

A Study on the Status of EA Activation and its Achievement Through Analysis of its Condition

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Abstract

EA (Enterprise Architecture) structurally defines intangible resources, such as business and information systems, and effectively promotes, manages, and improves IT (Information Technology). EA has been put to practical use in various ways to create effective information systems by systematically analyzing the interrelationships and public business system data, especially in public administrative institutions and local autonomous entities. Considering the difficulties in establishing EA and its management systems, now is the time to suggest a direction for activation and performance. This study is going to put forth a questionnaire-based model that analyzes the adoption of EA policies by individual institutions and make the model available for utilization and promotion status analysis of all matters related to performance in EA strategy.

Key Words: IT Governance, IT management, EA, Project Management, IT Portal

1. Introduction

EA results in investment decisions that are based on plans set forth by government agencies, improvements in IT, and systematic management of IT resources. However, investment decisions based on the plan and IT promotion have not produced useful results, whereas EA used by individual institutions has resulted in improvements in systematic management of IT resources, when considering the targets of investment decisions, IT improvements in view of the results, and systematic management of IT resources [7].

Therefore, this study is going to contribute to the development of EA for governments and individual institutions by identifying more competitive factors for EA and thus helping to understand the characteristics of organizations that effectively implement EA after discussing the implications of those influencing factors [8].

2. Related Research

Several in-depth studies on EA utilization have recently been done, reflecting a great deal of

interest in how to use EA in the course of IT promotion. “A Study on Importance of the Role of EA operational organization in EA result” [1] focuses on the importance of EA for the realization of goals. “The influence EA maturity weighs on information technology (IT) capability and informatization result: Targeting on public organization” [2] suggests that the influence of EA depends on an organization’s IT capabilities and the results depend on the level to which institutions introduce, manage, and utilize EA. Institutions that utilize EA more effectively and that start out with greater IT capabilities end up in positive feedback loops where EA increases IT capabilities, which then increase the effectiveness of EA.

3. Fact-finding Model for EA Status Analysis

3.1 Designing an EA fact-finding questionnaire

This study is going to establish a questionnaire model consisting of a questionnaire design model and a questionnaire analysis model by proposing a model for formation of EA activation and policy directions, a model available for analysis of EA results in individual institutions, and a model for utilization and status analysis of all matters related to performance in EA strategy.

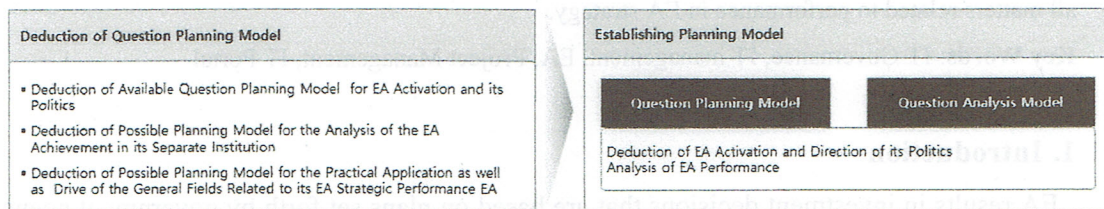


Fig 1. The Establishment of the Question Planning Model

This study is going to address policy directions and activation support factors through analysis of the influential factors/variables that contribute to EA competitive advantage [3], verify and supplement the existing model, and thus make a model available for EA result analysis. Also, this study will apply a questionnaire analysis model [4] for the analysis of individual institutions, and utilize it to deduce EA effectiveness and the implications of policy directions.

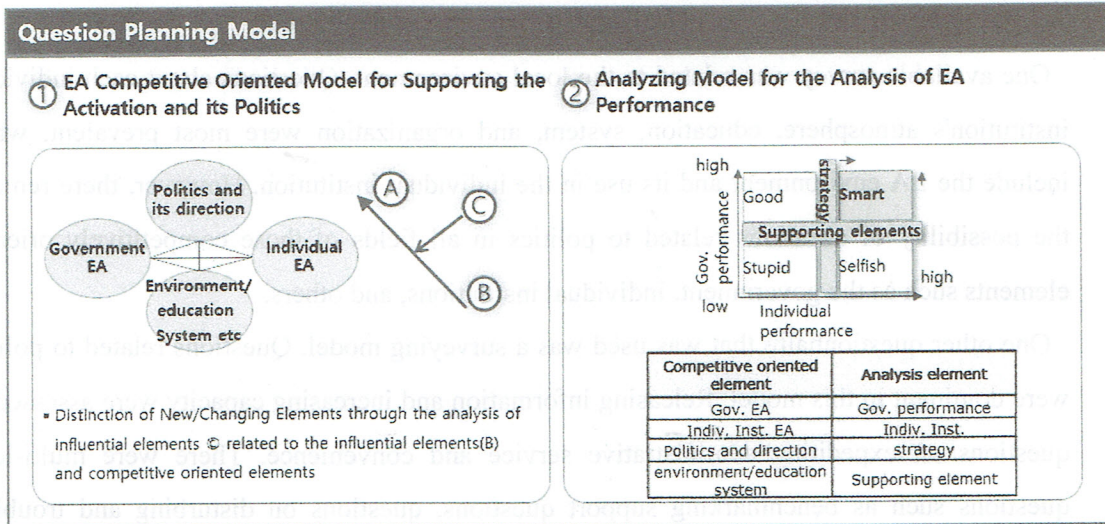


Fig 2. EA Competitive Oriented Model and EA Analysis Model

Fig. 3 outlines the question planning and analysis model, which is based on the analysis of EA achievement and EA activation as well as its policies. The model consists of and is based on influential variables that affect the foundation of competitively oriented elements.

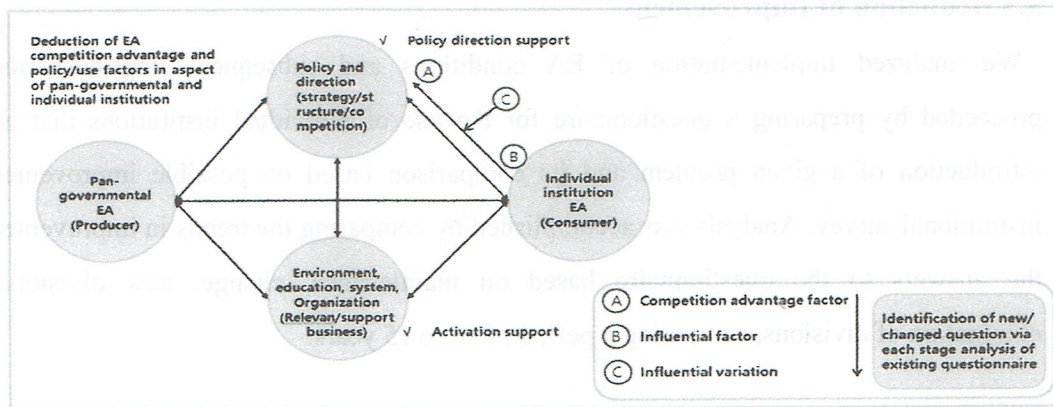


Fig 3. Questionnaire design model

To analyze EA performance in individual institutions, a question planning model [4] has been developed that makes it possible to utilize the suggested performance elements through an analysis of each question. When it comes to the mapping of each question related to the analysis element, the model includes those questions related to performance analysis and competitive elements. The objects of mapping were limited to the questions which are ranked on a 5-point scale from "low" to "high."

3.2 Analysis of the EA Fact-finding Survey Question Model

One available survey was related to the local environment. Questions about each individual institution's atmosphere, education, system, and organization were most prevalent, which include the EA environment and its use in the individual institution. However, there remains the possibility of questions related to politics in all fields of those competitively oriented elements such as the government, individual institutions, and others.

One other questionnaire that was used was a surveying model. Questions related to politics were dominant in this model. Releasing information and increasing capacity were assessed by questions on expediting administrative service and convenience. There were multi-level questions such as benchmarking support questions, questions on disturbing and troubling issues related to governmental EA politics, controversial questions on diverse issues and their solutions, questions regarding preferential politics and its activation and necessary conditions, customized consulting questions, questions on individual institutions' EA management systems and EA portals [5], and improvement issues including problems with the process of submitting documents.

3.3 Deduction of Improvement

We analyzed implementation of EA conditions and subsequent improvements. We proceeded by preparing a questionnaire for the use of individual institutions that permits introduction of a given problem and its comparison based on possible improvements of institutional survey. Analysis was accomplished by comparing the trends in improvement and the answers to the questionnaire based on maintenance, change, new divisions, and elimination of divisions, comparing a period of 14 to 15 years.

4. Analysis of the Results of the Questionnaire

The response rate was 98.3%. Results indicate that 119 institutions of 121 institutions that were given the questionnaire returned it, which include the survey subject of 426 institutions participated in 2015 [6].

4.1 The current conditions of EA implementation

Answers to subjective questions on the current condition of EA policies were 44.7% positive. However, regarding the current system in terms of such factors as information business, EA was still inadequately implemented.

The percentage of institutions that had adopted the regulations of the RFP was 49.6%, and

the non-adopted rate was 23.5%. Therefore, implementation must be accelerated to meet the EA standards indicated by the RFP. The percentage currently enforcing the policies was 26.1%. So as to secure the thorough management of information, certain regulations must be put into place. The registration of EA information increased to 68.1% from 36.7% over the past year, which indicates the establishment of current EA information.

4.2 EA Politics

54.2% of individual institutions measured and evaluated EA politics, which shows the need to develop balanced policies related to EA environment, guidelines, and regulations.

48.4% responded that it was necessary to simplify the EA registration process, which demonstrates the necessity of automatically collecting information. As a result, each individual institution should report the volume of information resources and the type of institution, such as central administration, local autonomous entity, and public institution, especially in matters pertaining to politics.

To activate governmental EA policy, adjustment of opinions and establishment of routines are needed to bring about different opinions through the notice board of EA.

4.3 Measurement of Managing Performance of Information System

47.9% of institutions out of all 57 EA institutions kept did not properly keep track of their information. The major cause of abolishing downgrade activation of information systems is that doing so demands a proper foundation to strengthen the measurement and performance of the information system.

5. Conclusion

This study produced a questionnaire model available to draw conclusions regarding EA implementation and policy directions and to adapt the model available for analysis of the EA results of individual institutions and the model available for analysis of the utilization and promotion status of all matters related to performance in EA strategy. Considering that 57.1% of institutions consider it necessary to implement EA effectively, individual institutions are slowly utilizing EA, compared to the development of advanced government EA. In addition, it is known that interest in the promotion of EA and willingness are necessary to enable individual institutions to establish themselves. Although EA has been developed, its current implementation falls short of where it should be. Furthermore, it seems possible to make progress through the use of EA policies. Management personnel are needed to introduce EA

to individual institutions. By increasing the frequency at which institutions are educated, the environment of EA will be improved. People are gradually recognizing the importance of EA in improving business conditions in connection with the spread of information, which has been demonstrated by the survey results [6].

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