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SCRUM CONCEPTUAL FRAMEWORK SECURE METHODOLOGY FOR THE DEVELOPMENT OF INFORMATION TECHNOLOGY PROJECTS SERVICES OF RISK MANAGEMENT IN MALAYSIA

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Abstract

This study aims to investigate the relationship between Scrum framework and risk management processes in Malaysia. Companies discuss the management based on a concerned business scale and the influence risk management in Malaysia IT projects success. This research is targeting IT firms and technology projects. Were researched through guarantee inside and out comprehension of the postulation foundation. In the outcome segment, the author influences a few proposals for the case to small-scale organizations to actualize ventures and to develop risk management successfully. The phases of risk management, in particular the step of risk detection, have a detrimental impact on project performance. Furthermore, risk control has its own risks as a mechanism. This makes it impossible to know if risk management is an appropriate approach in the IT production process for managing and minimizing risks.

The study show the effect of risk management in IT businesses is utilized in the Scrum System. The research further examines the implications of the performance of the risk management process of software projects by using the way Scrum operates. A summary of Agile / Scrum and a literature review, based on what was available about risk management in the new approach at the time of the study, to accomplish this goal. A description of the standard ISO 31000 Management Framework for IT businesses follows the literature review. Danger is a feature of all facets of daily life. The development of an information system is a difficult operation, making it susceptible to many threats.

Keywords*: scrum model, Risk management, ISO 31000, IT Companies, Malaysia.*

INTRODUCTION

We address the dangers of using Scrum with "Scrum, methodology." A Scrum is an iterative and systematic approach to project management that offers a basic "inspect and change" structure. The program is distributed in intervals called "Sprints" (generally 3-6week iterations) by using Scrum. A sprint begins with planning and the review ends. A sprint preparation meeting is a time-boxed conference devoted to the creation of a comprehensive sprint schedule. Sprint evaluation meetings are attended by project partners to evaluation the business, the industry, and technologies. To review the completed sprints, a retrospective meeting can be arranged. A daily Scrum meeting is a quick everyday meeting (usually up to 15 minutes long) where three questions are required to be answered by each member of the team: What did I do yesterday? What am I going to do today, and what hurdles are in my path? There are three items made, namely: product backlogs, sprint backlogs, and burn-down charts.

Backlogs consist of criteria for companies, while regular burn down maps display what remains of total jobs. The danger in using Scrum in multinational app development: For co-located

projects with limited team sizes, Scrum is generally found useful. Scrum teams are self-organized and based on coordination and cooperation between rich teams. But the allocation of project stockholders in ventures is also differentiated by physical, geographical, and socio-cultural disparities. It poses multiple problems or dangers that can impair the processes of cooperation and collaboration. Such project structural variables, such as coordination, expanded number of locations, many project workers participation, lack of tool support, may also have a huge effect on the contact mechanisms of a project. We would however argue that specific project considerations will produce several obstacles or risks and can hinder the use of Scrum.
By understanding project contextual considerations, Scrum practicing. Study: The purpose of the published analysis was to recognize and appreciate the problems or risks that need to be taken into consideration when using Scrum in projects and complementary techniques to mitigate these risks from the research literature. We performed a Comprehensive Literature Review to classify the key articles addressing the use of Scrum, which included many tasks, such as the creation of a review procedure, the detection and collection of primary documents, data analysis, and synthesis, and the documentation of the findings. Twenty primary papers that explore the use of Scrum activities were defined by ours. You will find a thorough overview of our observations and all of them. To minimize these threats, we consider the main problems or risks and complementary strategies. Our conclusions are consolidated into a logical structure that any practical observations are supposed to offer. Indicates the:

Research Questions. Is there a relationship between information technology project successes on risk management?" To obtain a detailed response to the research question, this research objective sets out the goals that this analysis will promote to explore the risk management method in the Scrum context used in IT projects. My aim in my interpretive work is to investigate the risk management process in a Scrum setting.

- To develop and optimize job efficiency and team results. And illustrate the importance of the system of Scrum.
- Providing a plan to support IT businesses by adding new challenges and taking on the task of solving problems.

The activities of risk management is a modern field and not so well-practiced, providing a lot of opportunities if integrated in the system and community. Searching for the application of Agile Risk Management. Within and outside the business, practice can be found in the field where there is little growth. Different viewpoints and diverse approaches exist and there is a lack of understanding of the mechanisms of risk management that contributes to growing issues in the IT department's risk management. It also faces project execution and on-time implementation issues, and several team challenges are growing. Project supervisors and.
Provide a realistic approach to the problem, using the scrum model as the best viable solution.

- Reduce its risk control challenges with alerts.
- Quick execution in a timely manner of the projects of the highest quality
- Resolving the team's logistical and organizational challenges. From programmers and project executives
- Modification of the working style to a modern style.

LITERATURE REVIEW

Over Review Scrum Conceptual Framework

There are limitations or restrictions on all forms of projects, human and economic capital, efficiency, and time, among others. In software development programs, however, the risk restriction is of considerable significance, as software and its ethereal essence are a riskier industry [1]. Project risk is 'an unpredictable occurrence or situation that has a positive or negative impact on one or more project goals, such as nature, pace, expense or efficiency, whether it happens' [2]. Two forms of risk typically exist, namely: dynamic and static risk [3]. IT threats, however, are called unpredictable because they have facets of both benefits and losses associated with them, and their effect usually varies with time and circumstances [3].

Gupta, Chetna, and Priyanka Chandani [4], described software development risks as the elements that pose a danger to the progress of software projects, typically referred to as software risk factors [5]. Technical, economic, and behavioral considerations may be such [5]. Environmental variables refer to the environment-related variables in which the program may be applied and used [6]. Around the same time, the control of staff, resources and resources are linked to administrative considerations. In the other hand, organizational variables are related to the organization that has developed, because it is the organizational climate that has evolved [7].

However, fundamental considerations that are the consequence of the incorrect application of hypotheses of software engineering and software/hardware systems [8], seem to be at the heart of several causes for device failure [9]. In addition, 128 risk factors based on the experiences of software professionals were defined by [10], including the following risks: lack of team knowledge, lack of project management expertise, weak project management approach, and extension of IT criteria.

Scrum manifesto comparing to conventional a hot debate between agile and traditional practitioners was conducted in a report to support the discussion of agile manifesto in terms of traditional methods and how traditionalists react and oppose agile concepts. With "Individuals and Engagement about Method and Resources" as the first agile manifest principle, the author greatly inspired programmers and software engineers who wanted to be interested in the creation of extremely valued applications. In this, the instruments and procedures behind this element are considered that traditional practices would not have much difficulty embracing this. Also, to help the CMM, SEI has established the People Maturity Model, and most practitioners agree that people matter. Software risk management the growing need for software and IT technologies, as well as the demands of consumer needs, increases competition in the software development industry, which in turn requires emerging businesses to handle the risks of their ventures. This is a concern for software development companies that carefully approach risk projects and boost the success-to-failure ratio [11].

Scrum's project management framework [12] highlights that it is important to provide independent risk identification and reduction in any project step and process, even though Agile is built to cope with high risk.

It begins with the demonstration of the path to waterfall creation and the agile approach. These are the short examples of each technique, core characteristics of documentation elements, SDLC and ways of thought. There was then the contrast of the gaps between the two methods, followed by relocation problems. Method leadership, communication management, teamwork development, and how to solve obstacles are all discussed. The chapter ends with the introduction of migration.

Over Review Of ISO 31000

The ISO 31000 standard recommends:' that organizations create, adopt and continuously improve a system to integrate the risk management mechanism into the overall policy, strategy and preparing, administration, monitoring process, policy, values and culture of the enterprise.' The following illustration gives an outline of the basic risk administration concepts, structure and method The Fundamentals of ISO 31000-Risk Management The ISO Technical Management Board Working Group on Risk Management published ISO 31000:2009, Risk Management-Principles and Recommendations in November 2009 after ratification by the ISO member bodies. The authors developed the standard to be applicable to any entity and to any form of danger, but ISO 31000 is not certifiable, unlike the popular ISO quality specifications. For those familiar with the AS / NZS 4360:2004 risk management norm,It should be easily identifiable by this ISO norm. ISO 31000 is exactly the same standard, except with terminology variations. When the AS / NZS norm is adopted by the company, the change to ISO 31000 should be relatively smooth. In addition, the auxiliary paper, AS / NZS 4360:2004 Risk Management Guidance Companion, guides the design and execution of risk assessment and management strategies. Similarly, the auxiliary document which supports the latest ISO 31000 standard is ISO / IEC 31010:2009.

FACTORS ADOPTED IN THIS STUDY

Scrum Framework And Project Management

In an often-complex project delivery approach, the Scrum structure describes standardized tasks, duties, and meetings to offer essential consistency. Scrum is famous for its fast-paced Sprints, in which every two weeks an MVP is provided. Kanban: By visualizing their workflow, restricting work in progress (WIP), and increasing the flow of backlogged products, the Japanese term for "visual sign" or "note," Kanban lets more conventional companies optimize their processes. Extreme Programming (XP): XP highlights the high quality of applications and adaptation to changing customer demands. This Agile approach is distinguished by pair programming, thorough code revisions, and unit checks. Adaptive System Development (ASD): ASD, speculate, interact, and learn, is best known for its repeating three-phase growth period. Feature-Driven Development (FDD): FDD is a lightweight Agile technique that incorporates a range of best practices in the industry into a five-step implementation cycle. Furthermore, the overall concept, schedule by feature, concept by feature, and build by the feature are generated in the development cycle.

Risks In Project' Performance And Scrum Framework

Team Coordination Mode Using impersonal coordination mode for low project risk or ambiguity, a personal coordination mode is proposed for modest levels of uncertainty and high project uncertainty using group coordination mode. [13] External integration, internal integration, structured planning, and institutional supervision In terms of the intrinsic risk of a project affected by project scale, technological expertise, and project layout, various types of projects require different management resources to have risk management countermeasures. [14] Partnership between parties involved for low project risk or confusion, use arm's length relationships.

Teamwork And Scrum Framework

The team must have shared objectives for wellbeing. A variety of implications of coordination have been explored by different scholars [15]; [16] for example, record a correlation between teamwork and workplace satisfaction, encouragement and enhanced mental wellbeing by reducing levels of stress. [17] Address how cooperation can increase patient satisfaction, impact medical care quality and maximize patient outcomes. [15] Say that cooperation can be related to corporate creativity, cost management, preservation of the workforce.

Important Of Time & Cost And Scrum Framework

The two main techniques used to address the time-cost trade-off issues in project scheduling are statistical and heuristic strategies. Mathematical approaches con-vert the time-cost trade-off concerns of the project to mathematical equations and to solve the problem using linear programming, integer programming, or dynamic programming. By assuming a linear relationship between time and expense for operations, [12] proposed the time-cost trade-off concerns using LP. This strategy, with a constant linear variance between them, was restricted to two alternatives per operation. [14] used IP to address time-cost concerns within the same operation, including both linear and discrete relationships.

5. Value Project strategy and Scrum framework

The notion of the supply chain, and generic techniques. His generic techniques include cost leadership, distinction, and emphasis. He believed that to achieve a competitive edge, a company would choose between them. The work of Porter created an ongoing discussion on the nature of strategy that contemplated whether firms should concentrate on one solution or merge distinct and often even competing strategies. [17] re-described strategy in later work as "creating a specific and useful role, requiring a particular range of tasks." Porter argued that strategy does different things, or does the same things differently, and stressed that organizational performance is not a strategy.

RESEARCH METHODOLOGY

One is ready to establish a theoretical structure after completing the literature survey. A theoretical framework is defined as a philosophical model of how one theorizes or makes logical sense of the relationships between the various factors that have been established as essential to them, according to [18] . Logically, this hypothesis stems from the documentation of past studies in the field. Integrating one-four rational beliefs with published science, considering the parameters and limitations that control the case, is critical in creating a rational framework for research inquiry. In short, the theoretical structure addresses the interrelationships between the factors assumed to be integral to the dynamics of the examined case. Developing such a logical structure allows one to postulate or hypothesize and evaluate interactions with thereby enhancing our interpretation of the situation's dynamics. The literature is reviewed and that has been noticed. The literature is checked and decided that certain external factors can be interpreted by scrum factors. Therefore, establishes a conceptual model for factors that influence the success of IT projects in terms of time, expense and quality, since it is an interactive structure and an active method to consider, evaluate and identify the various variables in the IT environment.

CONCEPTUAL RESEARCH FRAMEWORK

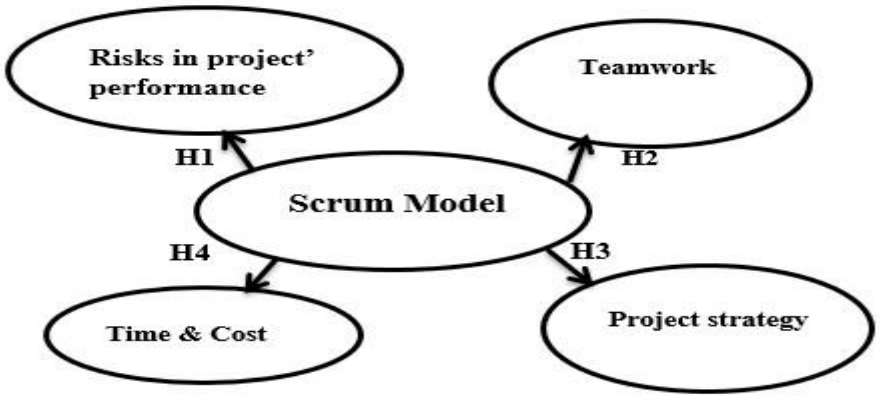

Figure. 1.1 Conceptual Research Framework

The following sub-sections expound the development of research hypotheses and conceptual models based on prior literature to examine the relationships to achieve the objectives of the study and answer its questions. In our research study, the theoretical and empirical research on adopting the scrum model for risk management is reviewed. This is done so in the context of an integrative framework, shown in Figure. 1.1 That examines the relationships resulted from using the scrum model and its effects on the risks arisen in the project development process, communication between customers and organization, project cost, and project flexibility. Centered on the structure of Figure 1.1, each relationship analysis was then categorized. Four large streams of study culminated in the process. Stream I examined the interaction arising from the implementation of the scrum model and its impact on the project-related risks in the production process. Our idea is suggested according to recent literature analyses and other observations.

Based on prior literature to examine the relationships to achieve the objectives of the study and answer its questions. In our research study, the theoretical and empirical research on adopting the scrum model for risk management is reviewed. This is done so in the context of an integrative framework, shown in Figure. 1.1 That examines the relationships resulted from using the scrum model and its effects on the risks arisen in the project development process, communication between customers and organization, project cost, and project flexibility. Furthermore, each relationship based on the structure of Figure 1.1, the thesis was then graded. Four large streams of study culminated in the process. Stream I explore the interaction arising from the implementation of the scrum model and its impact on the project-related risks in the production process. According to the previous literature reviews and other findings, our hypothesis is proposed:

H1: Using the scrum model reduces the associated project risks in the performance process. And improve work performance. Stream II studies the relationship and effects of adopting the scrum model on the communication between customers and organizations. And according to the previous literature reviews and other findings, the following hypothesis is proposed:

H2: Adopting the scrum model results in development and improvement. Team performance. Stream III pertains to research on the relationship between scrum model adoption and its effects on overall project cost. And according to the previous literature reviews and other findings, the following hypothesis is proposed:

H3: Adopting the scrum model shows the significance of the Scrum framework. Results in overall cost reduction of the project. Stream IV relates to research on the relationship between the scrum model used in IT projects and its effects on project flexibility. And according to the previous literature reviews and other findings, the following hypothesis is proposed:
H4: Using the scrum model results provide a strategy that would serve the IT by introducing in more flexibility of the projects.

In conclusion and as shown in Figure. 1.1 Conceptual Research Framework of this study shows the relationship between the independent variable scrum model" and the dependent variables, including the risks arisen in the project development process, communication between customers and organization, project cost, and project flexibility.

RECOMMENDATIONS FOR FURTHER STUDIES

Future research may consider concentrating just on to test the proposed conceptual model and evaluation of IT companies and study and development the state of risk management process by scrum model and exceptionally to be the contextual investigation for small-scale. Companies discuss the management based on a concerned business scale and the influence risk management in IT projects success. The methodology design validity, data will be collected by mixed-method or quantitative research. The second approach is a structured questionnaire with various project parties in several organizations in the public sector in the IT industry. Smart pls software package and structural equation modelling (SEM) will be used to analyze the collected data and establish structural relationships of scrum factors.

CONCLUSIONS OF THE STUDY

We perform a analysis to assess how the performance of the scrum model is impacted by risk management, and to see whether risk management leads to the progress of the IT project, and if so, how it is done in reality. We examine field workers, where we compare ideas to get the response.' scrum factor influencing IT projects performance. Furthermore, information technology projects around the world suffer from many problems and complex issues in performance such as time, cost, quality and safety, in addition to unstable economic and political situations of the countries especially by covid19. The scrum technique. This will be a crucial component of any organization to move towards achieving best practices to overcome performance problems.

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