizational mandate and (3) overlaps in the organizational mandate.

Laws and legislations

In order for the organization to achieve its mandates, sufficient laws and legislations are mandatory to allow the organization to handle them (Agency Governance Secretariat, 2008). In Dubai, it was seen that the DLD was supported by a comprehensive law no. 7/2013 that supported by resolutions from the executive council of the DLD. In the same manner, the SLRB in Bahrain is supported by clear laws and legislations (i.e. bylaws) that allow SLRB to achieve its mandates as it presented in section 4.2.1.

Based on it, it shows that the SLRB has laws and legislations cover its mandates which are land tenure (land registration and cadaster), land use and land value. In addition, these laws and legislations are expected to be extended more by implementing the new real estate regulation law to cover land development and real estate regulation.

Clarity of organizational mandate

According to FIG (2008), clarity of mandates of the land administration organizations prevents customers and stakeholders from confusion between land organizations. In addition, it allows a better understanding of the land administration system there (FIG, 2008). In Dubai, it was found that the DLD has clear and manageable mandates as the practices did not experience any confusion in understanding the law no. 7/2013 and its legislations. In Bahrain, the interviews within all three levels (i.e. policy, management and administrative levels) showed that the mandates of SLRB were not having the same meaning between different organizational levels.

⁴ SWOT analysis as a methodology are elaborated in chapter three.

Accordingly, the clarity of the SLRB mandate is partly covered in the organization. This is mainly due to lack of providing explanatory documents for the laws and legislations of SLRB. In addition, it was found that relevant officials were not involved in drafting laws which lead to difficulties in implementing these laws and legislations as it showed in section 4.2.1.

Overlaps in the organizational mandates

Organizations without clear and manageable mandates might be vulnerable to overlapping in their mandates and the efficiency of the performance cannot be sure (Albano, 2003). In Dubai, based on interviews, no overlapping practices were reported in DLD. However, in Bahrain, some practices of overlaps in mandates are observed on external and internal levels. These overlaps emphasize the fact that SLRB has not obtained clear clarification of its mandates either between other governmental organizations or within the SLRB as it explained in section 4.2.1.

Accordingly, the theme of overlaps in the SLRB is not covered within the organization due to presented cases in section 4.2.1. To resolve the overlapping issues, on the governmental level, SLRB needs to have a vital role in “The National Geographic Information Governance Committee” which is supposed to coordinate between all governmental entities regarding dealing with spatial data. On the organizational level, SLRB is suggested to practice Dubai experience in improving the explanations of its laws and have more involvement with relevant staff and stakeholders who are implementing these laws and legislations as it elaborated in section 5.2.1.

6.2.1.1. SWOT analysis

In the previous sub-section, the results of the SLRB are discussed according to the theme of the organizational mandate. According to acquired results, SWOT matrix is proposed to the SLRB organizational mandate as represented in table 7.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Availability of sufficient legislation supporting the SLRB mandate. • Laws and regulations are recognized and appreciated by staff. • The mandate is manageable by the organization. 	<ul style="list-style-type: none"> • Lack of adequate clear interpretations of some of the SLRB mandates. • Overlaps in mandate on the governmental level and organizational level.
Opportunities	Threats
<ul style="list-style-type: none"> • Establishment of “The National Geographic Information Governance Committee” to enhance the mandate on the governmental level. • Implementing RERA law to have a unified center to deal with land information. • The willingness of governmental and private stakeholders to support the SLRB mandate. 	<ul style="list-style-type: none"> • Shortage in managing the SLRB mandates. • Increase cases of overlaps either on the government or the organizational level.

Table 7 SWOT matrix about the SLRB organizational mandate

From the SWOT matrix about the SLRB organizational mandate, we can observe for internal factors that strengths of the SLRB’s mandate have a higher impact than its weaknesses. Similarly, for the external factors, the SLRB has higher opportunities to take advantage of opportunities more than obtaining threats.

6.2.1.2. Recommended strategies

In order to improve SLRB organizational mandate, strategies are generated according to the SWOT analysis on the theme of the organizational mandate as represented in table 8.

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • Use SLRB legislations to have an active role in the National Geographic Information Governance Committee. • Coordinate with RERA in implementing relevant tasks. • Take advantage of SLRB stakeholders in achieving selected tasks. 	<ul style="list-style-type: none"> • Develop explanatory documents with RERA to get an adequate interpretation of relevant mandates. • Improve the role of SLRB in the National Geographic Governance Committee to eliminate overlaps between government entities. • Develop a plan with RERA to eliminate overlaps with the SLRB.
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • Adopt on recognition of regulations in decreasing overlap cases within SLRB. • Preserve and improve manageability of SLRB mandates. • Amend existing laws to eliminate overlaps. 	<ul style="list-style-type: none"> • List and investigate in internal and external organizational overlap cases to improve the efficiency of the SLRB performance.

Table 8 Recommended strategies for the theme of SLRB organizational mandate

From the SWOT analysis about the SLRB organizational mandate (table 8), we can observe that the majority of strategies aim to improve the legislative aspect of SLRB in certain areas. In addition, it is suggested for the SLRB to focus on SO strategies as they have a high impact on it mandates and easy to implement.

6.2.2. Objectives and strategies of SLRB

The theme of the objectives and strategies is discussed according to: (1) clarity of objectives and strategies, and (2) efficiency of the execution plan.

Clear objectives and strategies

According to the UNECE definition for the land administration, it mentions that the process of land administration is used to achieve specific objectives. Thus, defining clear objectives and strategies for the land administration organization is required (UNECE, 1996). In Dubai, it is shown that the DLD has a clearly formulated objectives and strategies. In addition, in Bahrain, the SLRB has developed clear objectives and strategies for its mandates. This is mainly due to the availability of clear strategies and objectives either on the national level (Bahrain economic vision 2030), the governmental level (government action plan) and the organizational level (SLRB, 2016c). However, it is shown in section 4.2.2 that the understanding of the SLRB plan is not at the same level between different organizational levels. This can be referred to the fact that SLRB has only one version of its strategic plan which shows the long-term vision of it. In contrast to the situation in Dubai, the DLD had broken down its strategic plan into more than one phase in order to be understood equally by the different organizational levels as it showed in section 5.2.2. Thus, the theme of the clarity of objectives and strategies in the SLRB is partly covered and it needs to be elaborated with short-term and mid-term plans.

Efficiency of execution Plan

Having an execution plan to achieve objectives and strategies for the organization is equally important to create them, if not more. For land administration organizations, having an efficient execution plan is a critical step in reaching the “ideal situation” for land administration organizations (Steudler, 2004). In Dubai, the DLD has a scheduled execution plan that includes improving the quality of its services, reduce transactions

time and apply cost recovery practices. In addition, it was shown that each new project in DLD should be linked to DLD strategy and have a specific implementation plan before adopting it as it showed in section 5.2.2. On the contrary, it is shown from primary and secondary data that the SLRB has not got an efficient execution plan for its objectives and strategies, while it leans on the governmental action plan to achieve part of them. In addition, SLRB directorates are not obligated to implement the SLRB execution plan. This explains the fact that each directorate has a different position on it. Based on it, the theme of the efficiency of the SLRB execution plan is not covered in the organization and SLRB is suggested to elaborate its current execution plan with more details such as allocated resources and an approved timescale.

6.2.2.1. SWOT analysis

In the previous sub-section, the results of the SLRB are discussed according to the theme of objectives and strategies. According to the acquired results, a SWOT matrix is proposed to the SLRB objectives and strategies as represented in table 9.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Explicit developed strategy for SLRB. • Trust of staff in the advantage of the SLRB strategic plan. • Passion for achieving the strategy with available resources. 	<ul style="list-style-type: none"> • Lack of necessary information to implement strategies (i.e. timescales). • Adoption and implementation of strategies and objectives are not mandatory. • Inconsistency between the SLRB strategy and the government action plan.
Opportunities	Threats
<ul style="list-style-type: none"> • Requirement of the SLRB directorates and stakeholders for more data from the SLRB. • The DLD experience in advertising its strategies. 	<ul style="list-style-type: none"> • Reduction of allocated resources to achieve the strategy. • Lack to deliver outputs from the strategies (i.e., projects). • Presence of governmental action plan that is not fitting the current SLRB strategies and objectives. • Reduce the number of commercial stakeholders from Bahrain market.

Table 9 SWOT matrix about the SLRB objectives and strategies

From the SWOT matrix about the SLRB objectives and strategies, we can observe for internal factors that weaknesses of the SLRB's objectives and strategies have a higher impact more than its strengths. Likewise, for external factors, the SLRB has higher impact threats should avoid more than opportunities should take advantage of them.

6.2.2.2. Recommended strategies

As to improve this dimension, strategies are recommended according to the SWOT analysis on the theme of objectives and strategies as represented in table 10.

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • Enhance SLRB strategy with the involvement of stakeholders to facilitate its implementation. • Provide SLRB staff with sufficient information and authorities to build their strategies. • Use the trust of SLRB management in the staff to implement Dubai practice in dealing with objectives and strategies. 	<ul style="list-style-type: none"> • Provide sufficient information to SLRB staff to improve the implementation of strategies. • Benefit from DLD experience in obligating and adopting of SLRB strategy. • Share SLRB strategies with stakeholders to enhance the linkage between governmental action plan and SLRB strategy.
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • Advertise the SLRB strategy to stakeholders to avoid being unconvinced by the plan. • Use the trust of SLRB staff in convincing the top management to increase resources for adopting strategies. 	<ul style="list-style-type: none"> • Obligating directorates to adopt SLRB strategy to avoid inability to deliver projects. • Maximize the utilization of SLRB strategy through enhancing the linkage with the governmental action plan. • Providing sufficient information to the private sector to avoid their reduction from the market.

Table 10 Recommended strategies for the theme of SLRB objectives and strategies

From the SWOT matrix about SLRB objectives and strategies, we can observe that the majority of strategies aim to implement the SLRB strategic plan in an efficient way. In addition, it is suggested for the SLRB to focus on WO strategies as they are more capable to deal with the current situation.

6.2.3. Adopted processes

In the following sub-section, the theme of the adopted processes is discussed according to: (1) conducted processes in the organization, (2) efficiency of processes, (3) standardization and clarity of processes, and (4) processes reviewing.

Conducted processes

According to the global land Administration perspective, the land administration processes cover four functions which are; land tenure, land value, land use and land development (Williamson et al., 2010).

In Dubai, from the primary and secondary data, the processes in DLD covers land tenure, land value, land development and real estate regulation as an addition. While in Bahrain, the processes are covering land tenure, land value and SLRB is on its way to add the land development and real estate regulation. Both Dubai and Bahrain are conducting processes which are not limited to the land management paradigm as it showed in sections 4.2.3 and 5.2.3. Accordingly, the theme of the conducted processes in SLRB is covered as processes are covering mandates of the organization.

Efficiency of processes

Land administration organizations are highly affected by the efficiency of their processes. This is mainly due to its effect on stakeholders and customers in dealing with their rights from one side, and maintaining secured and sustainable services from the government from another (FIG, 2008).

In Dubai, it found that although DLD conduct high-quality services within a short time, however, there is lack of practices related to implement processes in a cost-effective manner as it showed in section 5.2.3. While in Bahrain, it was found that the SLRB provides high-quality services, however with higher costs and time-consuming processes as it showed in section 4.2.3. Accordingly, the theme of the efficiency of SLRB

processes are partly covered and it needs to be improved in its cost and length. In addition, SLRB is suggested to implement the unit costing project's recommendations.

Standardization and clarity of processes

According to the World Bank (2016), having clear and standardize processes is an essential element to raise the reliability of land administration organizations to raise (World Bank, 2016). In Dubai, it found that the DLD is implementing clarity and standardization in most of its processes. On the other hand, it was found that the SLRB is not implementing standards for its processes and they were bounded by a bureaucratic environment. Although there are process manuals for each directorate, these manuals were not followed by all staff as it explained in section 4.2.3. Thus, standardization and clarity of processes are partly covered as manuals need to have more involvement of related staff in developing them.

Processes reviewing

To maintain the sustainability of an efficient organization, it is vital for the land administration organization to have an independent party that reviews its whole processes and sees how the whole system runs to achieve the organization objectives (Steudler, 2004). For the DLD, the organization did not have tangible tools to review processes, unlike the SLRB which conducts sufficient dashboard and tools to monitor the performance of its processes. However, this review was not supported by guided actions that achieve the strategy of the SLRB. Accordingly, the theme of the reviewing of SLRB processes is partly covered as it needs to be linked with the SLRB strategy and support it with required resources.

6.2.3.1. SWOT analysis

In the previous sub-section, the results of the SLRB are discussed according to the theme of the adopted processes. According to acquired results, SWOT matrix is proposed to the SLRB's adopted processes as it represented in table 11.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Having sufficient documentation of processes. • Success in transition SLRB processes to semi-digital environment. • Having secured titles which are rich with cadaster and land registration information. • Adopting KPIs for reviewing the processes. 	<ul style="list-style-type: none"> • Lack of following process manuals. • Lack of guided actions to processes reviewing results. • Processes are not adopted efficiently.
Opportunities	Threats
<ul style="list-style-type: none"> • Adopting the unit costing project. • Adopting international standards. • Implementing processes in a fully digital environment. • Improve processes reviewing mechanism. 	<ul style="list-style-type: none"> • Extending the transfer to the fully digital environment. • Lack of quality of provided services, especially title.

Table 11 SWOT matrix about SLRB adopted processes

From the SWOT matrix about the SLRB adopted processes, we can observe for internal factors that strengths of the SLRB's adopted processes are equally important to its weaknesses. For external factors, the SLRB has opportunities to take that ranks higher than threats.

6.2.3.2. SLRB conducted processes recommended strategies

In order to improve conducted processes in SLRB, strategies are recommended according to the theme of objectives and strategies as it represented in table 12.

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • Use the international base of survey standards to adopt best practices to other directorates. • Use the documented processes as a source to develop fully digital systems. 	<ul style="list-style-type: none"> • Adopt on unit costing recommendations to implement strategies in a cost-effective manner. • Adopt on best practices standards to increase the coherence of processes. • Develop a fully digital environment for processes as a step to increase the efficiency.
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • Standardize SLRB provided services to avoid depending on staff experiences. • Improve adaptation of KPIs in reviewing processes to avoid losing processes quality. • Maintain and improve the semi-digital environment to avoid lack of resources. 	<ul style="list-style-type: none"> • Depending on staff experience in increasing the efficiency of provided services. • Use the transfer time to fully digital environment in improving process manuals in order to be followed by staff.

Table 12 Recommended strategies for adopted processes

From the SWOT matrix about SLRB adopted processes, we can observe that the majority of strategies are distributed over two main aspects: standardize processes and increase their efficiency. Thus, it is suggested for SLRB to focus on adopting the ST strategies as to avoid expected near threats.

6.2.4. Technology

The theme of the technology is discussed according to: (1) ICT infrastructure and operating systems, and (2) support and technological support for the organization.

ICT infrastructure and operating systems

According to Kwanya (2014), managing the land administration information required huge efforts due to its amount and flow. This management cannot be efficient without having an automated system to deal with them (Kwanya, 2014). In Dubai, it shows that the DLD built an efficient ICT infrastructure that includes providing a digital environment for officials and stakeholders. Similarly, in Bahrain, it showed that the SLRB also has a developed ICT infrastructure, however, with less diversity in systems as it explained in section 4.2.4. Therefore, the theme of the ICT infrastructure and operating systems are partly covered in the SLRB. This is mainly due to: (1) not unifying all ICT system under the information systems directorate, (2) lack of spatial data support, and (3) absence of digital and exchangeable platform with stakeholder.

Support and technological development

Providing sustainable maintenance and support for ICT infrastructure is equally important to obtain the infrastructure (FIG, 2008). In Dubai, the DLD has assigned the “Emirates Real Estate Solutions” to provide technological support and solutions for the DLD and its stakeholders. In Bahrain, it found that the SLRB has sufficient support for the general software, but it lacks to spatial data support. In addition, the private stakeholders are not provided sufficiently with required support as it elaborated in section 4.2.4. Accordingly, the theme of the support and technological development for SLRB is partly covered and it is suggested for the SLRB to develop a support and maintenance strategy that meets the expectation of stakeholders.

6.2.4.1. SWOT analysis

In the previous sub-section, the results of the SLRB are discussed according to the theme of the technology. According to acquired results, SWOT matrix is proposed to the SLRB's technology as it represented in table 13.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Existing of an adequate ICT infrastructure. • Availability of links between organizational and governmental servers, especially notary and municipality. 	<ul style="list-style-type: none"> • Lack of support to all domains, especially spatial data support. • Lack of technical support to stakeholders. • Using some outdated software.
Opportunities	Threats
<ul style="list-style-type: none"> • Expansion the support (i.e. spatial data support). • Get advantage from stakeholder experiences. • Increase the efficiency of the ICT infrastructure. 	<ul style="list-style-type: none"> • Lack of ICT infrastructure efficiency. • Reduce technical support to operational systems. • Loss of significant data created by stakeholders.

Table 13 SLRB technology SWOT analysis

From the SWOT matrix about the SLRB technology, we can observe for internal factors that strengths of the SLRB's adopted processes are less than its weaknesses. For external factors, the SLRB has more opportunities to improve more than threats.

6.2.4.2. SLRB technology recommended strategies

To improve the technology in SLRB, strategies are recommended according to the theme of the technology as it represented in table 14.

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • Improve the ICT infrastructure to enhance the linkage with stakeholders. • Use ICT infrastructure to provide exchange platform to stakeholders. • Advertise the benefits of the fully digital environment to launch tactical digitalization plan for SLRB. 	<ul style="list-style-type: none"> • Adopt additional ICT support in SLRB to compensate the shortfall support. • Increase efficiency of the performance of SLRB stakeholders by providing them with necessary support. • Developing an operational plan to phase out outdated software.
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • Increase the linkage between stakeholders to avoid loss of stakeholder's data. • Improve the ICT infrastructure to move to fully digital environment. 	<ul style="list-style-type: none"> • Improve the efficiency of ICT infrastructure by making all ICT support under the information systems directorate. • Facilitate data exchange for stakeholders to avoid loss of stakeholder's data.

Table 14 Recommended strategies

From the SWOT matrix about SLRB technology, we can observe that the majority of strategies aim to move to fully digital and efficient ICT environment. Accordingly, it is suggested for SLRB to focus on SO strategies as quick wins to improve the SLRB technology.

6.2.5. Management system

The theme of the management system is discussed according to: (1) organization guidance, (2) stakeholder relationship, (3) organizational structure, (4) capacity building and staff adequacy, and (5) institutional stability.

Organization guidance

Establish clear guiding principles for the land administration organization is enhancing the management of the organization resources (Enemark, 2005). In DLD and SLRB, it was shown that both organizations have sufficient guidance from the top management as it presented in sections 4.2.5 and 5.2.5. Accordingly, the theme of the SLRB organizational guidance is covered within the organization and directorates are receiving clear and specific guidance to do their tasks.

Stakeholder relationship

In land administration organizations, the interaction between the organization and its stakeholders is one of the successful approaches to improve the satisfaction of stakeholders to the organization. This is mainly due to the value of stakeholder's information in developing the LAS strategies (FIG, 2008). In Dubai, the DLD has allocated a specialized department to deal with stakeholders at international and local levels. On the other hand, in Bahrain, the SLRB has lacked in its dealing with its stakeholders as there is no specialized section dealing with them, discuss their concerns and support them with necessary data as it elaborated in section 4.2.5. Thus, the theme of the stakeholder relationship is not covered. This is mainly contributed to the dissatisfaction of the stakeholders of SLRB.

Organizational structure

The organizational structure is one of leading elements to measure how efficient is the organization (FIG, 2008). In Dubai, it was found that the DLD organizational structure was adequately developed to achieve objectives of the organization in an efficient way. However, in Bahrain, it was found that the organizational structure is inefficient to achieve objectives of the organization due to lack of the civil service bureau awareness of the role of the SLRB as it presented in section 5.2.5. Therefore, the SLRB organizational theme is not covered. This lead to: (1) having unspecialized structure, (2) inadequate tasks dividing on directorates, and (3) not able to meet requirements of SLRB's stakeholders.

Capacity building and staff adequacy

The capacity building and staff adequacy are conventional concepts that have been developed by the time. For land administration organizations, the building capacity covers the educational and professional bodies that are involved the organization (Rajabifard et al, 2007). While the adequacy of staff covers availability of sufficient staff in the organization that is supported by required skills (FIG, 2008). In Dubai, it was found that the DLD assigned an independent department which is "The Dubai real estate institute" to meet the training needs for the DLD, and its stakeholders, supported with adequate staff. However, for Bahrain, it was found that the SLRB has a lack of professional capacity building programs for the field of land administration as it showed in section 4.2.5. Accordingly. The theme of the capacity building and staff adequacy is partly covered and SLRB is suggested to develop an efficient building capacity plan that meets the update in the land administration sector from one hand and the situation of SLRB in the future form the other hand.

Institutional stability

In order for land administration organizations to meet their business demands, it is substantial for the organization to be stable in terms of managing its human and financial resources (FIG, 2008). In Dubai, it was found that the DLD is institutionally stable. However, in Bahrain, it was found that the SLRB is highly

affected by the austerity policies that were taken by the government. This is compounded by preventing the SLRB from getting part of their income to improve their services or hire required staff due to the ministry of finance and civil service bureau regulations as it presented in section 4.2.5. Therefore, the theme of the institutional stability for SLRB is not covered due to the lack of authority in dealing with it.

6.2.5.1. SWOT analysis

In the previous sub-section, the results of the SLRB are discussed according to the theme of the management system. According to acquired results, SWOT matrix was proposed to the SLRB's management system as it represented in table 15.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Existence of sufficient support and trust from top management to SLRB staff. • Availability of qualified staff. • Availability of clear governmental guidance. • Launch fast track services. • Academic training for more than 35 professional engineers in surveying and land registration fields. 	<ul style="list-style-type: none"> • Lack of institutional support. • Inconsistency in dealing with priorities between administrative level and policy and management levels. • Unsatisfactory services for stakeholders from the private sector. • Lack of a marketing plan. • Mismatch of positions between organizational structure and reality. • Lack of capacity building plan. • Increasing urgent requests at the expense of the daily work.
Opportunities	Threats
<ul style="list-style-type: none"> • Moving to a business model organization. • Strengthening the relationship with the private sector. • Hire staff for missing expertise. • Adopt risk management plan. 	<ul style="list-style-type: none"> • Losing key staff. • Decrease productivity. • The decrease of private sector stakeholders from the market. • Substitute SLRB with departments in other ministries.

Table 15 SLRB management system SWOT analysis

From the SWOT matrix about the SLRB's management system, we can observe for internal factors that weaknesses rank higher than strengths. For external factors, the SLRB has more threats to avoid more than opportunities to take.

6.2.5.2. SLRB management system recommended strategies

To improve the management system in SLRB, strategies are recommended according to the theme of the management system as it represented in table 16.

SO Strategies	WO Strategies
<ul style="list-style-type: none"> • Use the governmental guidance to adopt alternative solutions for the institutional support. • Use the governance boards to promote transparent management within SLRB. • Adopt a participatory policy with stakeholders to hire necessary staff. • Advertise the fast track service and its impact on SLRB and stakeholders. • Encourage the professional engineers to obtain required skills. 	<ul style="list-style-type: none"> • Adopt a business model to increase institutional support. • Strengthening the relations with stakeholders to increase their satisfaction. • Set land information sharing policy to enhance the SLRB relationship with stakeholders. • Develop a marketing plan to provide stakeholders with required information. • Settlement of the mismatching in the organizational structure through the risk management plan. • Develop training plan according to needed skills. • Manage staff productivity through the business model.
ST Strategies	WT Strategies
<ul style="list-style-type: none"> • Use the governmental guidance to manage staffing issues. • Adopt on stakeholders in improving the productivity of SLRB. • Encourage stakeholders to support SLRB using the political support. • Conduct targeted researches to measure staff satisfaction. 	<ul style="list-style-type: none"> • Improve productivity by increasing the institutional support. • Support stakeholders through providing clear land information policy. • Control urgent requests to maintain productivity.

Table 16 Recommended strategies

From the SWOT matrix about SLRB's management system, we can observe that strategies were distributed over three principles: improve the SLRB's relationship with stakeholders, re-build the institutional support to SLRB and develop an efficient capacity building plan. In addition, it is suggested for the SLRB to focus on the WT strategies due that the SLRB is experiencing difficulties in this field and these difficulties are expected to increase shortly according to the current SLRB circumstances that are presented in section 4.2.5.

6.3. Summary of the SLRB assessment

According to the above discussion, the results of the assessment of SLRB can be presented according to three rating ranks; (1) covered, (2) partly covered and (3) not covered. "Covered" rating has been given to indicators which exist in the organization and implemented in an efficient operating environment. "Partly covered" rating has been given to indicators which exist in the organization but not implemented in an efficient operating environment and need minor improvements. "Not covered" rating has been given to indicators that do not exist in the organization, or they are implemented in an inefficient environment and need significant improvements. Table 17 shows a summary of the results of SLRB in Bahrain.

Dimension	Indicator	Rating		
		Covered	Partly covered	Not covered
Organization core mandate	Laws and legislation are recognized and support the mandates of the organization	✓		
	Organization's mandates are clearly formulated and manageable		✓	
	Organization has no overlapping with other entities in achieving its mandates			✓
Objective and Strategies for organization	Strategies and objectives of the organization are clear and specific		✓	
	Strategies and objectives have an effective execution plan			✓
Adopted processes	The organization is conducted by sufficient processes to achieve its objectives.	✓		
	Processes are conducted in an efficient manner		✓	
	Processes are clear, simple and standardized		✓	
	Processes are monitored and regularly reviewed		✓	
Technology	The organization is based on a well ICT infrastructure		✓	
	The organization is supported by sufficient technological support (i.e. full electronic flow).		✓	
Management system	The organization is managed according to clear guidance principles	✓		
	LAS functions have an efficient relationship with stakeholders.			✓
	Organizational structure is well designed in a way that it achieves organization's objectives			✓
	Organization has adequate skills and capacity building plan to achieve its tasks		✓	
	Organization is institutionally stable (i.e. financially and administratively)			✓

Table 17 Summary of SLRB results

According to the summary of the assessment, it shows that the SLRB has three covered indicators, eight (majority) partly covered and five not covered. Broadly speaking, the not covered indicators have a higher impact on the performance efficiency of the SLRB due to their characteristics. In addition, it showed that lack of implementing of some indicators are related to each other. For example, having not efficient formulated mandates of SLRB lead to occurring of overlaps in SLRB mandates.

Moreover, the coverage of the assessment framework indicators can be read from another angle. SLRB, as an organization, has two main actors: government and stakeholders. The SLRB has a strong relationship with the government and that is why we can see laws of SLRB, conducted processes and getting guidance are covered indicators. In contrast, SLRB has weaker relations with stakeholders. This explains to us the existing overlaps, lack of support to implement the SLRB strategy, lack of efficient organizational structure and institutional support. Between a strong relationship with the government and less relation with stakeholders, the SLRB overall performance varies between dimension and another. This explains showing conducted activities in the SLRB as partly covered such as setting objectives and strategies for the organization, conducting processes efficiently, process provide technical support for the organization and having adequate skills for it.

6.4. Summary

In this chapter, after analyzing the results of SLRB in Bahrain and DLD in Dubai, thematic analysis of the assessment criteria is adopted to assess land administration in Bahrain. Accordingly, the assessment is conducted according to the results of each dimension and using SWOT analysis and recommended strategies from it. A summary of the five dimensions has been made showing the overall ranking for SLRB. In the next chapter, conclusions and recommendations of the whole research are provided.

7. CONCLUSION AND RECOMMENDATIONS

7.1. Introduction

In this chapter, the conclusion and recommendations of this research are presented. For conclusions, it shows the overall outcomes of this study according to its objectives. While for recommendations, it provides suggestions for the researched areas in the study according to identified gaps in the discussion in chapter 6. In addition, recommendations are provided for further researches in improving land administration systems from an organizational perspective.

7.2. Conclusion

The main objective of this research is to assess the current land administration system in Bahrain from an organizational perspective. In order to achieve this objective, five sub-objectives have been developed. For the main objective, the research findings have shown that the practice of land administration in Dubai is based on five fundamental concepts: transparent laws and regulations, specific objectives and strategy, comprehensive ICT support and an efficient management system. While in Bahrain, it showed that SLRB is supported by sufficient legislation, good strategic plans and an adequate ICT base. However, the land administration system needs improvements in three main aspects: clarity of legislations that support the mandate of land administration, efficient execution of strategy, stakeholder's policy and in the institutional stability.

7.2.1. Sub-objective one

The first sub-objective is to design a suitable framework to assess a land administration organization. This is achieved by reviewing concepts of evaluating LAS and six existing LA assessment frameworks with more than 60 indicators. Accordingly, a new assessment framework is designed which consists of five dimensions: organizational core mandate, objectives and strategies, adopted processes, technology, management system. Each dimension has specific indicators which are presented in table 4 in section 2.6. The framework focuses on the efficiency of land administration organizations, taking the Bahrain and Dubai cases into consideration as it shown in chapters 4 and 5.

7.2.2. Sub-objective two

The second sub-objective is to define the current status of a land administration system in Bahrain through the designed assessment framework. This is done by implementing fieldwork to the SLRB in Bahrain. The collected data consists of primary and secondary data. Primary data is collected through semi-structured interviews with officials from different organizational levels like the policy, management and administrative levels. Secondary data is collected as provided laws, bylaws, annual reports, process manuals and other supportive collected documents in interviews as they are presented and analyzed in chapter 4 according to the designed assessment framework in section 2.6.

The results show that SLRB has a clear mandate from the law, however with lack of implementation of it. Similarly, the objectives and strategies and the management system in SLRB are having clear principles for them but are not implemented as the SLRB requires (see section 4.2.1). With regards to processes, it has shown that SLRB is handling a number of processes that they are dealing with them with different interests as it elaborated in section 4.2.3. For the use of technology, the results have shown that SLRB is adopting on technology in its work, but there is lack of development and support for it as it presented in section 4.2.4.

7.2.3. Sub-objective three

The third sub-objective is to assess the current LAS in Dubai which is considered to be a best practice in the region. Similar to the activities performed in the case of Bahrain, fieldwork is done in DLD in Dubai following the same data collecting and analysis methods.

With respect to the organizational assessment framework, the results showed that DLD has a clearly formulated mandate and strategies with sufficient implantation of them. Similarly, the processes and the management system were conducted partly in a standardized way, however with less interest in the cost recovery aspect. For using the technology, the results show that the DLD is implementing a satisfactory use of technology with an explicit vision to move forward to a fully digital environment.

7.2.4. Sub-objective four

The fourth sub-objective is to assess the efficiency of LAS in Bahrain. This is achieved by comparing the results of Bahrain with those in Dubai and literature review according to the themes (dimensions) of the assessment framework where each theme is discussed independently.

The discussion came out with a summary that categorize indicators of themes under covered, partly covered and not covered according to their implementation in the SLRB as it represented in section 6.3. The summary showed that the majority of the SLRB indicators are partly covered where indicators are existed in the organization but they are not implemented in an efficient operating environment and need minor improvements

7.2.5. Sub-objective five

The fifth sub-objective is to provide recommendations for the organizational improvement of SLRB. This is achieved by implementing SWOT analysis for each theme of the discussion as it showed in chapter 6. This is supported by the generated strategies from the SWOT analysis for the organizational improvement of the SLRB.

The overall suggested strategies for revealed that the SLRB should provide: (1) more elaborations for its mandates, (2) objectives and strategies with timelines, (3) fully digitalized processes, (4) an efficient spatial data support, (5) organization with a business model, and (6) adaptation of the designed assessment framework. These recommendations are explained in the next section.

7.3. Recommendations

This section is based on the conducted discussions and SWOT analysis in chapter 6. Although the SWOT strategies are recommended to be implemented by the SLRB, the following recommendations are most crucial recommendations for this research.

1. **Provide elaborated interpretation of legislation:**

Some of the operational problems are caused by various interpretations of the laws. Accordingly, it is recommended that SLRB translates all legislation and guidance into detailed documents to prevent different interpretations of the laws. This will eliminate overlapping of functions and improve resource utilization for SLRB.

2. **Create a planning and partnership directorate:**

It is observed that SLRB has applied good practices developing its strategy. However, this strategy is not implemented efficiently due to lack of allocating required resources to it. Accordingly, it is recommended to SLRB to create a partnership and cooperation directorate similar to the practice in Dubai. This directorate should be responsible for:

- a. Supervision the implementation of the SLRB strategic plan and ensure that the plan is achieving the government action plan.
- b. Ensuring that the SLRB is having an operational role in the national geographic information governance committee
- c. Create partnerships with nominated stakeholders on the national and global levels and provide open communication channels with them.
- d. Ensuring the quality of provided services through managing SLRB projects, governance meetings and productivity KPIs.

3. Improve efficiency of processes:

SLRB has some practices of process standardization through its contract with a consulting firm to issue practice and procedure manuals for all SLRB services. However, these practices are not covering all services in SLRB and not following the same quality on all levels. Thus, it is recommended for that all practice and procedure manuals have to be completed on an equal quality level, taking DLD practice as the starting point, to increase the efficiency of conducted processes.

4. Draft a plan for transforming to fully digital environment:

Although SLRB went a long way with usage of technology, the technological improvements are made usually without a specific plan. Hence, it is advisable for SLRB to implement an efficient plan for adopting a fully digital environment. All other current and further improvements are recommended to be aligned with this plan. Adopting a fully digital environment is expected to deal with several challenges of SLRB such as the level of bureaucracy, limitation of financial and managerial resources, length of processes and archiving issues.

5. Set a business model for SLRB:

The availability of plans and strategies to achieve the objectives of the organization might not be sufficient for ensuring its success. Accordingly, it is recommended for SLRB to fit its strategies into a business model that ensures the capability of the organization to deal with the surrounding challenges (i.e. economic, political, social). An efficient business model can provide sustainable solutions for obstacles facing SLRB and allows it to justify to the government the need of the SLRB to be somewhat free from the institutional restrictions (i.e. civil service bureau and ministry of finance).

This recommendation is a cross-cutting theme for objectives and strategies, adopted processes and the management system themes. It has solutions cover implementing the process in a cost-effective manner, generating revenue for the government, providing required services to the customers and attract financial and staffing resources. In addition, transforming into a business model will empower decision makers in SLRB among the political, managerial and administrative levels and provide a transparent environment for them. In addition, it will enhance providing a targeted capacity building plan for the bureau as it will be market-oriented.

6. Adopt the designed framework for assessing land administration organizations:

In regard to the implemented assessment framework, it has been seen that the framework has dimensions with comprehensive coverage for functions of the organizations. They give the researcher the flexibility to measure most of these functions in land administration organizations. However, it is recommended to select the required indicators according to each case, purpose and allocated resources for the assessment.

7.4. Suggested areas for further research

Further research might be applied to both case studies in Dubai and Bahrain. For Dubai, the experience of shortening the transaction time of land transfer from days to 30 minutes needs to be more investigated from the organizational perspective as a best practice in land administration functions. This will provide an opportunity to investigate for further organizational dimensions. For Bahrain, the governance of the national geographic information governance committee in Bahrain needs to be explored in order to identify the governmental way in managing spatial information in Bahrain. In addition, further investigation is suggested in finding an adequate model in managing and dealing with SLRB stakeholders to provide sufficient support for the SLRB and attract professional stakeholders in Bahrain's land market and to study the feasibility of implementing the SWOT analysis strategies.

Further researches might be done in implementing the designed framework in other countries to examine its efficiency in exploring land administration organizations from an organizational perspective. In addition, further researches might be done in studying the institutional stability for land administration organizations as to be self-sufficient concerning human and finance resources (like Kadaster of the Netherlands can be studied as a best practice).

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LIST OF APPENDICES

Appendix 1: Semi-structured interview questions (Part A)

Dimension (5)	Indicator (18)	Question	Organizational level		
			Internal (SLRB)		
			Policy (22)	Management (19)	Administrative (15)
1. Mandate	Organization's mandates are clear formulated and manageable	a. Tell me about the organization (Organization identification: name, main role, location, affiliation, size, financial condition, employees)	X	X	X
		b. What does the organization working on these days?	X		
		c. Does the mandate include meeting the demands of the customers and other stakeholders?	X		
	Laws and legislations are recognized and support the mandates of the organization	a. What are the laws and regulations that support the organization mandates?	X		
	Organization has no overlapping with other entities in achieving its mandates	a. How clearly do you see the mandates of the organization formulated? Are there any overlaps with other entities? And why?	X		
	Sub-tasks are linked with each other well to achieve the core task of the organization	a. Do all tasks that organization is doing within the core mandate of the organization?	X		
2. Strategies	Strategies and objectives of the organization are clear and specific	a. What are the milestones for the organization? (improvements and crises)	X		
		b. After this long way, what are the learned lessons to keep improving the land administration sector?	X		

Dimension (5)	Indicator (18)	Question	Organizational level		
			Internal (SLRB)		
			Policy (22)	Management (19)	Administrative (15)
	Strategies and objectives are covering all aspects of the organization	c. What would be your recommendations to the organization to achieve its goals?	X	X	X
		a. Was there any assessment done for the organization? And what was it recommendations?	X		
		b. What is your capacity building plan?	X		
		c. How strong this organization is and why?	X		
		d. What are the main issues that you want to focus/improve in the land sector? (i.e. weaknesses, problems, challenges	X		
		e. Are they any coming opportunities for the organization?	X		
		f. What are the main threats that are facing the organization?	X		
3. Process	Processes are conducted in a cost-effective manner	a. How do you ensure the quality and accuracy of the processes?			X
		b. Are the processes conducted in a cost-effective manner?			X
		c. What are the challenges in applying accuracy and technological standards in work? And how do you deal with them?			X
	Processes are clear, simple and standardize	a. What is the reference for the processes and regulations in the organization?			X
	Processes are monitored and regularly reviewed	a. How much supervision does the organization do for its employees?			X
		b. How does the organization update itself? (methods of obtaining new knowledge)			X

Dimension (5)	Indicator (18)	Question	Organizational level		
			Internal (SLRB)		
			Policy (22)	Management (19)	Administrative (15)
		c. Are the work processes monitored and evaluated? And is it appropriate?			X
		d. How would you rate the achievements of organization mandates with others?	X	X	
		e. How does the organization ensure that it is doing well?	X		
		f. How would you rate the planning in the organization?	X		
	Every process has a clear link with the organization's objective	a. Does all process that organization is doing within the core mandate of the organization?			X
4. Technology	The organization is based on a well computerized ICT infrastructure	a. How many systems are used within the organization?			X
		b. How does the organization organize its data?			X
		c. Are the ICT applications well designed to support the work processes and the business objectives?			X
		d. Is the information technology sufficient for further development and maintenance of the information system?			X
	Information has a full electronic flow within organization and stakeholders	a. How does the organization communicate internally and externally? And how do you assess it?			X
5. Management system	The organization is managed according to clear guidance principles	a. How does the organization maintain its sustainability? (retirement and recruitment programs, employment policies)		X	
		b. How does the organization depend on the outsource? In which fields?		X	

Dimension (5)	Indicator (18)	Question	Organizational level		
			Internal (SLRB)		
			Policy (22)	Management (19)	Administrative (15)
		c. How are decisions taken in the organization?		X	
		d. How do you assess the flexibility of the organization?		X	
		e. How does the informality affect the organization?		X	
		f. Are the guiding principles for good management clear and understandable at all governmental levels?		X	
		g. Are the managerial tools in terms of planning control, accountability and liability appropriate?		X	
		h. Does the organizational culture encourage the sharing of values towards good performance?		X	
	LAS functions have efficient relation internally and with stakeholders, especially cadastre and land registration	a. What is your relationship with the stakeholders? And how satisfied they are?	X	X	
		b. Are the linkages between the mandated organizations well defined to ensure good institutional co-operation?	X		
	Organizational structure has well designed in a way that it achieves organization's objectives	b. What is the organizational structure for the organization? And how do you evaluate it?		X	
		d. How LA is organized in the country?	X		
		e. How does the organization look to the land administration sector?	X		
		f. What is the best organizational structure for land administration sector?		X	
	Tasks are divided adequately to departments	a. Is the distribution of duties and departments within organization adequate?		X	

Dimension (5)	Indicator (18)	Question	Organizational level		
			Internal (SLRB)		
			Policy (22)	Management (19)	Administrative (15)
		b. Is the allocation of tasks and responsibilities to managers appropriate and do they have the necessary power of execution?		X	
	Organization has required skills to achieve its tasks	a. What are the key skills required for the organization? How do you deal with the missing skills?		X	
	Organization has financial stability	a. Is the organization financially stable?		X	
		b. Are the financial mechanisms appropriate and do they meet the business demands?		X	

Appendix 1: SLRB executional plan (Part B)

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Policy (22)	Management (16)	Administrative (15)
1. Mandate	Organization's mandates are clear formulated and manageable	a. Tell me about the organization (Organization identification: name, main role, location, affiliation, size, financial condition, employees)	X	X	X
		b. What does the organization working on these days?	X		
		c. Does the mandate include meeting the demands of the customers and other stakeholders?	X		
	Laws and legislations are recognized and support the mandates of the organization	a. What are the laws and regulations that support the organization mandates?	X		
	Organization has no overlapping with other entities in achieving it mandates	a. How clearly do you see the mandates of the organization formulated? Are there any overlaps with other entities? And why?	X		
	Sub-tasks are linked with each other well to achieve the core task of the organization	a. Do all tasks that organization is doing within the core mandate of the organization?	X		
2. Strategies	Strategies and objectives of the organization are clear and specific	a. What are the milestones for the organization? (improvements and crises)	X		
		b. After this long way, what are the learned lessons to keep improving the land administration sector?	X		

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Policy (22)	Management (16)	Administrative (15)
		c. What would be your recommendations to the organization to achieve its goals?	X	X	X
	Strategies and objectives are covering all aspects of the organization	a. Was there any assessment done for the organization? And what was it recommendations?	X		
		b. What is your capacity building plan?	X		
		c. How strong this organization is and why?	X		
		d. What are the main issues that you want to focus/improve in the land sector? (i.e. weaknesses, problems, challenges	X		
		e. Are they any coming opportunities for the organization?	X		
		f. What are the main threats that are facing the organization?	X		
3. Process	Processes are conducted in a cost-effective manner	a. How do you ensure the quality and accuracy of the processes?			X
		b. Are the processes conducted in a cost-effective manner?			X
		c. What are the challenges in applying accuracy and technological standards in work? And how do you deal with them?			X
	Processes are clear, simple and standardize	a. What is the reference for the processes and regulations in the organization?			X
	Processes are monitored and regularly reviewed	a. How much supervision does the organization do for its employees?			X
		b. How does the organization update itself? (methods of obtaining new knowledge)			X

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Policy (22)	Management (16)	Administrative (15)
		c. Are the work processes monitored and evaluated? And is it appropriate?			X
		d. How would you rate the achievements of organization mandates with others?	X	X	
		e. How does the organization ensure that it is doing well?	X		
		f. How would you rate the planning in the organization?	X		
	Every process has a clear link with the organization's objective	a. Does all process that organization is doing within the core mandate of the organization?			X
4. Technology	The organization is based on a well computerized ICT infrastructure	a. How many systems are used within the organization?			X
		b. How does the organization organize its data?			X
		c. Are the ICT applications well designed to support the work processes and the business objectives?			X
		d. Is the information technology sufficient for further development and maintenance of the information system?			X
	Information has a full electronic flow within organization and stakeholders	a. How does the organization communicate internally and externally? And how do you assess it?			X
5. Management system	The organization is managed according to clear guidance principles	a. How does the organization maintain its sustainability? (retirement and recruitment programs, employment policies)		X	
		b. How does the organization depend on the outsource? In which fields?		X	

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Policy (22)	Management (16)	Administrative (15)
		c. How are decisions taken in the organization?		X	
		d. How do you assess the flexibility of the organization?		X	
		e. How does the informality affect the organization?		X	
		f. Are the guiding principles for good management clear and understandable at all governmental levels?		X	
		g. Are the managerial tools in terms of planning control, accountability and liability appropriate?		X	
		h. Does the organizational culture encourage the sharing of values towards good performance?		X	
	LAS functions have efficient relation internally and with stakeholders, especially cadastre and land registration	a. What is your relationship with the stakeholders? And how satisfied they are?	X	X	
		b. Are the linkages between the mandated organizations well defined to ensure good institutional co-operation?	X		
	Organizational structure has well designed in a way that it achieves organization's objectives	b. What is the organizational structure for the organization? And how do you evaluate it?			
		d. How LA is organized in the country?	X		
		e. How does the organization look to the land administration sector?	X		
		f. What is the best organizational structure for land administration sector?		X	
	Tasks are divided adequately to departments	a. Is the distribution of duties and departments within organization adequate?		X	

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Policy (22)	Management (16)	Administrative (15)
		b. Is the allocation of tasks and responsibilities to managers appropriate and do they have the necessary power of execution?		X	
	Organization has required skills to achieve its tasks	a. What are the key skills required for the organization? How do you deal with the missing skills?		X	
	Organization has financial stability	a. Is the organization financially stable?			
		b. Are the financial mechanisms appropriate and do they meet the business demands?			

Appendix 1: SLRB executional plan (Part C)

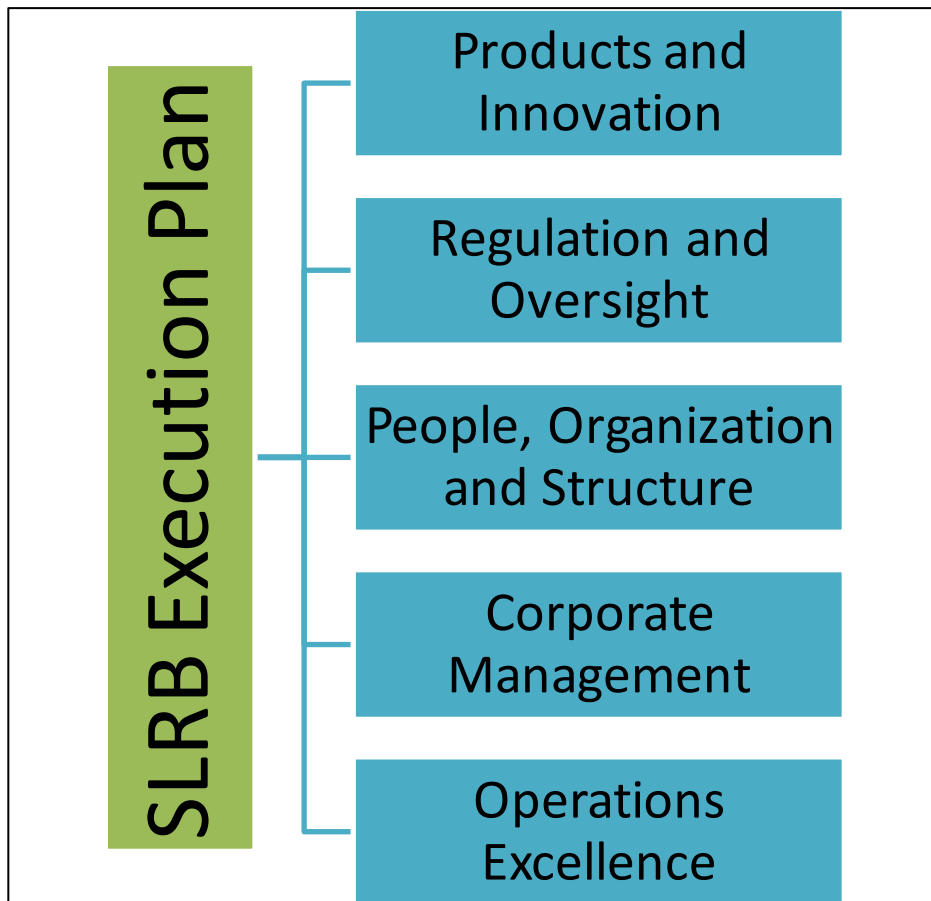
Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Society (18)	Private sector (15)	Individual (5)
1. Mandate	Organization's mandates are clear formulated and manageable	a. Tell me about the organization (Organization identification: name, main role, location, affiliation, size, financial condition, employees)	X	X	X
		b. What does the organization working on these days?	X		
		c. Does the mandate include meeting the demands of the customers and other stakeholders?	X		
	Laws and legislations are recognized and support the mandates of the organization	a. What are the laws and regulations that support the organization mandates?	X	X	
	Organization has no overlapping with other entities in achieving it mandates	a. How clearly do you see the mandates of the organization formulated? Are there any overlaps with other entities? And why?	X		
	Sub-tasks are linked with each other well to achieve the core task of the organization	a. Do all tasks that organization is doing within the core mandate of the organization?	X		
2. Strategies	Strategies and objectives of the organization are clear and specific	a. What are the milestones for the organization? (improvements and crises)	X		
		b. After this long way, what are the learned lessons to keep improving the land administration sector?	X		

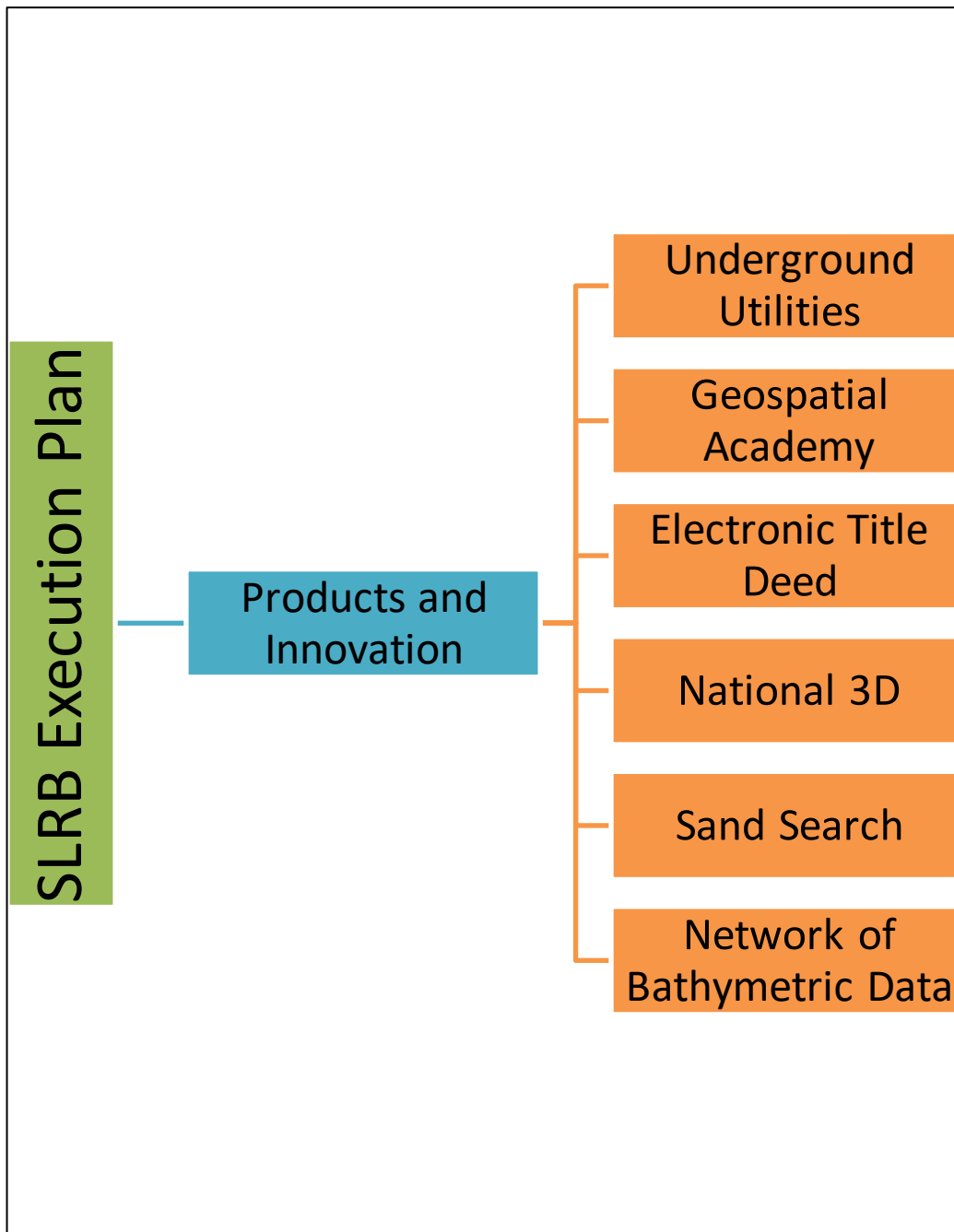
Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Society (18)	Private sector (15)	Individual (5)
		c. What would be your recommendations to the organization to achieve its goals?	X	X	X
	Strategies and objectives are covering all aspects of the organization	a. Was there any assessment done for the organization? And what was it recommendations?	X		
		b. What is your capacity building plan?			
		c. How strong this organization is and why?			
		d. What are the main issues that you want to focus/improve in the land sector? (i.e. weaknesses, problems, challenges			
		e. Are they any coming opportunities for the organization?			
		f. What are the main threats that are facing the organization?			
3. Process	Processes are conducted in a cost-effective manner	a. How do you ensure the quality and accuracy of the processes?		X	
		b. Are the processes conducted in a cost-effective manner?			
		c. What are the challenges in applying accuracy and technological standards in work? And how do you deal with them?		X	
	Processes are clear, simple and standardize	a. What is the reference for the processes and regulations in the organization?		X	
	Processes are monitored and regularly reviewed	a. How much supervision does the organization do for its employees?		X	
		b. How does the organization update itself? (methods of obtaining new knowledge)		X	

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Society (18)	Private sector (15)	Individual (5)
		c. Are the work processes monitored and evaluated? And is it appropriate?		X	
		d. How would you rate the achievements of organization mandates with others?	X		
		e. How does the organization ensure that it is doing well?	X		X
		f. How would you rate the planning in the organization?	X		
	Every process has a clear link with the organization's objective	a. Does all process that organization is doing within the core mandate of the organization?			
4. Technology	The organization is based on a well computerized ICT infrastructure	a. How many systems are used within the organization?			
		b. How does the organization organize its data?			
		c. Are the ICT applications well designed to support the work processes and the business objectives?			
		d. Is the information technology sufficient for further development and maintenance of the information system?			
	Information has a full electronic flow within organization and stakeholders	a. How does the organization communicate internally and externally? And how do you assess it?		X	
5. Management system	The organization is managed according to clear guidance principles	a. How does the organization maintain its sustainability? (retirement and recruitment programs, employment policies)			
		b. How does the organization depend on the outsource? In which fields?			

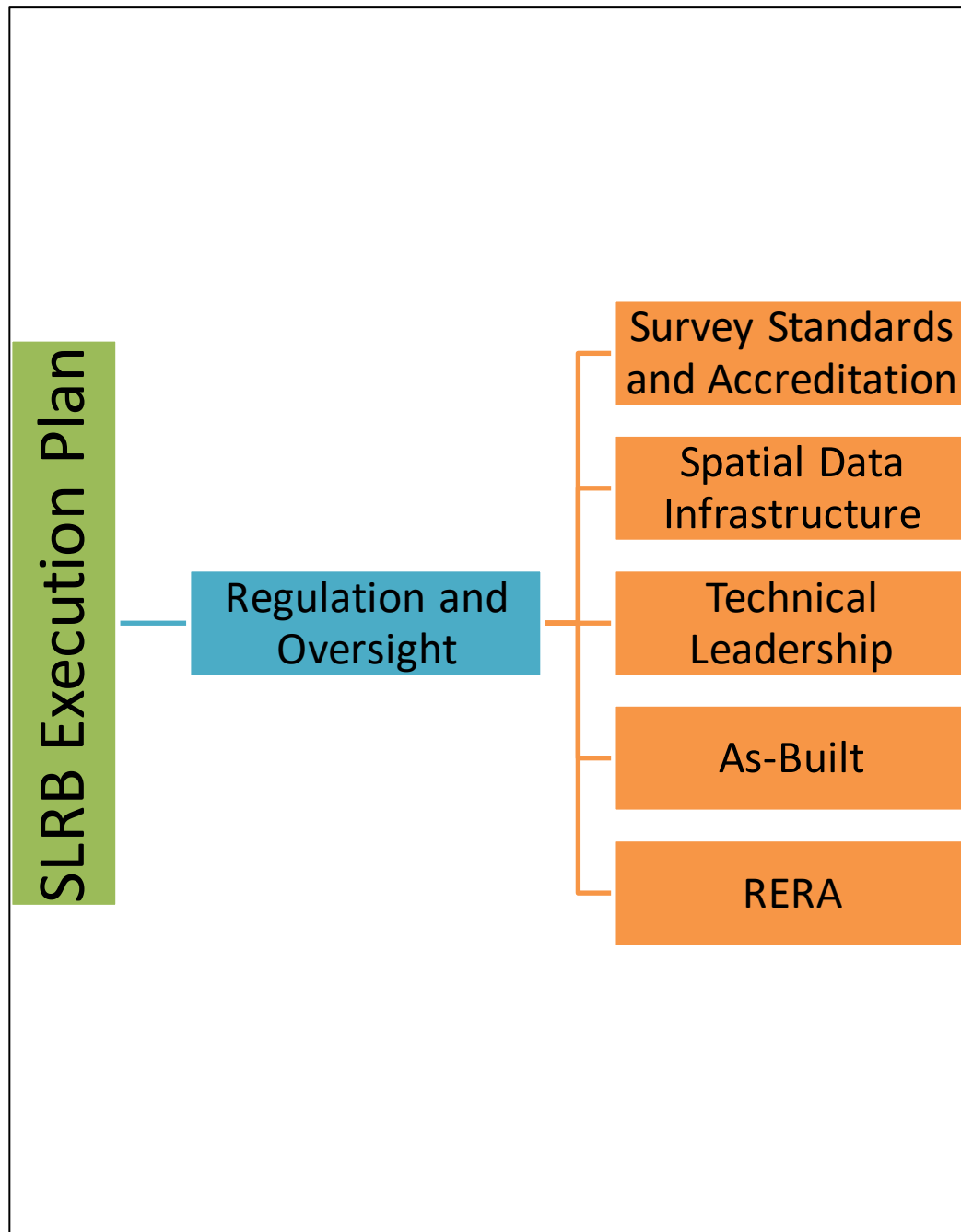
Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Society (18)	Private sector (15)	Individual (5)
		c. How are decisions taken in the organization?			
		d. How do you assess the flexibility of the organization?	X	X	X
		e. How does the informality affect the organization?	X	X	X
		f. Are the guiding principles for good management clear and understandable at all governmental levels?			
		g. Are the managerial tools in terms of planning control, accountability and liability appropriate?			
		h. Does the organizational culture encourage the sharing of values towards good performance?			
	LAS functions have efficient relation internally and with stakeholders, especially cadastre and land registration	a. What is your relationship with the stakeholders? And how satisfied they are?	X	X	
		b. Are the linkages between the mandated organizations well defined to ensure good institutional co-operation?	X		
	Organizational structure has well designed in a way that it achieves organization's objectives	b. What is the organizational structure for the organization? And how do you evaluate it?			
		d. How LA is organized in the country?	X		
		e. How does the organization look to the land administration sector?			
		f. What is the best organizational structure for land administration sector?		X	
	Tasks are divided adequately to departments	a. Is the distribution of duties and departments within organization adequate?			

Dimension (5)	Indicator (18)	Question	Organizational level		
			Governmental stakeholders		
			Society (18)	Private sector (15)	Individual (5)
		b. Is the allocation of tasks and responsibilities to managers appropriate and do they have the necessary power of execution?		X	
	Organization has required skills to achieve its tasks	a. What are the key skills required for the organization? How do you deal with the missing skills?		X	
	Organization has financial stability	a. Is the organization financially stable?			
		b. Are the financial mechanisms appropriate and do they meet the business demands?			

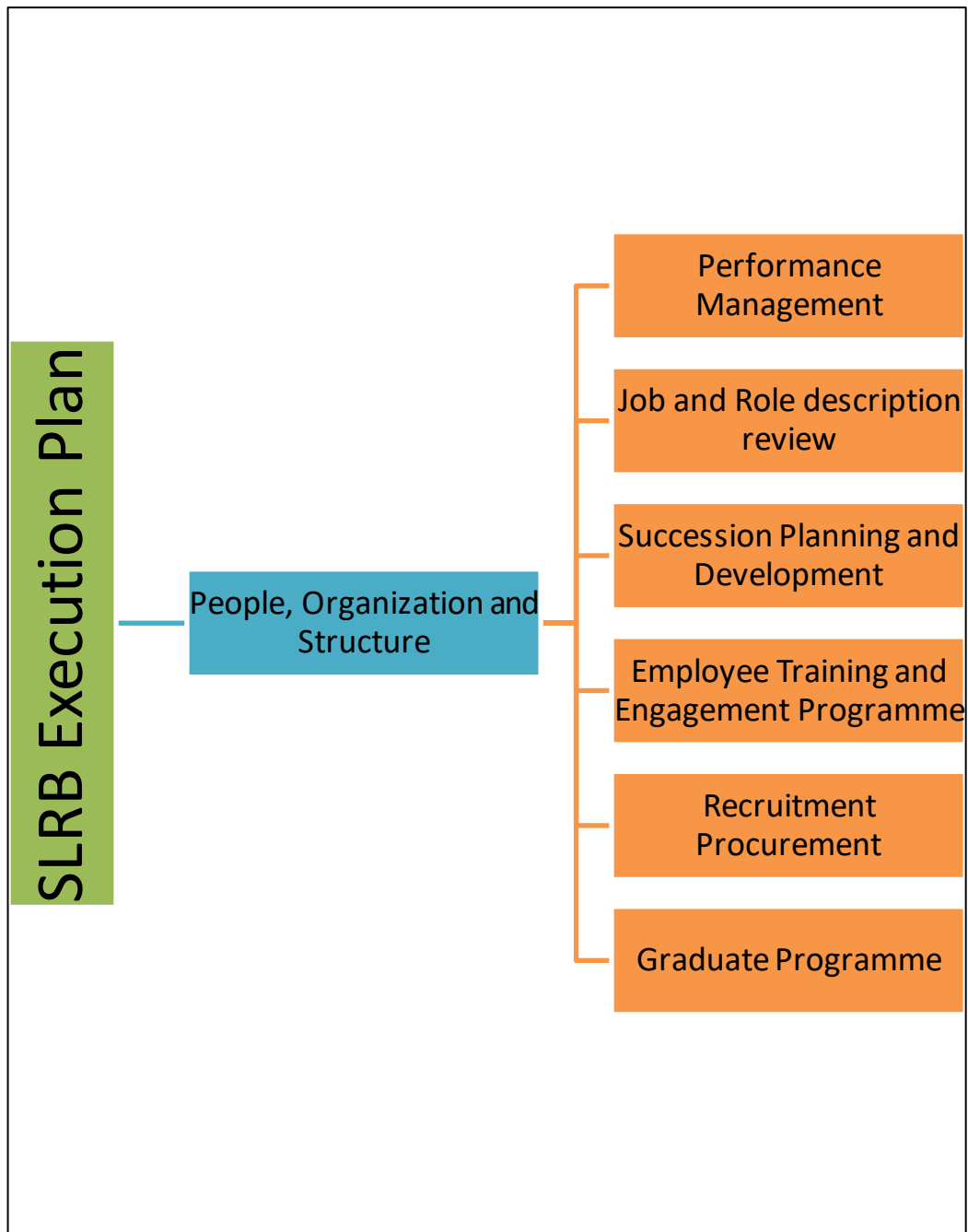




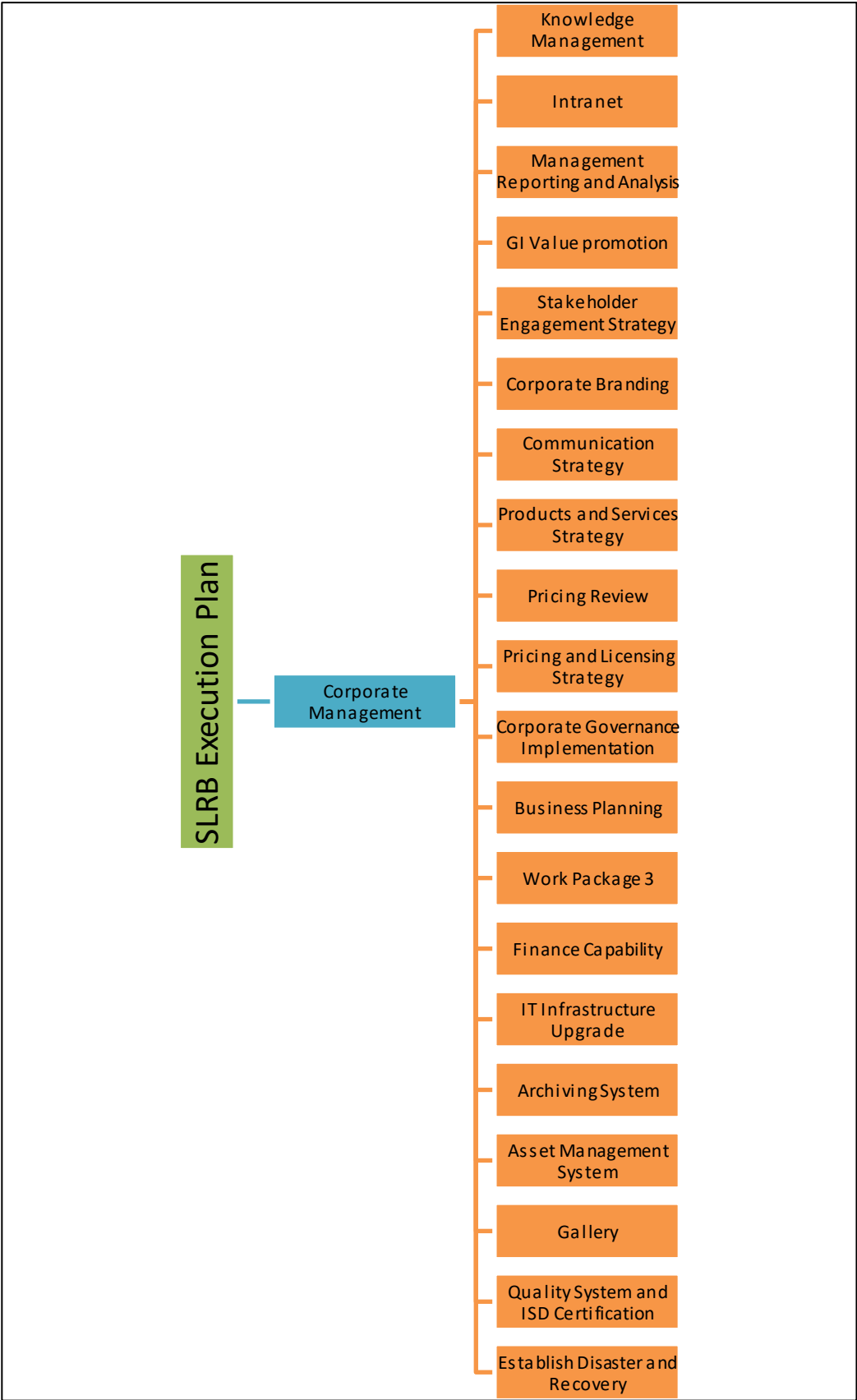
Appendix 2: SLRB executional plan (Part C)



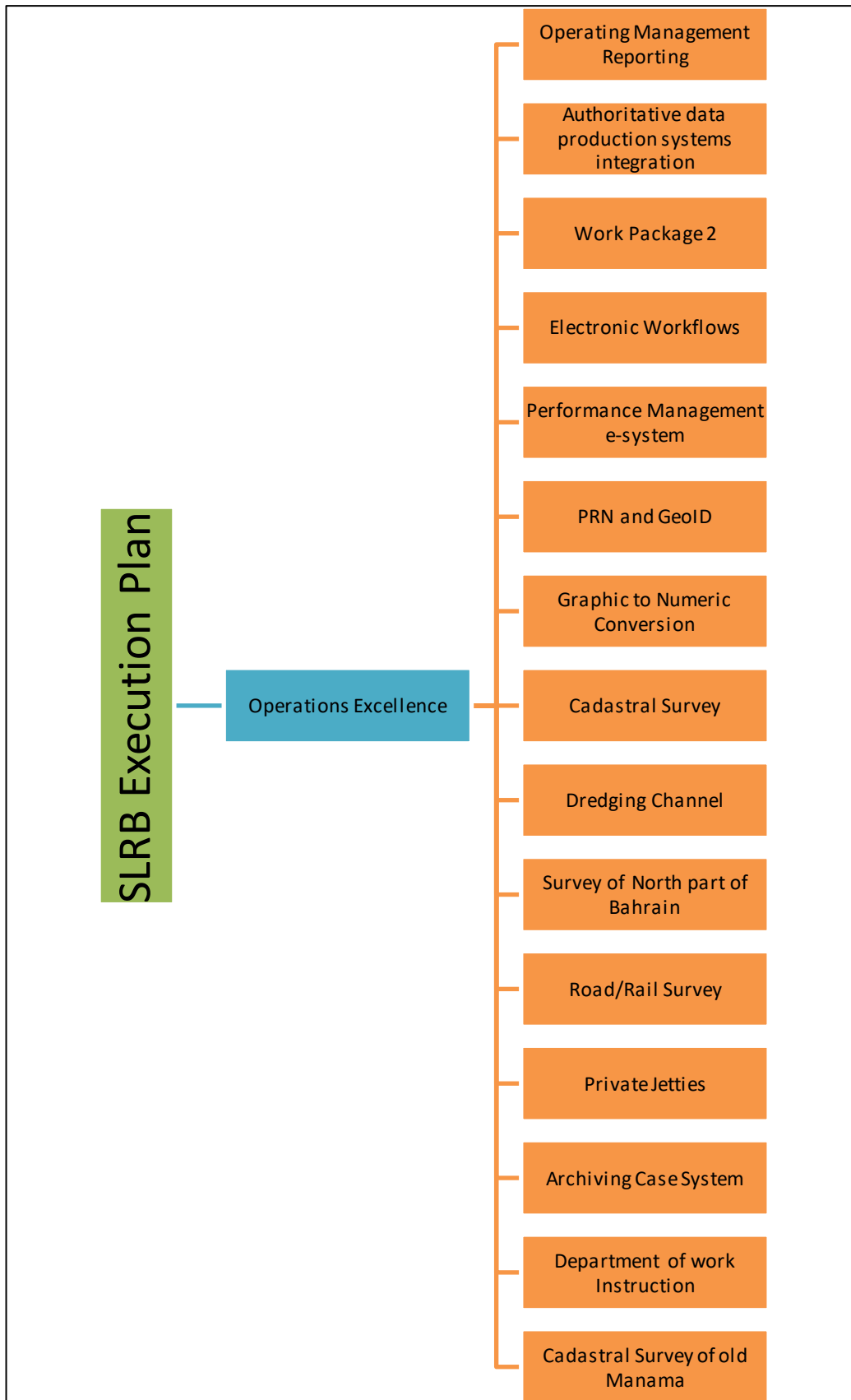
Appendix 2: SLRB executional plan (Part D)



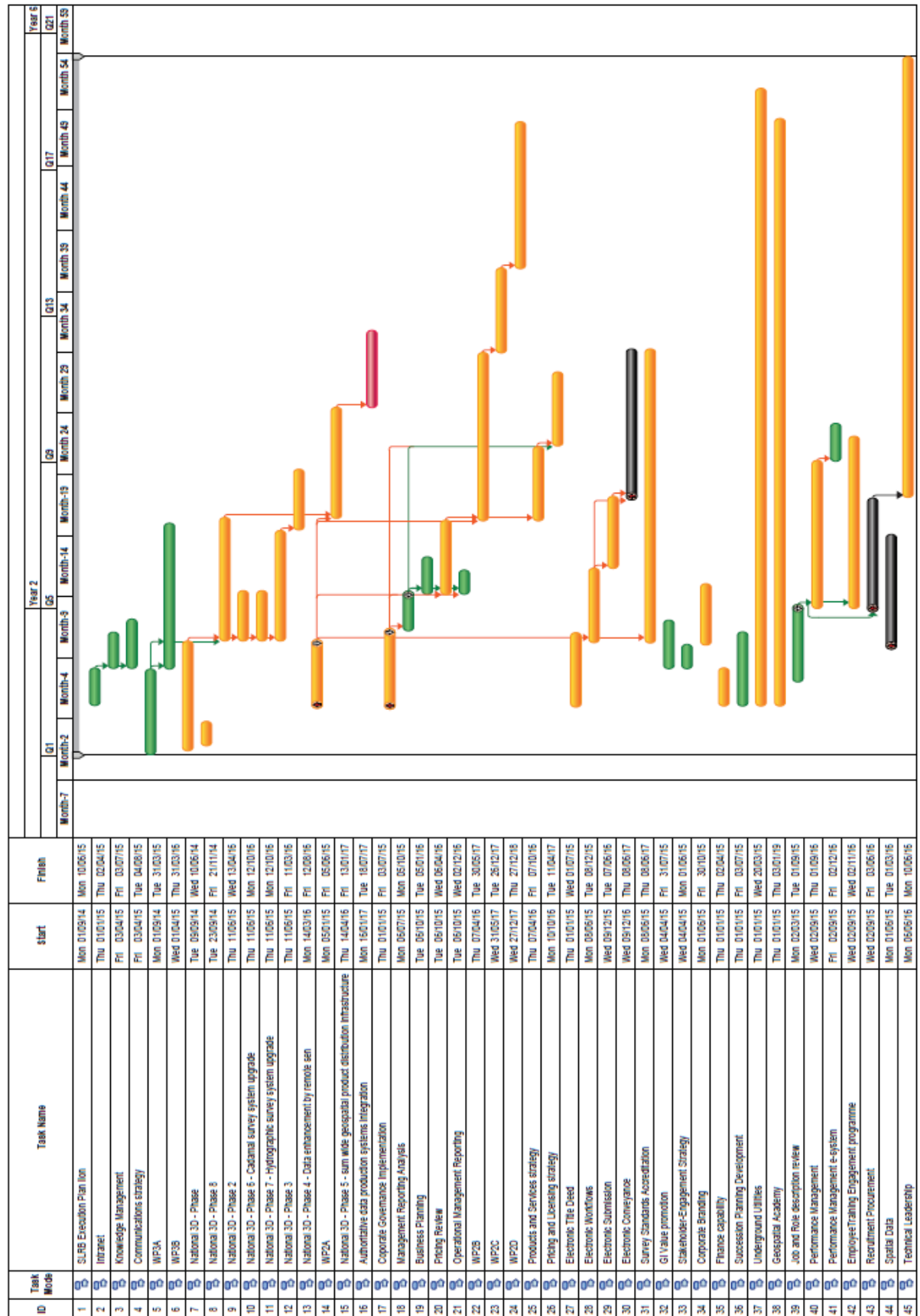
Appendix 2: SLRB executional plan (Part E)



Appendix 2: SLRB executional plan (Part F)



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Appendix 4: SLRB Graphic Project Plan

