

Multi-Project Management in Organization

Lecture Topics

- Organization of projects in multi-project environment
- Problems and challenges in managing of multiple projects
- Projects portfolio management
- Project management maturity model

Organization of Projects

A System Model of the Multi-Project Environment is presented on the following figure:

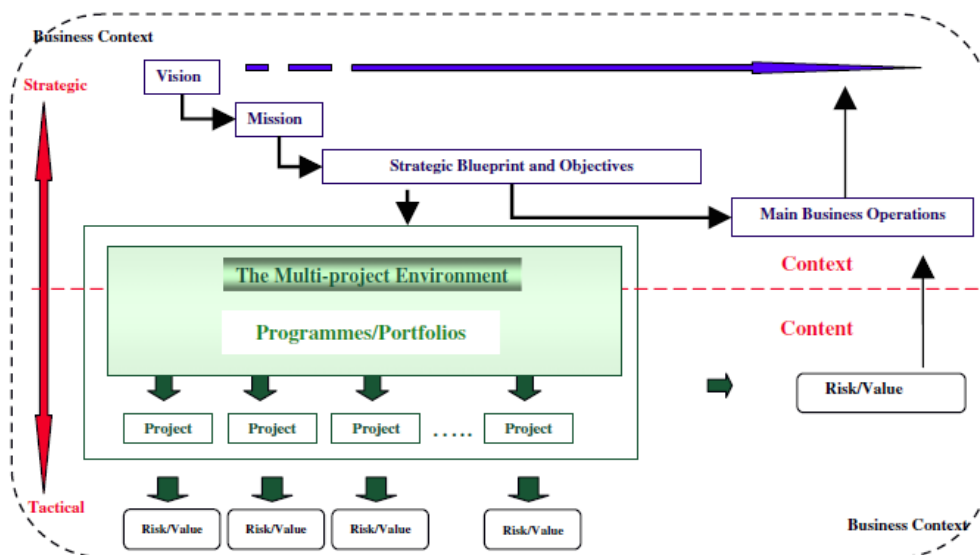


Fig. 2. A systems model of the multi-project environment.

Figure 1. A Systems Model of the Multi-Project Environment

The model recognizes that multi-projects are executed as a means of attaining some business objective and/or hybrid business and project objective as a means to enhance main business operations or service provision. This business project is undertaken as part of an open system and as such is influenced by the external business climate. The key features of the model highlight the distinction between the overall strategic issues which shape the organization's business context and tactical project issues. Ideally the contextual issues provide a basis for deriving the content of each project in a way that fulfills strategic objectives. Multi-project management attempts to bridge the gap between context and content and aligning projects to the overall strategy of the organization.

Projects can be organized in different ways:

- As project chain
- As projects portfolio
- As projects network

Pictorially presented on the next figure:

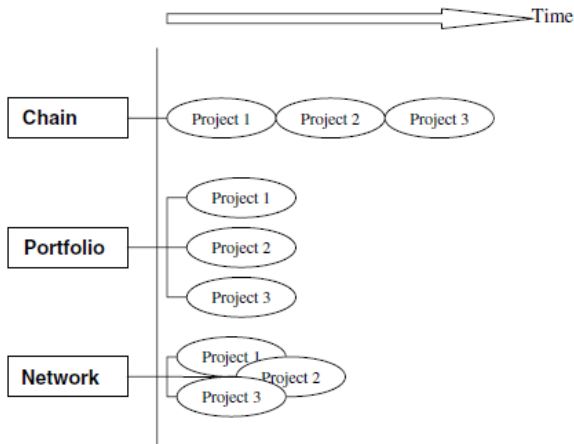


Fig. 2. Organisation of projects in programmes.

Figure 2. Projects organization I

Or like this:

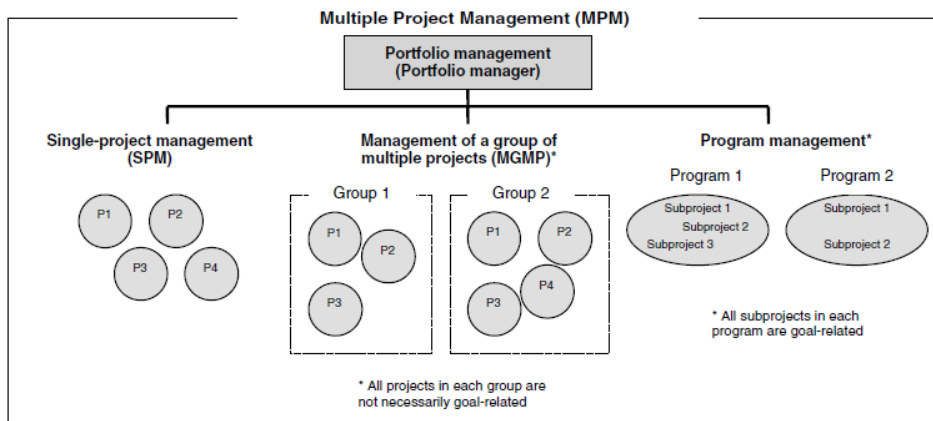


Figure 3. Projects organization II

Or like this:

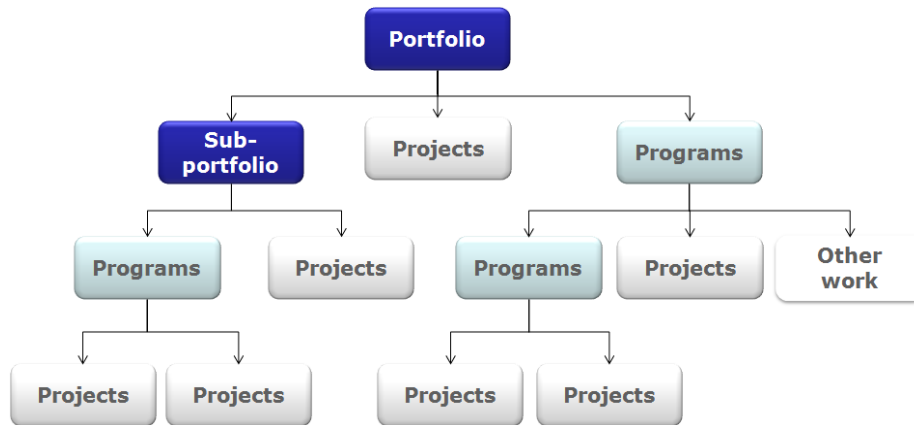


Figure 4. Projects organization III

Project Portfolio

A Portfolio is a collection of programs and/or projects and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. Unlike a program itself, the projects or programs of the portfolio may not necessarily be interdependent or directly related. A portfolio may also be defined to contain support, operations, non-labor expenses, although those types of work do not have to be included if there are good reasons not to do so. The portfolio allows you to optimize investment decisions by prioritizing and balancing all work within the portfolio. For maximum effectiveness, a portfolio should encompass all of the work that draws on common resources such as that contained within an entire Business Unit or department. Work is not done at the portfolio level. Instead, the work is done through the projects, support teams and operational teams that are working within the portfolio

Project Program

A program is a group of related projects managed in a coordinated way to facilitate a level of management and control that is not available from managing the projects individually. Programs may include elements of related work outside of the scope of the discrete projects in the program. A program often implies that one or more projects are running in parallel with others. Thus, all of the projects in the program are related and all are set up to deliver portions of a very large deliverable or set of deliverables. Programs typically do not contain operations or "other work". If they do, it is only for a finite period of time when some deliverables need to be supported and run, while other projects are still working on other aspects of the final solution. A program could be contained within a portfolio, although the reverse would not likely be true

„Other Work“

Support work is work of an on-going service nature such as recovering from a service failure, fixing errors, answering questions from your internal users, researching questions and so on. Unlike a project, the work does not result in an obvious or manageable deliverable. Rather, it is a matter of some urgency requiring immediate attention, yet delivers value to the organization. Alternatively, the work may produce a stream of deliverables of such a minor nature that individually each does not warrant treatment as a project. The need to include this kind of work under the umbrella of a portfolio may be because the availability of the necessary technical skills is limited and must be drawn from resources otherwise available for the projects in the portfolio. Only in this way can the total capacity of the resources for the portfolio be estimated and managed.

Problems in Managing Multi-project Environments

- Project level activities - improper implementation of the pre-project phase; project progress monitoring is infrequent; too long projects
- Management of project-oriented business - project work is given a second priority and not rewarded systematically; no defined owner, business or personnel strategy for portfolio; rapid and recurring changes in roles, responsibilities or organization structure; many bodies are entitled to set up a project; “own” objectives of a unit
- Commitment, roles and responsibilities - unclear roles and responsibilities between portfolio decision makers and the other parts of the organization; management does not seem to support project work; unclear roles and responsibilities at the project level
- Portfolio level activities - overlapping and non-integrated projects and tasks within one portfolio and between portfolios; weak Go decisions: resources, value, and priority not considered properly; the roles and the responsibilities of a portfolio manager are not clear or digested; no feedback given to the project level; projects are not killed
- Information management - lack of information on projects; inadequate flow of information across organization; information flow from projects to other parts of the organization, and vice versa, is not defined; no common database of projects;
- Resources, competencies and methods - methods and guidelines for portfolio evaluation, and project planning and management are inadequate; human resource shortage, a lack of commitment and inadequate competencies at the project level; too extensive composition of a steering committee and a project team

The Challenges of Managing Multiple Projects

- Not enough visibility on the detail being performed by project teams (i.e., developers, testers, etc.).
- Not enough time to attend to meetings and still track tasks and milestones (i.e., tight deadlines).
- Managing multiple risks and resolving multiple issues.
- Lack of experience in juggling multiple tasks and meetings (e.g., gets too crazy).
- Limited resources within the resource pool.
- Conflicting priorities among projects.
- Integration of all projects and their target dates not always clear.
- Communications among too many people affecting performance.

As Solution

- Project Portfolio Management Methodologies
 - The Standard for Portfolio Management (PMI)
 - PortfolioStep (TenStep)
 - The Portfolio Management Discipline in EUP
- Project Management Maturity Model

Project Portfolio Management

“...the centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing and controlling projects, programs and other related work, to achieve specific strategic business objectives.” (PMI).

Portfolio management is a business process that requires a set of detailed processes to be conducted in an interrelated continuous sequence. It facilitates decision making, through evaluation, selection, prioritizing, balancing, execution of the work, harvesting of benefits and feedback of results for process improvement. It presumes that the organization has a strategic plan, along with customary mission and vision statements, together with strategic goals and objectives (TenStep)

The three well-known objectives of portfolio management are:

- Maximizing the value of the portfolio
- Linking the portfolio to the strategy
- Balancing the portfolio

Project portfolio management processes are as follows:

- Portfolio Setup (Categorization)
- Identify Needs and Opportunities (Identification)
- Evaluate Options (Evaluation)
- Select the Work (Selection)
- Prioritize the Work (Prioritization)
- Balance and Optimize the Portfolio (Balancing)
- Authorize the Work (Authorization)
- Plan and Execute the Work (Activation)
- Report on Portfolio Status (Reporting & Review)
- Improve the Portfolio (Benefits & change)

On the following picture projects portfolio management process from corresponding standard by PMI is presented:

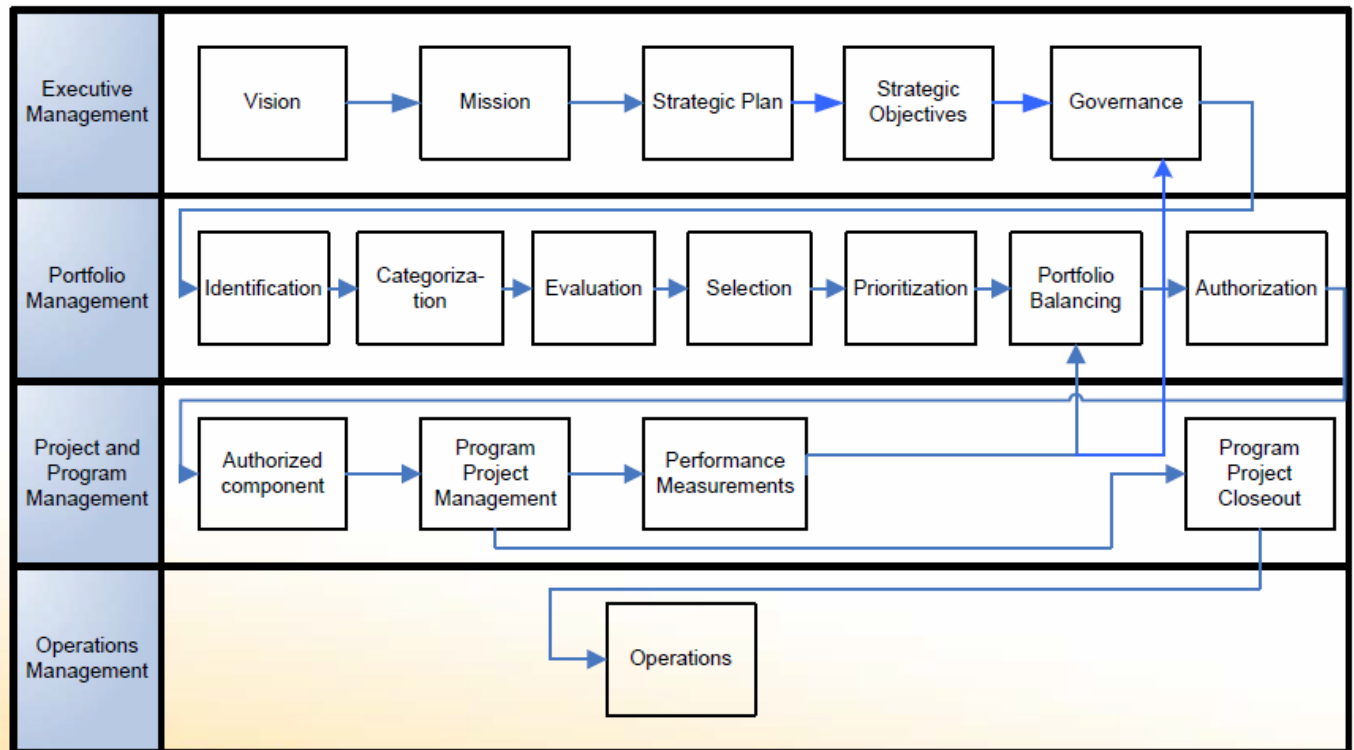


Figure 5. Projects Portfolio Management Process by PMI

By TenStep looks this process as presented on the following figure:



Figure 6. Portfolio Management Steps by TenStep

Project Management Maturity Model (PMMM)

The foundation for achieving excellence in project management. This model is comprised of 5 levels where each level represents a different degree of maturity in project management. Certain levels can and do overlap - the magnitude of the overlap is based upon the amount of risk the organization is willing to tolerate

Short description of these levels is:

- Level 1 – Common language. Organization recognizes the importance of pm and the need for a good understanding of the basic knowledge on pm and the accompanying language / terminology
- Level 2 – Common process. Organization recognizes that common processes need to be defined and developed such that success on one project can be repeated on other projects. Recognition of the application and support of the project management principles to other methodologies employed by the company
- Level 3 – Singular methodology. Organization recognizes the synergistic effect of combining all corporate methodologies into one singular methodology, the center of which is pm
- Level 4 – Benchmarking. Recognition that process improvement is necessary to maintain a competitive advantage. Benchmarking must be performed on a continuous basis. The company must decide whom to benchmark and what to benchmark
- Level 5 – Continuous improvement. Organization evaluates the information obtained through benchmarking and must then decide whether or not this information will enhance the singular methodology

These levels are presented on the following picture:

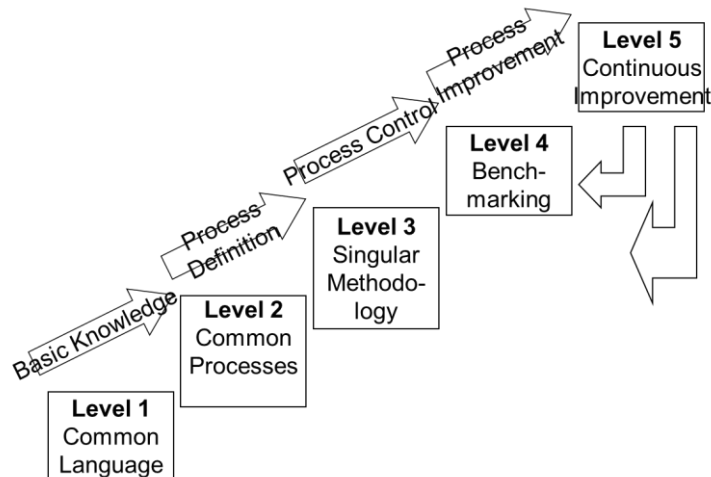


Figure 7. Project Maturity Levels

Level 1

Characteristics of Level 1:

- Meaningless support to the use of pm by senior and middle-level management
- Virtually no executive-level support
- Small „pockets“ of interest in pm
- No attempt to recognize the benefits of pm
- Self-interest comes before company`s best interest
- No investment in pm training and education

Advancement Criteria to Level 2:

- Arrange for initial training and education in pm
- Encourage the training (or hiring) of certified pm professionals (PMP-s)
- Encourage employees to begin communicating in common pm language
- Recognize available pm tools
- Develop an understanding of the principles of PMBOK

Level 2

Characteristics of Level 2:

- Recognition of benefits of pm - lower cost, shortened schedules, no sacrifice of scope or quality, potential for higher degree of customer satisfaction)
- Organizational support at ALL levels
- Recognition of need for processes / methodologies
- Recognition of the need for cost control

- Development of a pm training curriculum

Advancement Criteria to Level 3:

- Develop a culture that supports both the behavioral and quantitative sides of pm
- Recognize both the driving forces / need for pm and the benefits that can be achieved on a repetitive basis
- Develop an ongoing, all-employee pm curriculum such that the pm benefits can be sustained and improved upon for the long term

Level 3

Characteristics of Level 3:

- Integrated processes: organization recognizes that multiple processes can be streamlined into one, integrated process encompassing all other processes
- Cultural support: Integrated processes create a singular methodology. The execution of the methodology is through the corporate culture, which now wholeheartedly supports the pm approach. The culture becomes corporate culture
- Management support at all levels: The support is visible. Each layer or level of management understands its role and the support needed to make the singular methodology work
- Informal project management: Singular methodology is based upon guidelines and checklists, rather than based on the expensive development of rigid policies and procedures. Paperwork is minimized
- Training and education: With strong cultural support, the organization realizes financial benefits from pm training
- Behavioral excellence: The organization recognizes the behavioral differences between pm and line management. Behavioral training programs are developed to enhance pm skills

Advancement Criteria to Level 4:

- Integrate all related processes into single methodology with demonstrated successful execution
- Encourage the corporate-wide acceptance of a culture that supports informal project management and multiple-boss reporting
- Develop support for shared accountability

Level 4

Characteristics to Level 4:

- Organization realizes that its existing methodology can be improved upon
- The organization must establish a project office (PO) or a center of excellence (COE) for pm. Focal position in the company for pm knowledge
- The PO or COE must be dedicated to the pm improvement process. With full-time, dedicated personnel
- Benchmarking must be made against both similar and no similar industries. The company should perform both quantitative and qualitative benchmarking. Quantitative benchmarking analyzes processes and methodologies. Qualitative looks at project management applications

Advancement Criteria to Level 5:

- Create an organization dedicated to benchmarking
- Develop a pm benchmarking process
- Decide what to benchmark and against whom to benchmark
- Recognize the benefits of benchmarking

Level 5

Characteristics to Level 5:

- Organization evaluates the information learned during benchmarking and implements the changes necessary to improve the pm process
- Organization must create lessons learned files from debriefing sessions at the end of each project. Case studies on each project, discussing mistakes made and knowledge learned, are critical so that mistakes are not repeated
- The knowledge learned on each project must be transferred to other projects and teams
- The company must recognize that a mentorship program should be put in place to groom future project managers. The mentorship program is best administered through PO or COE
- Corporate-wide understanding that strategic planning for pm is a continuous, ongoing process

Examples of PMMM-s

- Project FRAMEWORK – ESI
- Project Maturity Model (PM2) – Interthink, Canada
- PRINCE2 Maturity Model (P2MM) – CCTA, UK
- Project Management Maturity Model (PMMM) – PM Solutions, USA
- Project Management Maturity Model (PMMM) – The Program Management Group, Wetherby, UK
- Project Management Maturity Model (PMMM) – APMG, UK

- SW-CMM, SE-CMM, P-CMM, CMMI – SEI, US
- Unified Project Management Methodology (UPMM) – IIL, US

Used Literature

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- Harold Kerzner: Strategic Planning for Project Management Using a Project Management Maturity Model, 2001