

A Conceptual Model of Change Management for E-Government Project in Indonesia

Endang Sulistiyani¹, Tony Dwi Susanto¹

Abstract—Implementation of e-government projects in developing countries is mostly failed. Current studies found that most of these failures were caused by failure in managing changes. Meanwhile, government as an object of e-government projects in a country, especially Indonesia will provide its own uniqueness. While the current model of change management was still general. Therefore, it was necessary to develop a specific change management model for e-government projects in Indonesia. Model was developed based on methodology, that are: identify the common components; analyze the characteristics of e-government projects in Indonesia; and formulate the change management methodology. The result of the research was a specific change management model for e-government projects in Indonesia that consists of seven main components, which were set the change goal, form a change management teams, doing gap analysis, establish a desire to change, design new environments, implementing the change, and sustain the change. Regulation and leadership are the main driver of e-government project initiative in Indonesia. The components were mapped to SDLC phases and states of change.

Keywords—Change Management, Model, Characteristic, E-Government, Project, Indonesia.

I. INTRODUCTION

E-Government was chosen by the government as an innovation for better public services than before[1]. Many countries of the developing countries have been trying to get this opportunity. However, this implementation is not considered as successful as their counterparts in developed countries. The survey that has been done by Heeks show that 85% e-government project in developing countries failed and only 15% were successful[1].

Change management is one of the critical factors in e-government[2]. According to Heeks, the failure of most of e-government projects was caused by gap between present and the future condition[1]. It requires change in order to bridge the gap[1]. The same thing was presented by Nasim that is the reasons for the high level of e-government projects failure in developing countries is the lack of change management strategies[3]. In addition, Ndou's research concluded that change management was made a challenge by 8 of 15 cases of e-government project[4]. Another conclusion indicates that failure of change management can increase the risk of failing e-government projects[5]. Formally, change management is defined as the

process, tools, and techniques that focused to people impacted by the change[6].

In the context of e-government, some projects only transform services from traditional to use technology[7]. This was in contrast to the research which emphasizes that e-government projects were more about organizational change issues than technology issues[3]. The change management approach in e-government projects was still limited[8]. In the context of change management, there have been several models of change management but still generic model for IT project. Recent research[2] has proposed a change management model for e-government but just contains the changed elements rather than a methodology.

Currently, Indonesia is one of the developing countries that has been implementing e-government projects. Government as the object gives uniqueness for e-government project. Bureaucracy as the nature of government makes the work in it done by top down approaches, driven by regulation, and order of leader[9]–[11]. State money is the main source of budget in the government, including e-government project[9], [12]. Government agencies' staff generally have more administrative competencies than IT capabilities[13], [14]. The competition in the government is weak, which was a pride when there was a region that successfully implement e-government projects and imitated by other governments[10], [15].

These conditions show that government in Indonesia as an object of e-government is unique, but the existing model still general. Meanwhile, e-government success required an appropriate approach that accommodation of unique conditions. Therefore, this study aims to propose a change management model for e-government project, especially in Indonesia. These objectives will be achieved by answering three research questions, what are the common components of change management model, what are the issues related e-government project in Indonesia, and what is the appropriate methodology for e-government project. The proposed model may be can be used as a reference in managing changes to e-government projects by government agencies in Indonesia.

II. METHOD

In order to answer the research questions, this study is conducted in three main steps (see Figure 1). Firstly, to identify the common components of change management. Secondly, to explore the characteristics and issues of e-

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government project in Indonesia. Thirdly, to formulate the change management methodology.

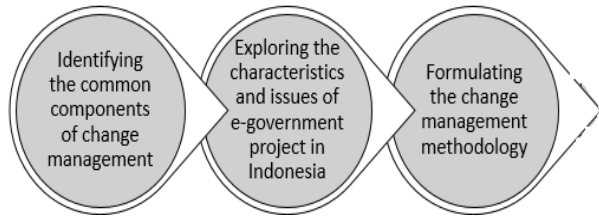


Figure 1. Research Methodology

III. RESULTS AND DISCUSSION

A. Current Change Management Model

Currently there are many models of change management. Each model has a primary focus. Based on the study of ten models, it is known that the main focus of change management can be grouped into three, i.e. steps, emotional transitions, and changing organizational elements (see Figure 2). Three of the ten models (30 %), that are Kubler-Ross Model, Bridges Transition Model, and Virginia Satir) focus on emotional transitions[16]. They can't be used as independent change management methodologies because they do not contain clear step guidance. Meanwhile, 20 % of models, that are McKinsey Model and Switch framework are not a framework for operational change but just contain organizational elements that change[16] Related to the purpose of this study, there are 50 % of models (Kotter's Model, Prosci ADKAR, EASIER Model, Deming cycle, and Lewin's model) that focus on the steps[16].

Grouping the Model based on the Main Focus



Figure 2. Grouping the Model based on the Main Focus

Expect that, there are two standards that related, i.e. COBIT 5 BAI05: Manage Organisational Change Enablement, seven phases of the COBIT Implementation Life Cycle dan ITIL continual service improvement approach[17]–[19].

Based on study is found five models and three best practices whose main focus is step. Components of each models are used to identify the common component. Components are synthesized then grouped based on similarity of definition. The summary result of change management component is presented in Figure 3.

Reference	Components	Component Summary
COBIT 5: BAI05	Vision of change	Team
	team	
	Desire to change	
	implementation	
seven phases of the COBIT Implementation Life Cycle	Sustain the change	Goal
	Driver of change	
	Gap analysis	
	Identification of solution	
	Change implementation	
	Change evaluation	
	Sustain the change	
ITIL: CSI Approach	vision	Gap
	Gap analysis	
	Solution planning	
	Change implementation	
	evaluate	
Kotter's change management model	Sustain the change	Desire
	Change driver	
	Team	
	Vision of change	
Prosci ADKAR	Desire to change	New environment
	Sustain the change	
	Driver	
	desire	
	knowledge	
Lewin's Model	ability	Implementation
	reinforcement	
	driver	
	Change implementation	
Deming Cycle	refreezing	Sustain
	goal	
	Gap analysis	
	Action planning	
	Change implementation	
EASIER Model	evaluate	Sustain
	reinforcement	
	vision	
	active	
	implementation	Sustain
	evaluate	
	evaluate	

Figure 3. Change Management Components

Based on Figure 3 it is known that there are seven general components of change management, i.e. goal, team, gap, desire, new environment, implementation, and sustain. All of models mentioned that goal is component of change management. Implementation and sustain are the component that is mentioned by 87,5 % of models. Desire's component is mentioned by 50 % of models. Gap is component that is presented by 37,5 % of models. Meanwhile, 25 % of models showed that team and new environment are common component. As with most existing models, the component is a sequential step. As a step, the main components that are still in the form of keywords are detailed into processes. The seven processes are (1) set the change goal, (2) form a change management teams, (3) doing gap analysis, (4) establish a desire to change, (5) design new environments, (6) implementing the change, and (7) sustain the change.

B. Characteristic of E-Government Project in Indonesia

Governance as the object of e-government projects provides uniqueness compared to most IT projects. Characteristics of e-government projects in Indonesia are identified from interviews with four informants. Two of them are government representatives and the other represent practitioners who work as a e-government application developer. All of informants presented that regulation is the main driver of e-government application

development[9]–[11], [20]. In related to the organizational culture aspect, 75% of informants mentioned that the application was built on the orders of the leader[9], [11], [20]. Meanwhile, in the aspect of human resources, 4 literatures used as a reference concluded that the government agencies staff have more administrative competencies than IT capability[13]–[15], [21]. Another aspect of the characteristics of e-government projects is the system development methodology. Based on the interviews, 75% of informants agreed that applications are usually developed in a short cycle, the outcomes of the project are not exactly known when the projects are initiated, and development cycle is iterative[9]–[11], [20]. This methodology refers to the agile development method, that is iterative software development approach, short development cycle, and small deliverable is used immediately[22]. Thus, the development of application e-government is close to the agile project management approach, i.e. project management methodology that uses short development cycles focusing on continuous improvement in the development of a product or service[23].

C. Characteristic of E-Government Project in Indonesia

Conceptual model describes change management approach for e-government project in Indonesia consists of 3 elements, that is change management component, characteristic of e-government project, and phase of SDLC (see Figure 4). The most prominent characteristic of the e-government project is regulation and leadership as a key driver. The formulation of the objectives of change should be complemented by clarity of regulations. This is important in order to clarify the law of the developed project. As is known characteristic of government organization that is bureaucratic, where one based on regulation, top down, and command superior. Therefore, the execution of each component requires regularization and leadership. In addition, as mentioned by Prosci that integration of project management and change management plays a role in achieving the success of a project[6], [24]. Because one form of e-government project that limits this study is application development, so the project management approach that used is SDLC phase.

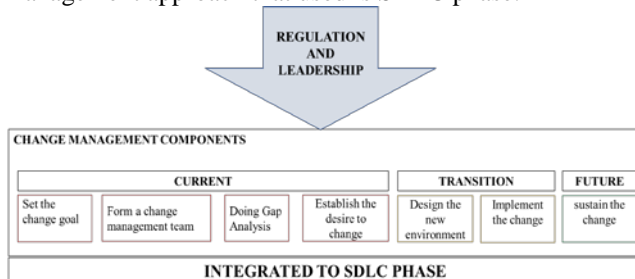


Figure 4. Conceptual Model of Change Management Methodology

IV. CONCLUSION

The resulting change management model consists of seven main components, which are set the goal change,

form the change management team, doing gap analysis, establish the desire to change, design the new environment, implement the change, and sustain the change. Governance as the object of e-government projects has given uniqueness, both from triggers, human resources, budget, and organizational culture. As an organization with a bureaucratic nature then everything that should be done must be clear at the beginning. This is reflected in the components of the change management model generated in the first three components. The goals of change that are largely influenced by the leadership and regulation demands must be defined early. The implementing team should also be formally established considering the work culture in the government that rarely works voluntarily, meaning that staff will tend to do the job in accordance with the job description they have. Meanwhile, gap analysis can be gained by new components because in all existing change management models have not been defined. Whereas in the Heeks study mentioned that the cause of most of the failures of e-government projects in developing countries is the lack of understanding of current conditions and the conditions in the future when e-government implemented. The seven components are mapped into three change states, where at the current stage there are 4 components, in the transition stage there are 2 components, and 1 component in the future stage. Given that an e-government project is an application development project, the methodology is also mapped to SDLC Phases. It is intended to show the integration between change management and information system development methodology.

This study is limited to conceptual model of change management. Furthermore, an action research on government agencies can be used to validate the proposed model. Those validation can be used to know the adequacy of the model for implementation in government organization. The possibility to change or not the conceptual model is determined by the validation result.

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