

An Integrated Project Management Framework for Improving Efficiency, Cost Management, and Risk Control in Railway, Rice Mill, and Customs Clearance Projects

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ABSTRACT

Defining the role of project management

Projects are defined to have their time dependencies of variables that could enhance the profitability notations of time, cost, labour, and finally reputation, face value, brands and social recognition. Each of the variable dependencies is always tied up with constant notation to the term called project success (Sara, Gilbert,2022). The relation between a project and its success successes is stated by the proportion of how wisely we choose the tools and techniques to attain the goal. The role of sustainable project management is stated to be the trend of the current scenario where the management not only focuses on the objective performance data but also retreats from the relationship dimension of both project management and criteria of project success.

The two main aspects which sustainability project management deceive is

- 1) satisfaction of stakeholders 2)increase the quality of deliverables
- 3) operationalization success
- 4) measure success in a multidimensional way (Sara, Gilbert,2022).

The need for an integrated approach to sustainability and project management in terms to derive the success of the project

The equation can be written as SUSTAINABILITY+PROJECT MANAGEMENT= PROJECT SUCCESS

Alwaysys seem to be stated as Its the term negative connotation towards measuring project success,which includes only the life cycle of the project terms to be initialisation, growth, maturity, stagnation, e of product or project.But it has never been defined in terms of "assets" otherwise termed as asset life cycle and finally

product life cycle All the three life cycles are related to each other in terms of the project resources, processes,deliverables and finally effects. To define the term project success ,It is defined as the measure of performance indicators of the projects that are related to influencing the elements that can increase the chance of attaining the success of the project. So, in general, the project or a task that involves tremendous planning and management in order le of people, planning,finance and administration to procure with estimation of time and process to attain the success of the project is termed as a core ideology of project management. Define project management in terms of finance thus including the variables like

- 1) Assets
- 2) inventories management
- 3) shareholder liability
- 4) liquidity and solvency of money
- 5) The non-performing assets
- 6) Tax variables
- 7) Revenue

To define the variables related with people in the project

- 1) skills and competencies
- 2) The role of organisational administration
- 3) The role of company norms
- 4) Human resource management
- 5) the legal constraints related with companies act
- 6) The stake holders, clients , the managers , the experts, suppliers, vendors, financial committee etc. where the company project manager manages the people and management in order to carry out the project tasks directly or indirectly.

The role of sustainable project management includes the act of manager role of handling people and tools simultaneously with regards with the finance and administration to perform the project to attain return of investment in both qualitative and quantitative manner

So in the terms with time management variable in project that includes

- 1) Calculation of overall duration of project
 - 2) The role of softwares and tools that includes softwares like
- A) POMBOK..



- B) The Primavera
C) The project office
D) The MS office
Financial softwares like Tally

E) Market research softwares like SPSS, TANAGRA, REGRESSION IT etc

The role of tools and techniques in the terms with project management includes the variables that could enhance the efficiency of project management and the justification towards utilising the people and assets simultaneously in order to outgrow the role of sustainability and management in the project scenario in terms to attain success and profit with defined timeline and labour estimation. In general the role of project success and its variable related to that outcome includes the need for just look back in to the evolution of how success has been defined from past to present. The project success has been depicted in terms of iron triangle concept that includes cost, time and quality. The below diagram depicts the evolution of how project success has been determined with respect to customer satisfaction and other variables. In brief from the above diagram, the life cycle of the project is said to be an integral part of success where the majority of variables seem to with the objective of customer satisfaction in the period of 1980s to 2000s thus the significance of measurement of success of the project always included clients satisfaction whereas now the developed notation of success of project indices includes clients organization and business success where the entire project has been planned monitored controlled the internal environment of a project concerning the external environment economic, social aspects of the lifecycle of the project resources processes deliverables and effects aimed to satisfy stakeholder need in a transparent fair and ethical way that includes proactive stakeholder participation. thus defines as the sustainability of project management.

According to Sara and Gilbert, they had been defining the sustainability in nine dimensions namely

- 1) balancing environment and economic interests
- 2) short term and long-term orientation 3) values and ethics
- 4) stakeholder participation 5) eliminate risk and waste
- 6) micro-managing assets and finance 7) transparent organisational hierarchy
- 8) international global orientation
- 9) handling time estimation concerning the cost of the project

The above 9 orientations have been stated to be the most widely accepted sustainability concept variables that have been determined to sense the role of project success and its variables depending on the project management

Time The project success variables are related to the constraints that include the indices such as

- Cost
- Strategic human management
- Strategic project management
- The strategic cost estimation and budget
- Strategic goal attainment
- The quality assessment team
- The quality assurance and control team
- Stakeholder social responsibility
- Scope of the project
- The need for feedback
- The version of planning and estimation The theoretical approach in project management

In general, we would indulge project management in terms of the variables related to people, cost, and resources that could indulge in project success but it is now started to be in terms of the principles related the project management and how that aspect of the project will be idealised to implement in the project to attain its goals and objectives. (Irina, 2021).

A practical way of approaching the principle of project management includes the research and development of ideas which can be related to complex and conceptual elements which can be related to the type of problems identified. (Irena, 2021).

The principle includes the concepts like

- 1) ability to handle the research complex process and methodologies
- 2) the role of identifying the problem in the project and determining the algorithm to solve those complex equations
- 3) The management's role in forecasting and predicting the future and determining the well-advanced principles to determine the solutions to various aspects of co-ordination of human sources, the cost budgeting and also the risk management planning and also includes the inspection of work results and sustainability.

The basic principles of project management include the parameters like

- 1) cost estimation
- 2) cost budgeting
- 3) resource planning
- 4) risk management planning
- 5) definition of activities



Which are directly or indirectly related to the degree of quality control and performance of the project applications Some of the principles of management concepts include

- A) principle of predefined success
- B) principle of efficiency
- C) the principle of strategy
- D) the principle of control
- E) the principle of communication channel

The principle of the working environment. Concerning the above-defining parameters both in terms of principles and performance, the people play an integral part in project success where the MANAGER has the upper hand in carrying out the roles and responsibilities of the actions in the project management based on

1. Objective of project
2. The objective resource utilisation
3. Project quality assurance
4. Reevaluation of project
5. Monitoring and controlling
6. Project is broadly classified based on their tangible and intangible criteria
7. The tangible criteria include the policies, procedures whereas the intangible criteria include products based on physical labour
8. Classification of projects based on four elements that include
9. Scope and objectives
10. Nature of projects
11. Size of projects

Conclusion of projects in development programs which includes the relevance with projects carried out at in state-level the national level and the international level. Irina in his research stated that the project solemnly depends upon the innovation and new product development aspects of the project management system. To develop generic methodologies for the project and it's determining the need of customers and stakeholders

The specific concept of diminishing failure need to be determined and the concerns related to that failure have to be evaluated to carry out the positive aspects of project justification and innovation through research. When a market goes through a failure in terms of product as well as operations it is always justifiable to state the most relevant research and innovation to overcome those gaps. identified in the market through research and development.

IMPORTANCE OF COMMUNICATION

To manage people in the company, it is very important to communicate effectively. A team of people cannot perform well unless there is effective communication between them. One of the main reasons why the communication should be carried out effectively is mainly due to

- Achieving coordinated results
- Managing change
- Motivating employees
- Understanding the need of the workforce.

It is important to understand the human aspects of communication in the company. This is because, the company works as an organisation where it includes culture, leadership, structure and rewards. Even though there is a massive investment in the tools and new technologies like BIM and ICT in the company, it is not possible to divorce the communication between people for the customs clearance of goods and procedure process. It was able to find out from the history that, conflicts arise mainly between project managers and the workers in a project. An effective leader should know to convey his vision to the workers with the help of a

communication tool. Finally, if there is proper communication between people, then this leads to conflicts between people. Communication is one of the main barriers to customs clearance of goods and procedures. it causes conflicts because; communication is present in every aspect of the company. The main reason for conflicts in customs clearance of goods and procedures is improper communication. Things that happen in the company are mainly through contact with people. Communication plays a major part in the customs clearance of goods and procedures.

The role of the project manager in the process implementation and development of the project and for the success of the project. Some of the factors that influence the project are the role of the manager in handling probes t and skills which influence the set of organised activities, performance requirements, and coordinated and limited costs. The project goals can be achieved and the day-to-day change in the order of the activity can be managed and drafted by only the project manager, a day-to-day task needs to be approved by the project manager and it imposes authority.

Some of the general ways through which the project manager does not have full authority include

- dismissing people
- no access to a payroll programme
- no he cannot streamline activities



- minimal understanding of how the organisation works
 - business supporting project management
 - they need to make decisions when the organisation required them
- Positive aspects of project manager
- considered who takes strategic decisions
 - AI supports project manager to make decisions
 - manager needs to deal with negotiations and finance
 - Project manager will always have all information hooked up within him
 - they are people with project management skills who can determine the best tool to achieve project success
 - a collection of initial data of the following in project according to project charter based on objectives
 - they do help in carrying out the project efficiently to perform. project with scope
 - they knew the entire stakeholder rapport to deal with the project In a Profitable manner
- To define the project life cycle and the project sustainability The sustainability of project management includes the
- sustainable development
 - life cycle orientation
 - the orientation of stakeholders

- project result and transparency in the management process
- planning and monitoring
- control management

-change management, is the concept that has been briefly explained by Madalina Maria in his research. For example, the organisational structure of the company or an education institution includes, the role of Academic management cell -concerning state education norms

- Administration management cell of Kennedy - Academic regulators and controllers of curriculum board Chairman and registrar's
- The admission committee admission sub- administrators and managers
- The Kennedy financial cell - the auditor's desk
- Principle
- Vice principles
- Headmasters for houses B, C, D
- Faculty union -head and vice president
- Faculties on board for each subject under each department head
- Faculty feedback award committee's students union - president and vice president representative committee
- Students' feedback, cultural and reward committee
- The cafeteria head
- The cafeteria vice-head
- The cafeteria committee
- The school cleaning and management cell

This every education institution needs to follow an organisational structure and should adhere to the rules and responsibilities in an institution, for this case the school's name is Kennedy high school and the need for a proper hierarchy of organisational structure could enhance the quality and efficiency of the school The below diagram describes the hierarchical interpretation of the company which includes the board of directors, the advisory board, the CEO, the managers, the head of the concerned human, finance, and operation departments the managers the staff that includes lower-level staff and higher-level staff. Concerning school education, organisational strictures include school and the education system. Thus the role of manager in every organisation has the role and responsibility to compete in carrying out tasks and responsibility.

The project life cycle and its significance

The life cycle of the project needs to undergo proper monitoring, planning and control. of activities which are related to the project management system. the life cycle concepts include the vision of the cycle and extension highlighted in the research developed by the entire project management context. (Madalina, 2021). The diagrammatic representation of the project lifecycle has been attached below, which was explained by Gray and

Larsen (2006). The stages of the project life cycle include

1) defining 2)planning 3)executing 4)Delivering

Whereas the project lifecycle with resale t to tasks includes

1)conceptualization 2)planning 3)execution.

4) termination

This project lifecycle includes the role of both task and product where the cycle keeps repeating till it reaches achievement and goals to attain success in products. When it comes to organisational development includes birth, early growth, growth, maturity, decline, ageing and death.

That needs organisational development and stability.

The role of the organisation includes the process through which the entire organisation process proceeds of its value of core ideology



of mission and vision. The organisation stated to reach its maturity when it has gained, The overall success of the organisations The role of declination exists when

it cannot compete its market forces and started to deteriorate concerning environments and competition

The permanent organisations and the application with terms too. project delivery and outcomes It is stated to be very concrete to study the core vision and mission of organisations as we have already seen in the organisation lifecycle, once the company has attained the maturity or permanent stage it

has to define its value and benefits to carry the project success in an institution. This process of enabling the project to perform its valuation and dependencies includes the role of change management practices (Alejandro Romero, 2021). Just defining the organisational value is the process of actions proceeded by the organisations to carry out project deliverables in terms of organisational benefits. The information and communication technologies -ICT had seemed to be underperformed and reported low return investment. they lack in expecting benefits obtained from project deliverables. The project manager and his team's performance are related to this ICT and started to recurve the project outcome based on deliverables in terms of organisational benefit.

Alanzandro defined benefit management as "it is the process for identifying, defining, planning, tracking and realising organisational benefits and has poorly explored in literature. in other terms, it is the process of implementing the managerial practices and roles to enhance the methodology of improving

The efficiency of project outcomes and deliverables concerning organisational behaviour and values.

To state the role of the project owner, they are defined to be the person who is responsible to support or started to be a shareholder who necessarily seems to define the acquisition of benefits from the project directly or indirectly.

The process of acquiring the external resources and capabilities where the internal access of organisational objectives are met and resolved concerning external outcomes of the organisational benefits is termed to be stated as benefits management, there are three types of benefits management namely

- 1) Tangible benefit -measurable in monetary terms
- 2) quasi-tangible benefit- improving the efficiency
- 3) intangible benefits -not easy to measure How to measure and category benefits

This isn't the state where organisations need to consume the role of benefits to how the organisation implements goods practices in all terms of the level that including meso, macro and micro levels in management.

In general, the formula to determine value in an organisation includes

$VALUE = BENEFITS / INPUT COSTS$

The Concept of benefits catches something border which cannot be measurable such as intangible benefits. in simple project management is defined as the flow of values in an organisation. indents role to conceptualise the main proposition of benefit management

- 1) a clear strategic alignment in terms of benefit management
- 2) the benefits and the corresponding target must be identified in the business
- 3) a decision-making structure
- 4) checkpoints should be established
- 5) should extend the life cycle of projects beyond their delivery

the model that depicts the strategic integration of meso ethics includes, three stages namely

· Micro level- the micro-level of integration includes leadership authority and ethics which relates to individual and organisational ethical congruence where it deals with the individual concern of ethics, then comes the meso level

Meso level- in the context of meso level we could infer that the company includes the corporate level of ethics involved that may include corporate code of conduct, ethics training program and employee demand for corporate ethics then finally depicts the macro level of strategic governance

· Macro level- in this level where the law and ethics take place concerning corporate and executive response to ethics policy and corporate social responsibility.

When the micro-level and meso-level context organisational problems have not been resolved

Our Company Mission

The decision-making behaviour plays a major role in one conscience and intuitive ideology of why this problem has occurred in the company. The inequality concerning sex, wages, and labour had been with a statement of ethical issues in the company as it has not been addressed well by the Walmarts company. The context can be explained with the model of ethical decision making and behaviour in organisations. As we have already revised the concept of leadership, the external factors that are involved with company terms concerning social scientific theory and findings and normative theory and implications that are related with terms of individual characteristics and commitments formal and informal organisational structures and finally the individual characteristics and commitments based on the issue characteristics that should lead to ethical decision-making behaviour in organisations.

REDESIGN OF COMPANY ETHICAL FRAMEWORK

concerning organisational policies and structure, we could infer the model that has been invented by Svensson and wood. In his citing, he had clearly stated that the organisational values norm beliefs the backbone of every organisation to attain a goal of success. What society expects is directly related to the company's culture like internal and external competencies, in general,

the values and norms are related to parameters like government legislation, increased education, power of media, competitions, associations, business integrity internally socially responsible managers institutional responsibilities etc. thus lead to formations of norms and values of company, there the norms need the recheck concerning specified parameters in the model those values and norms leads to perceptions that include leadership relationships, staff relationships, shareholder relationships, external stakeholder supplier relationships customer relationships and competitor relationships that leads to the outcome of the evaluations of the norms like economic outcomes, lawful behaviour, products acceptable and finally the society evaluated and this process are the cycles that produce the desired outcomes for company case. Some of the other aspects the need to concentrate on are all the organizational actions of ethics programs. That includes code of conduct, training storytelling, reward systems information systems, communication channels, employee selection and organisational strategy. this leads to conditions on the organizational level which includes organizational norms procedures of decision making and distribution of resources which also directly or indirectly related to political context, some of the conditions that need to be advised concerning the individual level includes necessary skills and personal intentions. This directly relates to the possibility for morally

responsible behaviour of decision-makers inside a company

To implement the proper benefits management system.

it has to be stated that the role of the organisational enabler is to be defined those includes

- standards of project governance
- organisational culture ethics core values
- rules and regulations
- meetings

To influence a greater impact within the internal organisations, the people in the organisational environment should be concentrated more than the tools and techniques(Muller, 2021)

Projects are often used as a vehicle for driving and implementing the change, the combination of both project management theory and change management theory could help us to determine the positive context and outcome in the project of the company. (Larsson, Pernille, 2016).

In general, project management is defined as the application of tools, techniques., skills, and knowledge to project activities to meet the requirements(PMI, 2013).

The change management in the context to project management includes the directly influential variables such as

- -project scope
- - budget
- - time frames
- - tasks
- - planning activities
- - stakeholder analysis
- - the front end of the project
- - planned structure and budget
- - risk and stakeholder analysis
- - the role of people in organisations includes
- - project owner
- -project manager
- -project team members
- -reference group and committee
- As projects seem to be the collection of tasks or activities.

A short note on work. break down structure Installation of agricultural. equipment - rice mill in Thanjavur village

The work breakdown structure chart includes

- 1) initiation
- 2) planning
 - 2.1) establish a project team
 - 2.2) perform rice mill assessment 2.3) create a product scope statement
 - 2.4) test the rice mill equipment installation 2.5)Selecting the efficient rice mill
- 3) Scope of implementing psychological support and health wellness package to employees
 - 3.1) Verify
 - 3.1)complete trial test of rice mill 3.3)Purchasing rice mill
- 4) Learn to operate the rice mill and its installation procedures
 - 4.1) Design specification of rice mill to the installing process in the Thanjavur district
 - 4.1) creating training and implementation of working of rice mill
 - 5) professional labour skill training
 - 5.1) webinars and trail practice to use the rice mill 5.2) deliver training to labours
 - 5.3) conduct regular meetings and trainings



- 6) Launch the installation of a rice mill in Thanjavur village
- 6.1) implement the paper document formalities to install the mill
- 6.1.1 to implant the rice mill in the land determine the total mill needed to install
- 6.1.2 technical support assistance
- 6.1.3 the financial estimation and cost budgeting
- 6.1.4 the gain access to the mill to people the in team and labours
- 7) provide support
- 7.1 appoint a managerial skilled person and the technical person handling rice mill operations
- 7.2) safety precautions
- 7.3) updating the training methods and procedures. **COST MANAGEMENT**

The poor cost performance has been determined based upon the indirect or factors and attributes related to it, for example in his journal he mentioned that the cost of project is directly or indirectly related with the stakeholders or contractors way of estimation practices. To define cost estimation it so the technical process of predicting expenditure based on accurate measure of resources and control over project implementation. of the major findings in this research paper is the factors that increases the cost of projects directly and indirectly The PERT is the general methodology that has been carried out in most of the customs clearance

And procedures projects in UK, Australia, America etc, in such mega projects the price of bulk resources are estimated with respect to bill of quantities methodology and has been noticed that these bills and prices has been assigned by the contractors based on their experience and only few resources have been assigned as per specified pricing tags. Some of the factors related with poor cost management are supervision, unforeseen ground conditions, low speed in decision making ,client intimated variations and design change

The poor project management influence the cost and time of the project and the affects the net outcome of the project Even uncertainty is one the major reason for project failure that usually occurs in tendering stage in customs clearance and procedures project that usually helps in determining the indirect cost in customs clearance and procedures projects

The direct cost in customs clearance and procedures project includes project size, public ownership factors project implementation phase that increases the cost overruns The cost overruns are basically due to the influence of people, management, time and uncertainty. The determination of role of all the three factors with respect to cost overruns. The cost performance management has its significance .The project management team drawbacks includes capability of firms customs clearance and procedures team, scheduling and planning deficiency, customs clearance and procedures frequency variations delays in work approval ,cash flow during customs clearance and procedures financial difficulties and payment of completed project. With respect to planning factors those includes the role of the project manager, effective monitoring scope and nature of work leadership quality of PM, understanding the responsibilities of the team ,the coordinator capability of handling contractors labours ,staff training skill training and control of human resources in the project process.

As a result we could state that the entire cost management failure in the customs clearance and procedures project has been due to improper planning and scheduling deficiencies , methods and techniques of Customs clearance and procedures ,effective monitoring and feedback process, complexity of design and development contact tors deficiencies , escalation of material prices , delays in work approval ,staff training and skill training accurate project planning and monitoring. The communication barriers , effective site management and market competition. The factors that has been determined to creat project failure has to be concentrated in order to eradicate the cost overruns in the project The five significant factors that has been identified are the project monitoring and scheduling, design efficiency, effective site management and communication. ns Risk in management involves systematic risk management that includes tasks of risk identification, analysis and response the. Introduced formal risk management , where the efficiency has been determined in rail project in Hong Kong , where the cost efficient risk to generate more specific and focused knowledge.

WEST RAIL PROJECT INFORMATION- RISK MANAGEMENT

Place :Hong Kong international airport Length:30.5 km domestic passenger railway Estimated cost ' HK\$46.4 billion
Includes building 9 stations 32.5 hectare depot, laying 88km of track along route line comprising 13.4 km viaduct and Includes 14.7 km of tunnels and 2.4 km of surface alignment Kowloon Canton railway corporation owned by Hong Kong special administrative region

It includes 5 detailed design and 2 design build contract for major tunnel section

The entire project was joint venture and commenced in September 1999 and was successfully finish ed on October 2013 Used advanced technology such floating slab tract supported by rubber bearings which could reduce vibration transmission in voiduct structure The entire project objective revolves around determine the risk factors related to project. Thus risk management system hereby covers management policies, processes, and structures that are directed towards the effective management of risks Some of the factors of risk includes

- 1) resource factors
- 2) management factors 3) parents factors

The list of risk factors associated with the project includes



- **RESOURCE FACTORS**

- Price escalation in materials
- Price escalation of equipments a
- Price escalation of labour

- **MANAGEMENT FACTORS**

- Inaccurate cost budget
- Inappropriate cost control mechanism
- Increased project size and scope
- Increased cost due to project delay
- Design changes
- Clients cash flow problems Suppliers default

- **PARENT FACTORS**

- Financial problem from parents
- Disagreement on accounting profits and loss
- Problem in allocation of works
- Excessive interference from parents or higher authority

The basic definition of risk management differs from person to person one person may think that risk is all about analysing, interpreting and defining the problems and finding the solutions to it. The other includes the factors related to cause of risk and managing those risk through out the project, it can

also be fined as the intuitive process rather than determining the factors related to causes of risk and managing it. The people involved Project manager: foresee the risk in the entire project The quality manager includes the quality and safety of the project Safety manager looks for safety of employees and labours in the project Risk management is otherwise stated as facing the world of uncertainty there can be positive and negative t on project objectives and uncertainty management Risk management is defined as handling the happening that is destined if negative determined that including monthly score card.

The scope of risk management includes unknown and known events concerning known and unknown impacts

- When there are unknown events and known impacts we need to do need cause analysis
- When there are unknown events and unknown impacts they can be ignored
- If there are known events and known impacts it is said to be a certain happening of risk
- If there are known events and unknown impacts we need risk management

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The risk event includes

- A) cost that is positive and negative impacts
- Schedule that includes scope objective
- 3) quality
- Risk probability which includes the likelihood of occurrence, the ratio of the number of chances by which an event may happen is the sum. of chances of both happening and not happening
- There are qualitative analysis and quantitative analysis
- Positive risk analysis
- Any certain condition that has a positive impact on the project is termed a positive risk
- There are different terms of risk that includes
- Unknown impact
- Risk threshold
- Risk appetite
- Risk tolerance
- Aggressive, conservative neutral a balanced risk taker

The process of risk management is

- 1) identify risk
- 2) risk access and analyse
- 3) plan action
- 4) Implementation
- 5) measure control and monitor
- The types of risk are financial risk, technology risk, commercial risk, risk of obsolescence project planning and execution of risk
- This journal defines how to implement a technology in managing the information throughout the project and CICS is the method that has been utilised to entirely manage the information system CICS-customs clearance and procedures information classification system.

One of the classification systems includes library classification system (LCS)

The LCS includes Dewey decimal system classification, universal decimal classification and library of Congress classification in order to classify library in cics. The cics are further classified based upon the information needed for the entire project the CICS planning includes schedule planning which consists of facility planning it is considered to be the most important aspect of making



an complex facility with assembling various products.

The different types of facility classification are

Area facility that basically describes about the area in which the project has been carried out

Transport facilities includes how the transport helps in this project and it has been broadly classified

as road transport facilities, rail transport facilities and finally air transport facilities Then water facilities includes Harbour and coastal facilities and water resources processes that has been utilised in the project Environmental facilities such as sanitary facilities etc. The next classification includes space classification The three dimensional products that includes slabs and beams etc. The main area is considered to be the space facility, The space facility has been broadly classified in to underground, surface, on the ground, above ground, and it includes function, service, control, maintenance and ancillary, The space classification mainly includes the information about the underground tunnels, ducts, surface includes pavement for an expressway or track of railway and the above ground includes elevated structure such as bridge and elevated channels and the function includes subordinate structures such as retaining wall culverts and spill ways All the information related with these space facility may Include services that includes information about tollgate a gauging station a bus station and control includes light houses for Harbor facility or control towers etc This cics gives the detailed information of various project that has been carried out in terms of subdivision that was provided to project managers and flexibility in practical application

Element classification in cics

Elements includes the various parts that need to be aligned to provide a complete product, for example pier and slabs are been assigned to construct a elevated bridge where as it cannot includes concrete work, formwork or other operations that are used to construct the elements

Elements are classified in to 9 categories

- 1) ground and foundation 2) horizontal elements
- 3) vertical elements
- 4) wall
- 5) connection 6) fitting
- 7) mechanical and electrical

Project managers need to classify the element information in a detailed manner that could help in flow of information to perform

The operation in the customs clearance and procedures site

In simple way the slab is stated to be the element but formwork and reinforcement work is stated to be the operations Operation classification All the operation that need to be carried out in the customs clearance and procedures sites are defined to be taking the lowermost level in a cics

That includes

- Primary operation

Secondary operation

- Tertiary operation
- The basic process includes
- Cost estimation
- Cics
- Schedule planning

In the process of project the information technology is concerned with the process of providing the information about the project flow that is from process to operation and need a unified cics to manage the project with project manager The advantages of using CICS are

- A) cost estimation
- B) operation to facility
- C) schedule planning
- D) facility to operation items

To have a proper control over projects with information management levels they need

It provides the detailed information management they need, The cics will be very helpful for proposed managing the customs clearance and procedures information in civil engineering projects.

Traditional project management

It is called as heavy, linear or bureaucratic project management that includes the concept of project dynamics. It is based on tools, scheduling, deliverable and process defined by experts that belongs to techno structure the projects comply with standards. Whereas the agile project management includes iterative methods of value added where the quality matters in other words it is defined as the flexible, dynamic, and change happens in the process of the projects, new changes happen again and again, the roots of agile project management includes the lean management in other terms it is defined as the change management process. In other terms hybrid project management includes the combination of agile and traditional management system both TPM and APM is considered to be the incremental process, where APM has impact on project efficiency and stakeholder classification Traditional project management principles includes key performance indicators {KPI}. Where KPI includes efficiency reliability and principle two includes the role of project managers in implementing the strategy in the project that has been defined by the



project expert and the principle three includes the definition of well defined outputs in terms of work break down structure and product break down structure. the principle 4 in TPM includes the working rules of the entire project. And principle 5 includes the relaxation of our competitors and the role of financial auditors and the practice differentiation from neighbouring organization principle 6 includes the defining of maturity level from lowest to highest SCRUM APM METHOD ARCHETYPE

The introduction of agile project management was due to some drawback faced in TPM, some of the projects that has been performed in traditional approach failed with respect to time and satisfying the clients need or skills. The scrum creators propose a body of knowledge based on clear principles

SCRUM methods are

- Adaptable
- Iterative
- Flexible
- Fast
- Effective methodology to deliver significant value.
- Scrum includes self organised and which divide the work cycle of the project in short called sprints
- The principles of scrum is different from TPM Principle 1- the ideology is based on project success with respect to customer value and lead time

Principle 2- the project team implement iterative collective and time focused practice and working rules The team of the scrum includes a project manager who is responsible for road map definition and plan He collaborates with a product owner who is a customer spokesperson and scrum master who lead team meetings, commonplace tools project actors share commonplace resources and consisting of the working environment and has room for stand up meetings which includes visual management devices The process of the sprint in other words iterations includes Inputs from executive Product owners represent functional aspect requirements that include product backlog Then comes the team that includes the second ceremony where it includes a sprint planning meeting week time box that includes a maximum period of iteration, not more than working 2 weeks then the next step is task work out which includes sprint backlog iteration 3 requirements then comes the sprint demo which will be repeated 1-4 weeks to every 24 hours, the sprint end data and team deliverable do not change which includes sprint retrospective and includes process oriented meeting how to improve further thus the sprint includes the steps like

- 1) summarising 2) backlog 3) sprint planning 4) sprint demo
- 5) sprint retrospective 6) start up
- 7) high level schedule time management, finance in project and time and material board

In agile approach the time cost and quality are fixed where as the feature will be changing as per need and demand.

A brief on topic cost estimation cost control and budget of the project

The objective of this cost estimation includes how to control the cost or optimize the cost. There are four processes involved in cost management that include

- 1) estimate the cost 2) training cost 3) administration cost
- 4) inventory carrying cost

Some of the estimations of cost ways include

1. Expert judgement
2. analogous estimating
3. parametric estimating
4. bottom-up estimating
5. 3 points estimate
6. reserve analysis
7. cost of quality
8. project management software
9. vendor bid analysis
10. Group decision-making techniques

Variable scale is different which has been analogue where the project cost includes 30% planning and execution which needs to be allocated in the project

The bottom-up estimation includes identity estimate at the detailed level of 90% accurate

- The parametric estimation includes human resources, material resources and equipment resource

- For example, 50 dollars/hour which had the output of 2000/week pricey resources

Some of the parameters involved are man-hour litres kg

- For 500/sq.ft -1000 Rs

The building or customs clearance and procedures per SQ feet includes 1000*500

- Every activity the estimation will lead up that includes bottom estimation cost.
- Reserve analysis: where the risk is known and unknown situations
- Contingency margin in terms of reserve analysis where the 100\$million in which 80\$million are

in the reserve where the sponsor budget works

- There are two types of contingency reserve analysis that include
- Known and unknown and unknown -unknown
- Vendor bid analysis where the bidding happens, the bidding element analysis happens concerning cost component to market rates
- The champion bid analysis includes the market leaders with respect to bid value analysis and bid document

d document

- Earn value management
- Design in terms of resources

The design includes planned expenditure, the earned value and the actual cost

10 activities include 10 items -1000, the worth of work done is 750 and the actual cost includes 1000 The amount of work achieved is earned value that is converted to dollars that includes planned and actual costs. The project is over budget the schedule of the project includes the drawback with

the project schedule How to measure these that includes schedule variance and cost variance

The schedule variance - earned value - planned value

Earned value - budget @ completion X % work completed

- The work plan includes the % of work plan is the planned value measure or monitor cost

Parameter Abbreviation used

Abbreviation	Expanded Term
EV	Earned Value
PV	Planned Value
AC	Actual Cost
BAC	Budget at Completion
EAC	Estimate at Completion
ETC	Estimate to Complete
SV	Schedule Variance
CV	Cost Variance
SPI	Schedule Performance Index
CPI	Cost Performance Index
CR	Critical Ratio
VAC	Variance at Completion
TCPI	To-Complete Performance Index
TSP	To-Schedule Performance
CP	Cost Performance
CBL	Cost Baseline
FC	Fixed Cost
AP	Actual Progress
BC	Budgeted Cost
PV%	Planned Value Percentage
EV%	Earned Value Percentage
Calculations	

$EV - PV = 750 - 1000$

- $SV - 74\%(1000) = 750$
- The cost variance (CV)
- $CV = EV - AC = 750 - 1000 = 250$ $CV\% = CV/EV = 250/1000 = 25\%$
- Schedule performance index
- SPI and CPI = ev/pv
- CPI - Cost performance index
- $CV = EV - AC = 750 - 1000 = 250$
- $Cv\% = CV/EV = 250/1000 = 25\%$
- We could infer that it is 75% efficient
- Lower budget is when $SPI > 1$ and over budget is when $SPI < 1$, the $CPI > 1$ is stated to be under budget and $CPI < 1$ is stated to be over budget
- $SPI - EV/PV$
- $CP - EV/actual\ cost$
- Critical ratio is $CR - CPI * SPI$

CBL - pure cost estimate + contingency result Problem

Given that 50 pcs to be installed -AP

Duration is 10 days and FC is -\$10000 for the project to determine the EV, PV, AC, SPI, CPI, CP

1st week -30 pcs -5 days EV - 50%(10,000)

= total work performance * cost $PV - BAC * planned\% complete$



$=10,000 \times 50\% - 5000$

$EV - BAC \times \text{actual \% complete}$

$-10,000 \times 60\%$

-6000

$AC - 4000$

$SPI = EV/PV = 6000/5000 = 1.2$ $CPI = EV/AC = 6000/4000 = 1.5$ $CR = SPI \times CPI = 1.2 \times 1.5 = 1.80$

1. Forecasting variable

2. EAC where the estimate is at the completion

3. $SV = EV - PV$

4. $SPI = EV/PV$

5. $CV = EV - AC$

6. $CPI = EV/AC$

7. $CR = SPI \times CPI$

8. $EAC1 = BAC/CPI$

9. $EAC2 = AC + ETC$ ($ETC = BAC - EV$)

10. $EAC3 = AC + (BAC - EV)/CR$

11. $VAC = EAC - BAC$

12. $TCP1 = EC - EV/EAC - AC$

13. $TSP1 = EAC - EV/EAC - PV$

14. $VAC = EAC - BAC$

CONCLUSION

In creating a high-performance team it is always we and not The role of the project manager is to lead the team in the proper direction They should possess good people management skills and should be ready to face moral challenges and should be well versed in handling conflict across the team, he or she

should be familiar with soft and hard skills and should have good personal skills social skills and interpersonal skills, the leader should make sure that the team should have great mutual respect with the team members, the team fails if there is lack of self-respect and mutual trust drawback between team members, there are internal politics between the team and members and lacks in the individual team. Members productivity and outcome To provide a high-performance team one should have to cultivate team bonding activities such as getting together personal friendships mutual respect and understanding of the meeting and communication will help. with good interpersonal skills and respect, we can generate high-performance team

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