

Report on Two-Day Course on Basic Project Management for Young Engineers

YOUNG ENGINEERS SECTION, IEM



by Engr. Vivekasugha Alif Gunaan and Engr. Tiang Kwong Hwo

THE Young Engineers Section of the Institution of Engineers, Malaysia, and the Young Engineers Section of IEM Miri Branch jointly organized a two-day course on basic project management on 13th and 14th April 2012 at Curtin University Sarawak, Malaysia. A total of 30 participants attended this course.

The course was delivered by Ir. Noor Iziddin Abdullah bin Haji Ghazali who is attached to the Project Management Consultant team of KLCC Group for commercial building projects in Putrajaya. The speaker is also currently in the Industry Advisory Panel (IAP) for the undergraduate programme in project management at University Malaysia Pahang (UMP). According to Ir. Noor Iziddin, project management (PM) and its methodologies have evolved and improved significantly over the last three decades. This in part is attributed to many of the lessons learnt from the successes and failures of projects undertaken by various organisations. Ir. Noor Iziddin briefed on the basic essence of project management that would be especially suitable for those intending to equip themselves with the fundamentals of project management. Participants were taught the structured and integrated approaches, processes, tools and techniques that could be applied in managing the various phases in a project life cycle. The contents of the course were closely referenced to PMBOK Guide (4th Edition) produced by the Project Management Institute but with a short introduction on PRINCE2 from the United Kingdom.



The speaker Ir. Noor Iziddin explaining the basic principles of project management to the course participants

The 1st day of the course started with an Introduction to Project Management, followed by Definition of Project Management, Context of Project Management, History of Project Management, and Knowledge Areas and Process Groups.

Some of the benefits on implementing the right project management processes and tools include being able to minimize the project challenges, ensure project deliverables achieve the project objectives within the agreed budget, time, scope and quality, ensure that the customer's investment is protected, ensure that actual implementation follows the agreed project execution plan, remove hassles from managing the resources for the project, ensure proper implementation of the technical solution, satisfy the customer's quality expectations, and document the lessons learnt.

Details of each of the five process groups and the nine knowledge areas which have been used by project managers around the world were explained throughout this two-day course:

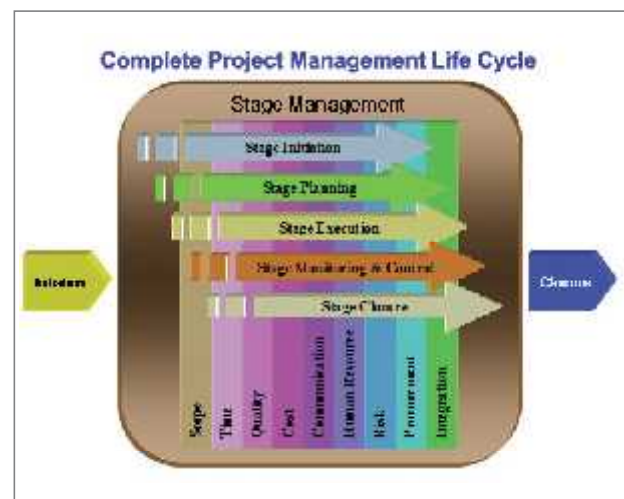


Figure 1: Project lifecycle

The project manager, as the single point of responsibility, will be responsible for either performing the work or delegating it.

When planning and control techniques for managing complex projects were inadequate, this encouraged the development of scheduling methods which integrate project procurement, resources and costs.

With these shortcomings in mind, Network Planning Techniques using similar network format were developed:

- 1956 CPM – Critical Path Method. (Microsoft Project)
- 1961 PERT – Program Evaluation and Review Technique. (Primavera).

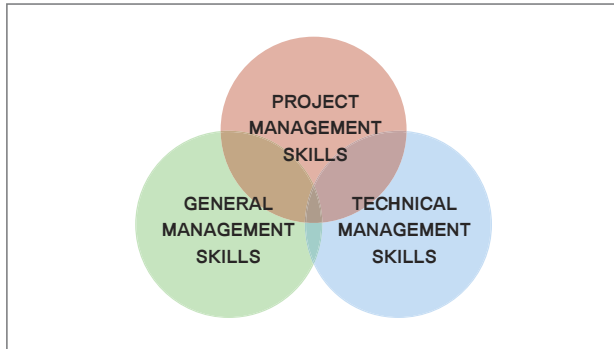


Figure 2: Intersecting management skills

Effective communication is important for project managers for two reasons. Firstly, communication is the process by which the management functions of planning, organising, leading, and controlling are accomplished. Secondly, communication is an activity in which managers devote an overwhelming portion of their time.

Subsequently, for the projects to be successful, the selection of appropriate processes within the project management process groups is required to meet the objectives. The speaker stressed the use of a defined approach to adapt to project specifications. One needs to comply with the requirements to meet stakeholder's needs and expectations, in addition to balancing the competing demands of scope, time, cost, quality, resources and risk to produce quality outcomes.

Table 1: Functions and challenges of project management

Initiating process	Planning process	Executing process	Monitoring process	Closing process
Project definition	Resource planning	Determine QA standard	Tools used to monitor	Contract issues
Clear objectives	Risk plan	Project team	Human issues	Warranty
Documents	Creation of WBS	Supply deliverables	Periodical meetings	Deliverables vs quality
Project boundary	Budget plan	Stakeholder intervene	Managing change control	Acceptance criteria
Project scope	Supply chain management	Cash flow	Trouble shooting	
		Human issues		

In project management, the goals set are usually associated with time, cost and quality.

In addition, the speaker also explained that the need for models is to aid decision-making leading to project selection. In establishing the relationship between a project's expected results and the company's strategic goals, the following information should be considered.

- Production Considerations
- Marketing Considerations

- Financial Considerations
- Personnel Considerations
- Administration and Other Considerations.

The selection of the right project for future investment is a crucial decision for the long-term survival of a company. Numerical methods are used as a process for ranking and evaluating prospective projects. The financial models available are:

- Payback Period
- Return on Investment (ROI)
- Net Present Value (NPV)
- Internal Rate of Return (IRR).

Project life cycle, the project management framework, goals and objectives, PRINCE 2, practical approach to infrastructure project management and Project Management Consultant (PMC) concepts were discussed on the second day of the course.

Some of the benefits of this course to the participants would include:

- Understanding the structured and integrated approach in initiating, planning, executing, monitoring and controlling and closing out projects.
- Applying and relating the knowledge learnt at the work place.
- Identifying what one needs to know about project management.
- Understanding the role and selection of the project manager as well as the project organisation structure and issues.
- Exposure to the various PM methodologies, tools and techniques.

The speaker explained the concept and role of the project management consultant in the construction industry through the following diagram:

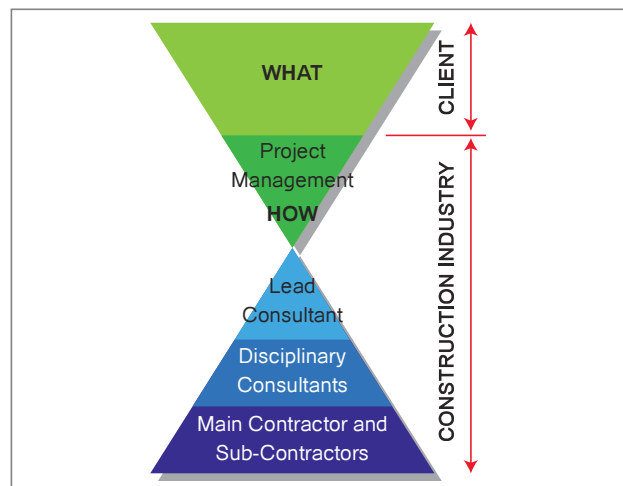


Figure 3: Concept and role of the project management consultant



The participants listening attentively to the speaker during the course

The speaker then explained the various Project Management techniques which are widely used in the world today.

Table 2: Comparison of project management approaches

Standard	Origin	Purpose
PMBOK® Guide (Project Management Body of Knowledge)	PMI (Project Management Institute), United States	<ul style="list-style-type: none"> The only ANSI standard for project management Promote the profession Basis for certification, categorisation, Meta-data for PM/ products/services/etc.
APM BOK (Association for Project Managers Body of Knowledge)	APM, United Kingdom	<ul style="list-style-type: none"> Certification of Professionals Promotion of the profession Basis for training
ICB (IPMA Competence Baseline)	IPMA, Netherlands (International Project Management Association)	<ul style="list-style-type: none"> Harmonisation Cross-reference Basis for certification of people Describing PM
Australian National Competency Standards for Project Management	AIPM (Australian Institute of Project Management)	<ul style="list-style-type: none"> Promote the profession Certification/ Qualification of people and assessment Uses PMBOK Guide as Knowledge Base
PRINCE 2 (Project In Controlled Environment)	UK Government	<ul style="list-style-type: none"> Methodology, public domain Definitions of terms, processes, guidelines
CMMI (Capability Maturity Model International)	SEI	<ul style="list-style-type: none"> For assessment of organisational capability Developed for software engineering
ISO 10006 (International Standard Organisation)	ISO	<ul style="list-style-type: none"> Guidelines to quality in project management Definition of terms and processes Aimed primarily at quality in project management

During the Q&A session at the end of the two-day course, the speaker responded to various questions fielded by the participants, and shared his experiences in his pursuit of PMP® certification.



Engr. Vivekasugha Alif Gunaan and Engr. Tiang Kwong Hwo presenting a certificate of appreciation and memento to Ir. Noor Iziddin



A group photo of the speaker and the participants

The course ended at the scheduled time, and Ir. Noor Iziddin was presented with a certificate of appreciation and a memento from the session chairman, Engr. Vivekasugha Alif Gunaan, on behalf of YES KL, and Engr. Tiang Kwong Hwo, Vice Chairman of YES Miri. Readers who have any queries or who wish to obtain a soft copy of the course material could send an email to laplace82@gmail.com. ■

ERRATUM:

In the report by Ir. Dr Chan Swee Huat on "One-Day Seminar on Underground Construction: Design, Technologies and Recent Findings" published in the July 2012 issue of *JURUTERA*, the wrong photograph was inadvertently used to depict the author. Displayed on the right is the correct photograph of Ir. Dr Chan Swee Huat. We apologise for the error made.

