A REVIEW ON METRICS TO MEASURE AND MONITOR THE PERFORMANCE OF STRATEGY IMPLEMENTATION

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ABSTRACT

The strategy formulation in organizations will be useless unless it is well implemented. Monitoring and measuring the implementation process is responsibility of the stakeholders. By understanding the elements in strategy implementation such as the complexity of environment and dynamic changing in decision making can be considered as metrics to develop a performance tool and measurement kit. This metric mechanism can then deploy into a knowledge management system (Strategy Monitoring-Knowledge Management System). This paper explains the emerging metrics for measuring and monitoring strategy implementation at higher education institution in Malaysia. The concept of the balanced scorecard, the skandia navigator, the Okumus framework and the Cynafin framework will be used as the basic. The paper proposes a research framework in monitoring and measuring the success of strategy implementation and to ensure it aligns with organizational objectives.

Keywords: *Metrics, Performance Measurement, Strategy Implementation*

1. INTRODUCTION

Formulating a strategy is important, but the success of its implementation to achieve business objectives is challenging. Not many researchers and companies have considered about this phenomenon. Top level managers thought that the strategy formulation was their part and it required high intellectual skills to conceptualize the formulation. On the other hand, strategy implementation was a part beyond their responsibilities. In reality, all levels of managers are responsible to ensure that it is well implemented and achieves organizational objectives.

Nowadays many researchers discussed about the importance of strategy implementation, the emerging of metrics and framework around it and the role of knowledge management in managing the organizational strategies. However, none of these researches have been empirically tested yet and the scope of discussion is limited in the profit organization, such as bank, hospitality, tourism, accounting, etc. Kettunen & Kantola[1] have been noted that the higher education institution as nonprofit organization needs to evaluate and audit its management including the strategic planning component and it's relation to the internal processes.

Malaysia as one of the development countries pays full serious attentions in education. As being reported in some newspapers [2], Malaysia will become a hub of standard educational excellence and reach a world-class quality in education. For these reasons, the education ministry has launched its National Higher Education Strategic Plan and the corresponding National Higher Education Action Plan 2007-2010. This action plan is an initiative in the pursuit of excellence while improving the quality of Malaysian Higher Education. This strategic plan under responsibility of vice counselor will be cascaded through the implementation part in each university in Malaysia. Therefore, to monitor and measure the effectiveness of the strategic plan in the level of higher education institution, the process implementation must periodically review, assesses the progress in producing the quality and the best decision concerning corrective action in ensuring the stated objectives are being achieved.

This paper reviews literatures on metrics and frameworks, their advantages and disadvantages that are related to strategy implementation. The balanced scorecard concept as strategic management control system and the importance roles of intellectual capital or knowledge management in organizational business process. Here is strategy implementation. A new approach on metric and framework is proposed as future direction to measure and monitor the performance of strategy implementation in Malaysia higher education institutions.

2. THE LIMITATION OF EXISTING METRICS AND FRAMEWORKS

Recently, many frameworks and metrics of strategic management are used in the organization. They produced "fantastic" strategic plan and organized "excellence" action plan, but it will be useless unless they are followed and supported by optimal implementation of strategies and resources' skills. The transformation of strategy into its implementation is beginning by understanding the barriers or problems in the process of strategy implementation. These "inhibitors" or "barriers" or "impeders" or "problems" [3-11] can be factors to measure and monitor the success of strategy implementation. However, none has subsequently been empirically tested, consistent, enough and standard framework in strategy implementation. Those proposed problems lack of coherency between the factors and sub factors. They were not prepared to solve the complex problems and face the dynamic environment changes especially when the stakeholders need to produce the quality of decision as problems solving. These factors will affect the success of strategy implementation.

3. THE NEW APPROACH

By studying the weaknesses of previous research that focusing on nonprofit organizations, the literature of this new approach will emphasize on some important key words. It is including the balanced scorecard and the skandia navigator as performance measurement tools, okumus framework in strategy implementation studies and snowden framework in knowledge management perspectives. From these studies, there are some components that are being the foundation of approach. First, there are some problems or inhibitors or impeders arising in the process of implementation. To do so, by solving those problems, the success of strategy implementation

can be achieved. Second, the emergence of conflicts, environment changes and uncertainty situation require to be considered by the overall stakeholders in an organization. These dynamic environmental changes from external and internal side of organization will also influence the successful of strategy implementation. The last component is the significant of human factor as one of variables which is affecting the implementation. It is including the communication, the organizational structure, the organizational culture and the human resource. Therefore, the entire components above will be the basic foundation in developing the metrics. These are concentrating in the importance role of stakeholders' knowledge, expertise, intellectual capital, behaviors, beliefs and actions in solving the complexity of problems arising and uncertainty environment during the processes of strategy implementation.

A. BALANCED SCORECARD

In order to manage organizational business process, many metrics and frameworks which are related into management and strategic control system have been developed in recent years. Some of these emanate from the total quality management (TQM) such as the Baldridge, Six Sigma, ISO9000 and European Quality models. Others are the balanced scorecard approach [12], the performance pyramid [13] and the performance prism [14, 15]. The balanced scorecard was developed to address the weaknesses from traditional performance measurement system. It is then combined the measurement of financial and non financial perspectives that more effectively focus on the new managerial imperatives.

Many researchers have agreed and disagreed to the benefit of balanced score card in strategy implementation performance framework. A number of concerns is also being voices as to whether such scorecards can effectively enabled strategy implementation alone or whether there is a need for them to be supported by other management tools such as budgets and forecasts, measures of economic value added, and focused incentives and reward systems [16]. Some pro researches about the balanced scorecard explained that the balanced scorecard provides a framework for managing the implementation of strategy while also allowing the strategy itself to evolve in response to changes in the company's competitive market and technological environments [17]. The balanced scorecard which its four

perspectives as manifested in the strategy maps [18] will link and cascade the organizational strategies from the top until down level management. One of the importance issues and problems in the successful of strategy implementation is communication. The two ways communication is provided by the balanced scorecard [19] with the application of its strategy map. The feedback or bottom up message can be used to communicate the strategy implementation from bottom to up level management. On the other hand, the command and evaluation method are used to communicate from up to the bottom level. The scorecard approach also encourages the coordination scorecard with every level of an organization which is shown in the role of middle level managers as strategic control actors in the process of transformation strategy [3]. The involving process of the entire management role of the stakeholders in an organization will encourage their ownership [16] as individual or group in achieving the organizational objectives. It is predicted as one of variables which are affected the successful of strategy implementation. Others pro opinion on the balanced scorecard approach that it is addressing a number of significant deficiencies associated with more "traditional" performance measurement systems [20]. For example, it provides a "balanced" organizational assessment by recognizing a variety of key stakeholder views [21]. The significant part from the entire pro opinions about the balanced scorecard is the capability to powerful link between the strategy and operations (implementation process) [22].

Moreover, disagreements or contra opinions within these concepts are also argued by others researchers. First is about the stakeholders' views where the balance score card does not properly coherence with the stakeholders approach and it often fails to effectively address some issues relating to employee and supplier contributions and/or the role of the community and is biased towards shareholders [14 and 23]. Second is about the top and up management's involvement, as stated by [16] that the balance score card which is suggesting top-down approach is limited by the participation from lower levels management. It means that the contribution is manipulated by the top level management. Third is explained by Okumus [24] that this technique does not give much emphasize on many explanation of the problems in strategy implementation which involving conflicts and power struggles among interest groups, organizational culture, resource allocation and trainings. It is just looking deep inside into the strategy implementation. Answering

those critics many studies are conducted to complement or replace or combine the balanced scorecard with others control system [21 and 7]. Kaplan and Norton [18] have developed further research from their original concept that focus on performance measurement through strategy focused organizations to the all-embracing strategy maps which provides much more detail on how to embed the scorecard concept and link it to strategy [18] and they tried to complement the balanced scorecard concept with the concept of strategy implementation which is proposed by McKinsey in 7 models [25]. Meanwhile, Brugeman [26] tried to link the functional of balanced scorecard to the management incentive programs, and De Waal & Gerritsen-Medema [27] have developed a scorecard which complements with operational issues associated with the continuing operations. Yet, there are still critics and arguments with those frameworks.

B. SKANDIA NAVIGATOR-INTELLECTUAL CAPITAL

Skandia has taken a lead in developing the measures of intellectual capital as a management tool. The concept of "intellectual capital" can be explained as key determinant of the process of value creation for shareholders, managers and society as a whole which gives rise to benefits that are hard to quantify [28]. Viedma [29] also defined intellectual capital as the knowledge and other intangibles that produce or create value in the present and the future. Moreover, the knowledge it's self is any intellectual material residing in the minds of the people until it is harnessed into something that can add value to the company [30]. Besides the Skandia that measure the organizational intellectual capital performances, Neely tried to introduce the performance prism as a performance tool to measure organizational financial and non financial assets based on the stakeholders value. It discussed the stakeholders' dimensions and value, including stakeholder satisfaction, strategies, processes, capabilities and stakeholder contribution [31]. Although those frameworks are useful in organizational measurement, but it is constrained to the simply framework which provides little guidance on how the appropriate measure can be defined, introduced and used to solving organizational business problems Focusing on the intellectual capital measurement, the new approach and alternative theoretical paradigms are emerging, let say the "value explorer" [32] and "Intellectual Capital Benchmarking System"[33]. Both methodologies and others tend to focusing mainly

on strategy formulation whereas it is essentially consider on strategy implementation.

C. OKUMUS FRAMEWORK-STRATEGY IMPLEMENTATION

An analysis of the previous framework, Okumus [34] found 11 key implementation factors. Considering the role and characteristics of each factor, it can further be grouped into four categories: strategic content, strategic context, process and outcome. The framework also explained and provided the role and the importance of each factor and the relationship with others [24]. This prevents companies in achieving the coherence between strategy and key implementation factors. Besides, the framework also can be used for retrospective analysis of past, current and future cases of strategy implementation. This research also emphasized on the crucial of top and middle managers knowledge and expertise in strategy implementation, because directly or indirectly they are engaged in developing and implementing strategic decision that have wider implication on many other functional areas, but it is still need to be trained to manage complex cases of implementation in dynamic environments. Besides it, this framework is suitable applied for hospitality in hotels environment. The questions remark here is how if this framework adopted in others environment such as higher education institution as one of nonprofit organization. And how does it solve the complex and dynamic changes environment in the processes of strategy implementation.

By adopting Okumus's frameworks that focusing on the strategic context and operational process, this research applies the variables used (strategic context: organizational structure, organizational culture, leadership and environment uncertain; operational process: operational planning, resources, communication, people, control and outcome) to transform the organizational strategies (IT,IS,ICT,KM) from formulation into implementation. The problems occurred in that business processes, will be identified to be investigated of its knowledge flows or knowledge life cycles [35] and processes as problem solving. The importance of organizational knowledge in the success of strategy implementation brings this research to observe the capabilities of knowledge management in achieving the organizational strategies and objectives

D. SNOWDEN FRAMEWORK-COMPLEXITY OF KNOWLEDGE

Recently, intellectual capital management or knowledge management plays important roles in non-linear business environment to gain competitive advantages. Triggered by the SECI model of Nonaka, the new initiatives of knowledge management such as decision support which support in BPR initiatives are introduced. Here, complex adaptive systems theory is used to create a sense making model that utilize self organizing capabilities of the informal communities and identify natural flow model of knowledge creation, disruption and utilization [36]. The complexity thinkers force human capability to create order and predictability through collective or even individual acts. In order to solved and developed the complexities to be more visible, the Cynefin framework was built by proposed three basics assumption prevalent in organizational decision support and strategy. These assumptions are focusing on the relationship between cause and effect in human interaction and markets. Understanding the past human behavior to predict future behavior by facing some choices between one or more alternatives, it can help in minimizing pain or maximizing pleasure of decision making. Therefore, the intention and actions from competitors, populations, nation's states, communities or collective identity are under consideration as the result of intentional behavior. In decision making, both policy making and operational levels must be deal or fit with situation where the assumptions are true or not [37].

This concept is adopted to study the complexity of knowledge where the stakeholders need for solving the problems arise during the implementation and produce the best decisions in the ways to achieve the organizational objectives. The four metrics concept, known, knowable, complex and chaos will be applied to identify the situations that need to be considered in the process of strategy implementation.

4. METRICS FOR PERFORMANCE MEASUREMENT

Those reviews in some of fields studies around the concept of Balanced scorecard and Skandia navigators as performance measurement tools, the importance of strategy implementation in achieving the organizational objectives and the concept of knowledge management in decision making

triggers the emergence of this new metric concept for measuring and monitoring the performance of strategy implementation which the scope of higher education institution in Malaysia (see Figure 1).

From Figure 1, the grounded theories for the metrics development can be explained as follows:

1. The Balanced scorecard concept.

From the studies of some weaknesses of the balanced scorecard concept in the strategy implementation, this new metrics adopt the four perspectives of balanced scorecard. If the scorecard used the measures and targets as variables to monitor the implementation of strategy, this new metrics perceives the importance of intellectual capital in the successful of implementation. In facts, the human capital concept is introduced in learning and growth perspectives of balanced scorecard but it is not fully discussed by Kaplan and Norton [17]. Therefore, by focusing on the internal process perspectives in the process of strategy implementation and learning and growth perspectives without insignificant the others perspectives (financial and customer perspectives), the balanced scorecard can be more effective used in monitoring and measuring the performance of organizational strategy. Moreover, the opinion that mentions the balanced scorecard just only the "straight jacket" then the template can be ignored. It can be used as the template in monitoring and measuring the performance of strategy implementation.

2. The stakeholders' knowledge and intellectual capital of Skandia navigator.

The concept of knowledge and intellectual capital in Skandia navigators is not fully applied in the development of this metrics. The concepts of it which is focusing on the human and the processes of the stakeholders in their involvement of the successful of strategy implementation are enriching the concept of new metrics development. It is answering the questions about the measuring the performance of stakeholders in their involvement in strategy implementation.

3. The importance of Okumus variables in strategy implementation.

Based on the studies of previous metrics and frameworks in strategy implementation, it seems that the okumus is more realistic and objectives to be used to ensure the strategy will run successfully. The variables proposed by the okumus which focusing on the internal and external of strategic context and operational processes are used as the variables or problems that influencing the performance of implementation processes. The ability of the stakeholders in solving the complexity of problems in uncertainty and dynamic environment will be one of indicators in measuring and monitoring the implementation performance.

4. Snowden in Cynafin framework

The concept adopted from the Cynafin is focusing on conflict in decision making to face the complexity of problem, knowledge interaction and uncertainty environment in solving the problems arise during implementation. This situation can be used as a situation that needs to be considered by the entire stakeholders in an organization in measuring and monitoring their strategy implementation. Are there in known situation, knowable, complex or chaos? Onward, it is helping for the stakeholders in taking the corrective actions in ensuring the strategy implementation will be successful. For detailed concept of the metrics in measuring and monitoring the strategy implementation can be depicted in Figure 2.

The Strategy formulation and the strategy implementation cannot be separated. This relationship can be expressed by the success of the later to be an indicator the effectiveness of the previous one. The most important part is how to transform the formulation into the implementation. Some barriers or problems are found in strategy implementation. However, they also affect it. The organizational culture, the organizational structure, people skills, knowledge and behaviors influence the decision making to face the complexity and uncertainty environment. Implicitly, it will also produce some alternative strategies for problem solving.

The complexity environment and decision making changes force the stakeholders to explore their knowledge, expertise and power. This is to make the action plan work and the achievement of organizational objectives. In order to succeed the strategy implementation, the stakeholders must strongly consider and understand about the strength, the weaknesses, the opportunities and the treats (SWOT) of the organizations. The knowledge process is created while they have to make a right and best decision for problems solving. The knowledge gap between what they know and what they need to know as problems solving trigger the stakeholders to acquire the new knowledge. This explanation can be depicted in Figure 3.

The components shown in Figure 2 and 3 are used as fundamental of formulation Critical Success Factor (CSF) and Key Performance Indicators (KPI) to allow the metric development solution. The metric mechanism in measuring and monitoring the strategy implementation will be

applied in the form of Strategy Monitoring-Knowledge Management System (SM-KMS). This prototype will be deployed to show the stakeholders contribution and collaboration to ensure that strategy can be conducted well. Technology alert, statistical analysis report, root causes problems will be produced by that system. This will help the managers in every level to control and measure the performance of strategy implementation.

5. CONCLUSION

Many researchers have observed the importance of strategy implementation. However, there are some other conclusive researches and fewer explanations can be conducted to solve the problems. In order to measure and monitor the strategy implementation, the important things that must be considered are some barriers in facing every changes occurring in strategy implementation. By examining the weakness of balance score card approach and the important role of stakeholders' involvement, the idea of this new research approach are evaluated. Applying the implementation process, the dynamic changes and uncertainty environment are emerged. Some conflicts and complexity environment emerging force the stakeholders to produce some changing decision making or other alternatives ways to ensure the "right" decision. The complexity of stakeholders' behavior, knowledge, expertise and intellectual capital are used as referees in developing decision making. Those can meant the numerical values which are used as parameters and indicators of metrics proposed to measure and monitor the process of implementation where the criteria of success strategies can be delivered. In future work, the metrics mechanism can be shown by the knowledge management system whereas the stakeholders can be monitored through the process of strategy implementation in organization especially in the scope of higher education in Malaysia.

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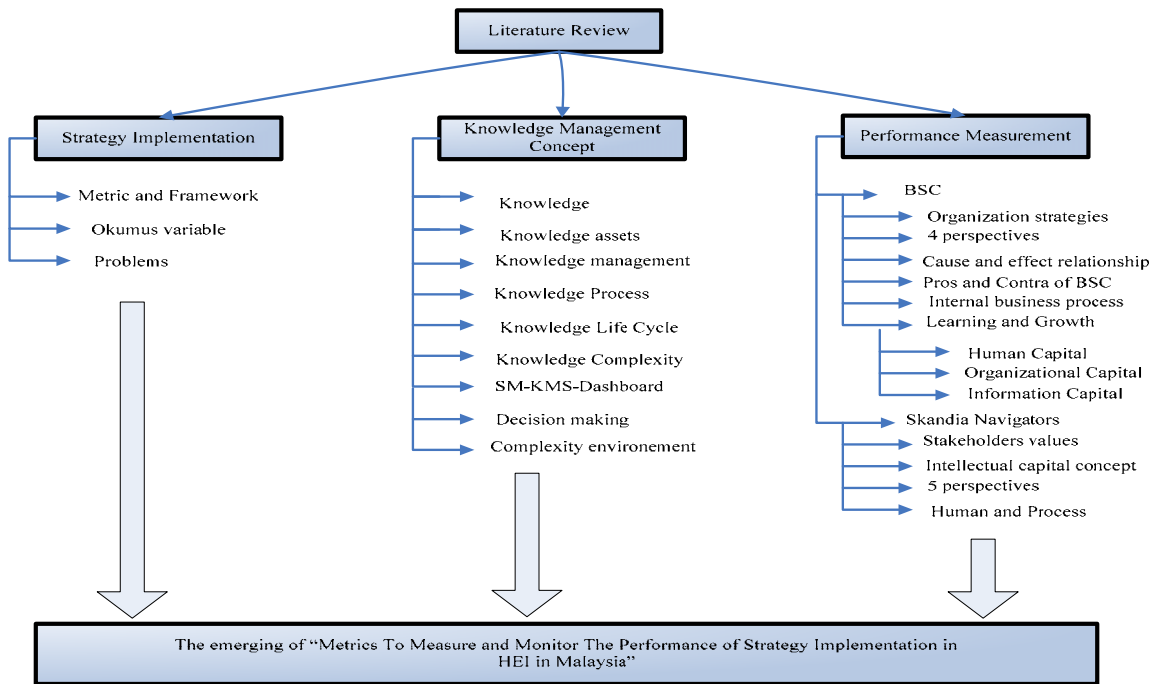
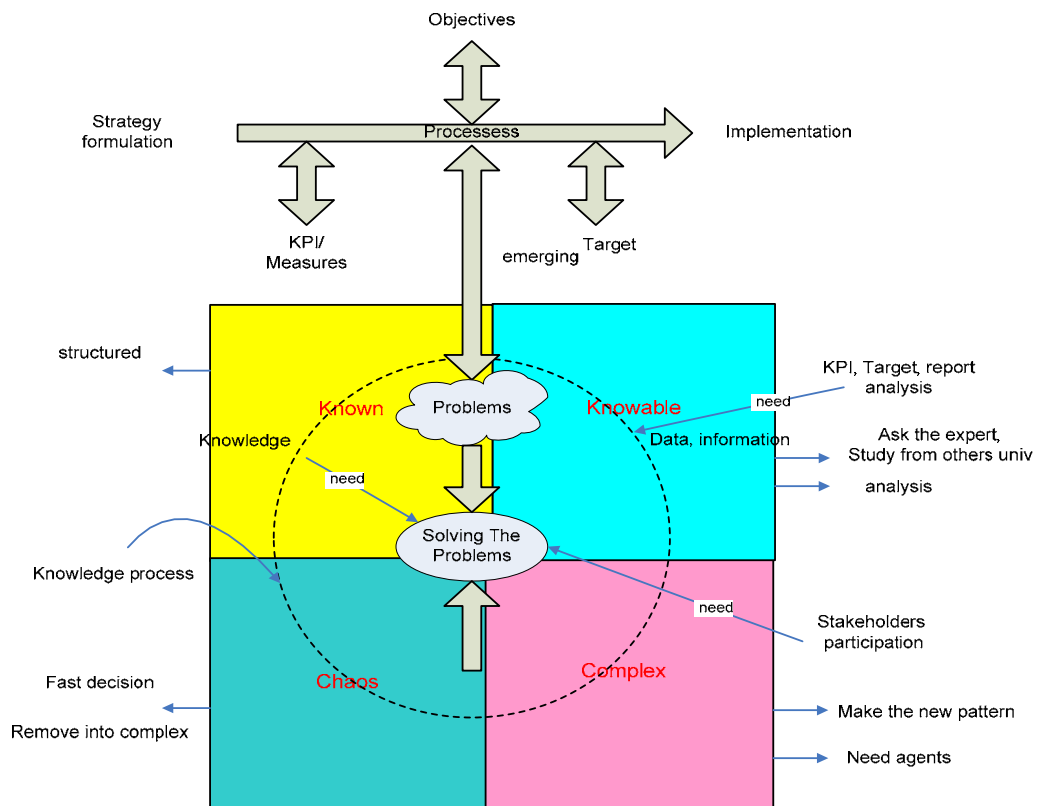*Figure 1. Literature reviews mind map for new approach*

Figure 2. Research framework for metrics to measure and monitor the strategy implementation
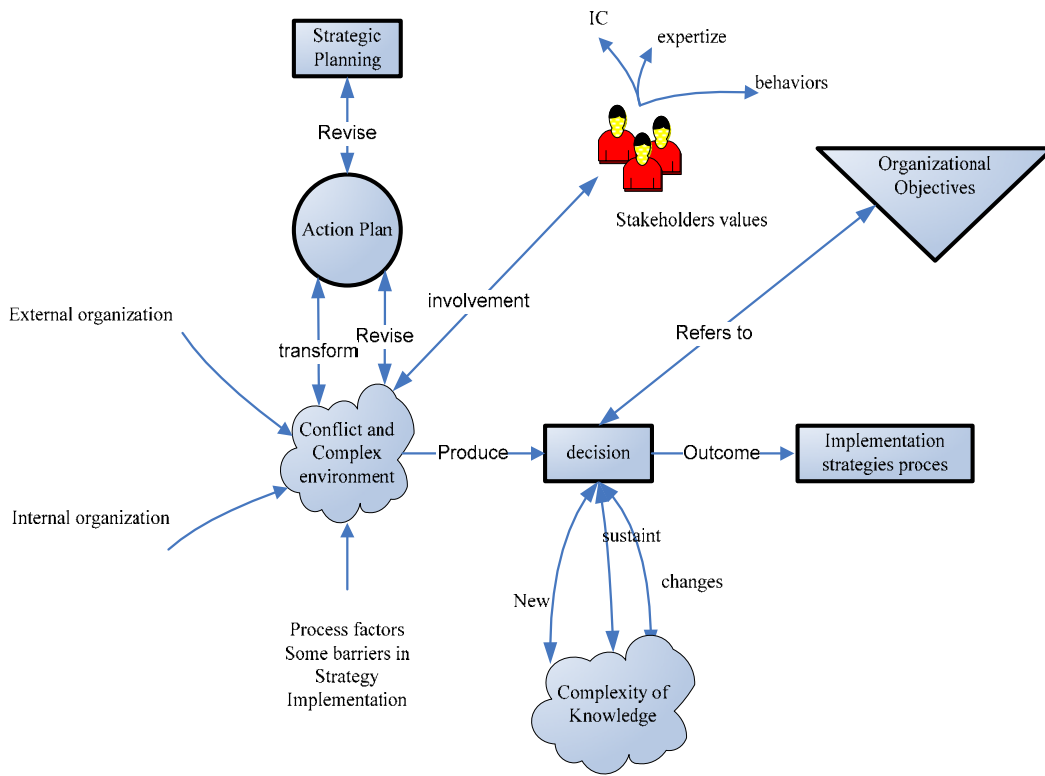
Figure 3. Complexity situation in strategy implementation process

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