

THE IMPORTANCE AND TRENDING OF IT PROJECT MANAGEMENT

Abdellah Oussama, Ahmedalla H. Hanoura and Osama A. Abdelnasser, Technology and information system, Group 3.

Abdellah Oussama, Department of Software, Universiti Teknologi Malaysia, Johor 81310, Malaysia.
Ahmedalla H. Hanoura, Department of Software, Universiti Teknologi Malaysia, Johor 81310, Malaysia.
Osama A. Abdelnasser, Department of Software, Universiti Teknologi Malaysia, Johor 81310, Malaysia.

Abstract—Universiti Teknologi Malaysia (UTM) is an entrepreneurial public research-intensive university, specializes in engineering, science, and technology. UTM used to hold general and specialized industry talks about work environment, workforce, and new technologies. Attending industry talks help students to be up to date. Today in IT Project Management talk, UTM students will learn how to manage teamwork? what are your role and the importance and trending of IT project management.

I. INTRODUCTION

On 1st December, an industrial webinar about the importance and trending of IT project management held by School of Computing at UTM on Cisco WebEx from 10:00 AM - 11:00 AM. Dr. Goh Eg Su was School of Computing's moderator during the session to Mr. Mohd Khairul Reeza Ruslan as the head of project management office, Commerce Dot Com Sdn Bhd, who spoke about importance of project management, emerging trends in project management, relevant IT careers and Q&A discussion before ending the webinar.

II. IT PROJECT MANAGEMENT

1. The Importance of IT Project Management

What is Project? Project is an individual or collaborative enterprise that planned to achieve a particular aim, it characterized by having a quality-time-cost triangle to identify the constraints of the project; for example: if you managed to make a high-quality project without dealing with time and cost, you will spend more time and cost, they need to be in a balance. A scope to define the general idea with requirements to implement, to select the targeted part and the limitations. Project has risks & benefits needed to be obvious to handle up-normal situations or accidents.



Fig. 1. Golden Triangle

Project management is the process of leading the work by skills, tools, and techniques to accomplish aims and meet success criteria at a specified time, in IT there are many project management certifications served to IT specialists to manage their work in a structured method like PMP: Project Management Professional, CSM: Certified ScrumMaster and PRINCE2 was developed as a UK government standard for collaborative information systems projects which is a

hierarchy structured project management method used to emphasizes dividing projects into manageable and controllable stages known as portfolio -> programs -> projects; for instance: as university students, we had 6 or 7 courses each semester and 8 semesters to get the degree. The degree is the portfolio, a semester is a program and a course is a project. Each project has an environment that includes six aspects, seven themes, seven processes, and seven principles to implement, test, and measure each project precisely. Project environment variance depends on the field, changes in requirements and the six aspects which are project characterizes quality-time-cost triangle, scope, risks, and benefits, however, themes, processes and principles are as mentioned in Table 1.

TABLE I. PRINCE2 framework

| THE PRINCE2 FRAMEWORK | | |
|--|---------------|---------------------------|
| PRINCIPLES | THEMES | PROCESSES |
| Continued Business Justification | Business case | Starting up a Project |
| Learn from Experience | Organization | Initiating a Project |
| Defined Roles and Responsibilities | Quality | Directing a Project |
| Manage by Stages | Plans | Controlling a Stage |
| Manage by Exception | Risk | Managing Product Delivery |
| Focus on Products | Change | Managing a Stage Boundary |
| Tailor to Suit the Project Environment | Progress | Closing a Project |

Tailoring the processes is the way that controls the variation in the project environment by extending or shrink a process, a theme, or a principle's role in the environment.

2. Trending of IT Project Management

1. **Gig Economy** which is a new free-market system where organizations and independent workers engage in short-term work arrangements, independent workers establish teams to handle huge tasks and to work in different time zones, without sticking to a particular permanent job.
2. **Big Data** which is the field that analyzes a huge collection of data to study customer needs and behaviors to visualize risks and benefits in the project. This term encompasses a set of technologies, methods and very specific practices for storing and analyzing (rapidly) very large masses of data before drawing lessons from it. In other words, its main aim is to build models intended to better understand phenomena and behaviors that were vague beforehand.
3. **Artificial intelligence** which is used to improve, enhance, and automate projects quickly and efficiently with the ability to choose the best projects to execute. AI allows companies to significantly

improve their services and refine their marketing strategy to better target their customers.

4. **Change management:** In a constantly changing world, and new technologies emerging every now and then, companies are more and more aware of the importance of helping management, employees and stakeholders to embrace change in their current business environment, which often involves conducting formal change impact assessments, developing individual action plans, improving communications, and providing training to erase the resistance to change.
5. **Method melding:** which refers to the use of numerous methodologies to execute a project in the best possible way. This approach is relatively new in the corporate world, as enterprises in the near past used to focus on a single methodology, as opposed to using many. Nowadays the use of different flexible methodologies is no longer a choice, but it has become inevitable given the overwhelming complexity of projects.
6. **Advance PM tools and solutions:** Given the importance of proper project management in the success of any company, the use of new tools and solutions that are in line with the technological advancements has become indispensable. The use of project management tools allows PMs to efficiently define the workload that each task represents as well as the time it takes. It also allows them to have a more global view of the sequence of tasks, in particular thanks to the Gantt planning. This way they will avoid falling behind in the completion of the project, and the employees will not feel aggrieved. Furthermore, since communication is also a key element in the success of a project, it's vital to make use of different tools and solutions that ease the process of sharing information and arranging online meetings, especially in this new age in which the "work from home culture" has become more prevalent.
7. **Emotional intelligence:** Emotional intelligence involves a certain degree of sensitivity and empathy to perceive the emotions of others and to use this knowledge to intuitively encourage performance. Modern companies are characterized by open workspaces, teamwork, and mutual respect between employees and managers. Thus, when managers are endowed with some form of emotional intelligence, they become able to understand and motivate the people they supervise.
Emotional intelligence has a significant impact on the manager's development as well as on his leadership qualities. Practicing activities aimed at stimulating the emotional intelligence of managers results in observable and concrete positive effects, including higher productivity, higher motivation, and most importantly a positive relationship between all stakeholders in the company which can greatly affect the quality of results.

III. RELEVANT IT CAREERS

1. **Project manager:** the project manager or PM, is the one who leads and organize the project throughout its lifetime. He is responsible for the different phases, from the translation of user needs into functional and technical specifications, to user acceptance testing, or even production.
2. **System analyst:** the system analyst is the one who, assess technical needs of users and oversees the implementation and of IT systems. Depending on the context, he might me creating new systems, or improving existing ones.
3. **Data scientist:** data scientists are usually responsible of analyzing large amounts of data coming from multiple sources to extract major trends. This job is a melting pot of several areas ranging from mathematics, statistics, computing, visualization to data modeling.
4. **AI engineer:** Artificial intelligence engineer is both a researcher and a computer scientist. He develops computer programs capable of thinking and performing tasks that typically used to be done by humans. This job is one that would contribute enormously in the passage from industry 3.0 to 4.0.

IV. REFLECTIONS

Abdellah Oussama: Since I've started working on different course group projects in UTM during my first year, I've discovered that I very much enjoy managing people and directing the flow of the project. Even though I consider myself a very passionate person about programming, I would prefer to have a job that involves leadership and personal interactions. Given that I'm still a student, I wasn't aware of the existence of the job of project manager before this talk, which was an eye opener for me as it introduced me to different aspects of the corporate world, especially the roles of PM, which I now consider my dream job. Now, I know that during my next 3 years in UTM, I should focus on improving my soft skills such as communication skills and emotional intelligence, along with the technical skills (programming, system analysis, testing ...) so that I'll be able to peruse such a career.

Ahmedalla Hanoura: For me, as a computer science student I always tried to participate in many events to know more about project management, but actually this talk was the best by miles because, in this talk, I did understand many things that I didn't have an answer for. More than that I love the Artificial Intelligence career also because I think it is the most important nowadays due to its ability to save time and energy. I think that I would love to work as a project manager with the help of AI in this management and doing tasks it will be the best combination I can ever imagine. For now, I will try my best to enhance my skills in leader shipment, communication methods, emotional, and artificial intelligence.

Osama Abdelhameed: Being an entrepreneur or a participant in a start-up with sufficient experience to be qualified to hold this role, these ambitions eager me to develop and invest in my present study to gain my expected future career. IT project management influence each member's work which means that everyone should know the method that will be used in the

project to has an opportunity to suggest his ideas and adjustments. Software development requires knowledge in most IT-related topics like hardware, data science, big data, AI, and VR technology thus I manage to have knowledge and experience in each one.

ACKNOWLEDGMENT

We would like to extend our sincere thanks to **Mr. Mohd Khairul Reeza** the speaker in this talk who provided us with precious information. We are also grateful to **Dr. Goh Eg Su** our dear professor and the moderator of this industrial talk.

REFERENCES

- [1] Mark H. Warner, "Scope and the Triple Constraints of Quality-Time-Cost", The Project Management Blueprint, (2019),
<https://www.theprojectmanagementblueprint.com/blog/project-overview/scope-and-the-triple-contraints-of-quality-time-cost>.
- [2] De O. Dawg, "PRINCE2 and Moving Towards an Economy Transformation Programme", (2017),
<https://www.themontserrareporter.com/de-ole-dawg-part-13-2017-prince2-and-moving-towards-an-economy-transformation-programme>.
- [3] Heagney, J. (2016). Fundamentals of Project Management w (Fifth ed.). AMACOM.