



Module: Business Processes

Unit: Introduction to Project Management

Lesson: Achieving Project and Process Success

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Achieving Project and Process Success

Introduction

In this lesson we will briefly discuss performance measurement within the context of project management. We will look further at that in the next unit but here we will restrict ourselves to a few preliminary observations about performance measurement generally.

Performance Measures and Performance Indicators

Strictly speaking one can distinguish between a performance measure and a performance indicator. A performance measure is used when one is measuring something directly e.g. how much electricity has been used by a project activity or how many labour hours have been devoted to a particular part of a project. A performance indicator is needed, however, if the thing one wants information about is not capable of being measured directly. For instance, it is difficult to measure directly the motivation of a project team. Possibly one could carry out some questionnaire-based research and ask the team questions about their levels of motivation but even that has difficulties attached to it. So instead we could use a performance indicator. This is a measure of an alternative (or proxy) variable that gives a reasonable indication of the level of motivation; for instance we might look at levels of absenteeism or the rate of turnover of project team members leaving to join other organisations. Thus in this example levels of absenteeism and the rate of project team turnover are indicators of what we are really interested in but cannot easily measure directly - i.e. project team motivation.

think about it

What performance indicators might you use to come up with reasonable indications of:

- a. customer satisfaction
- b. creativity of project team members

feedback

The performance indicators we thought of were:

- a. number of repeat purchases
- b. number of customer complaints
- c. number of suggestions made in an employee suggestion scheme

You will find that many writers on the subject use the term performance indicator to mean both performance measure and performance indicator as we have defined them above and you will need to be aware of that as you read such material. However, for our purposes, we will continue to distinguish between the two terms. In the context of measuring project management performance one will tend to find that usually one can use performance measures. The use of performance indicators is likely to be restricted to human resource type issues of the sort we mentioned above.

Value for money

One way of categorising performance measures is to do so in terms of the contribution they make to value for money. This can be done by initially breaking the concept of value for money down into its three constituent parts i.e. economy, efficiency and effectiveness.

We define these three as follows:

Economy - economy measures the cost paid for inputs into a process or project

Efficiency - this measures how well inputs are transformed into outputs in a project or process; for example output per labour hour is an efficiency measure. It helps in identifying efficiency measures when one realises that they are always ratios of some sort between an input and an output.

Effectiveness - effectiveness measures how well the output of a process or project meets the objectives that were set for that process or project.

Economy: Cost of fuel

Efficiency: Weekly output of cars

Economy: Average level of project team wages

Effectiveness: Exam pass rates achieved in a trial of a teaching project

Efficiency: Student teacher ratio

Input, Process and Output Measures

Earlier in the module we saw that a simple definition of a process saw it as consisting of inputs that were transformed into outputs by the process. Our categorisation of performance measures relates to this definition as follows:

- Inputs: economy measures look at the cost of inputs into a process (or project).
- Process: efficiency measures look at the efficiency with which the process converts inputs into outputs.
- Outputs: effectiveness measures look at how well a process's (or project's) outputs meet the objectives set for the process (or project)

According to the National Treasury of South Africa (2007) good performance indicators should be:

- Reliable: reliable enough for their 'intended use and response to change in performance levels'
- Well-defined: clear enough to understand and for 'data to be collected consistently'
- Verifiable: must be able to validate the 'processes and/or systems that produce the indicator'
- Cost-effective: the cost of collecting the data for the indicator must be less than the perceived value of the use of the indicator

- Appropriate: the indicator should 'avoid unintended consequences and encourage service delivery improvements, and not give managers incentives to carry out activities simply to meet a particular target'
- Relevant: the indicator must relate logically to the goals and objectives of the project (National Treasury, 2007).

N.B. the term performance indicator is used above in its wider sense to mean both performance indicator and performance measure.

Project Success Factors

In the previous lesson we looked at project (and project management) success criteria; in other words means of measuring project/project management success. We now turn to a different but related concept i.e. project success factors.

It is important to distinguish these two concepts carefully. While a success criterion measures a project's success or lack of it e.g. profitability or keeping to budget, a success factor is something that helps a project achieve that success. In other words, while success criteria identify the ends or purposes of a project, a success factor is a means or contributor to achieving that success. Thus examples of project success factors might be top management support for a project or a competent project manager.

Different writers have come up with different lists of project success factors and some feel that they may differ a bit across different types of project e.g. projects in different industries or of different sizes. Below we will introduce you to the findings of just some of the research that has been carried out on project success factors. Much of this is derived from an unpublished M.Sc. dissertation Zhang (2011).

White and Fortune (2002) reported that the success factors most commonly ranked highly by a number of project managers they had researched were:

- clear goals
- senior management support
- adequate resources

Iyer and Jha (2005) identified success factors affecting cost performance in Indian construction projects based upon their research of the owners and contractors of such projects. (N.B. the project owner is basically the project stakeholder who sets up the project). They identified the following seven success factors:

- top management support
- project manager's technical competence
- project manager's leadership and coordination ability
- coordination among project participants
- commitment
- monitoring and feedback on process
- favourable social and economic conditions (of course this differs from the previous six in being

out of the control/influence of project participants)

my learning space activity

One of the issues with any piece of research is the question of how reasonable is it to expect the research findings to apply in other situations. With reference to the research by Iyer and Jha (2005), described briefly above, suggest which aspects of the research design may lead to the findings perhaps being of limited applicability to other situations.

feedback

First be quite sure we are not being critical of the piece of research. All research has to focus on particular things. The points we are looking for include the following:

The research focuses on just one country - India. It is possible that respondents from other countries might have different views about project success factors.

The research focuses on just one industry - construction. It is possible that respondents from other industries might have different views about project success factors.

Similarly the research only asks certain project stakeholders - i.e. owners and contractors. Quite possibly different stakeholders might identify different success factors. Interestingly on this point Iyer and Jha did find that their two groups of stakeholders prioritised the success factors they identified differently - project owners ranked the project manager's leadership and coordination ability highest, while contractors saw the project manager's technical competence as the most important factor.

Also remember that the research was looking only at one success criterion - cost performance. Clearly it is quite likely that respondents would see different success factors as important when considering different success criteria - such as performance against schedule or against specification.

Finally the research was published in 2005; might the passage of time have changed respondents' perceptions of important project success factors?

Project Success Factors (continued)

Returning to our summary of research findings on project success factors, Yu and Kwon (2010) looked at urban regeneration projects in Korea and concluded that the following ten success factors were relevant in them:

- low levels of conflict between key stakeholders (this was seen as the most important factor)
- the provision of effective legal and administrative services to the project
- standardised decision making processes (we will discuss this success factor in a bit more detail later)
- efficient communication
- good planning of and monitoring of processes

-
- appropriate project management systems
- an appropriate organisational structure
- good cooperation between stakeholders (to be honest this does not seem to be very different from the first success factor in our list)
- performance management occurring at each stage of the project
- an appropriate balance between public and private interests in the project (N.B. this will tend to be somewhat specific to urban regeneration projects where the public and private sectors typically come together to stimulate growth and regeneration in city areas; obviously though, the factor may also be relevant to other projects that require partnership between the public and private sectors)

Interestingly, some research has looked at which success factors seem to be most influential in the performance of particular stakeholders within given projects.

One such piece of research was carried out by Wang and Huang (2006), who looked at Chinese construction projects. They found that, based upon the perceptions of the construction supervision engineers whom they researched, the following success factors seemed to be important in driving the performance of particular key stakeholders.

<u>Key Stakeholder</u>	<u>Success Factor Relevant To Their Performance</u>
Project Owner	Support from top management Effective procurement
Contractor	Effective performance against technical specification
Firm responsible for supervision of construction	Effective collaboration with other stakeholders Effective control of project cost and duration

Figure 3.01 - Success Criteria Relevant to different Project Stakeholders

Interestingly Wang and Huang (2002) found that the performance of the project owner seemed to have most influence upon project success out of all the stakeholders they examined.

When we discussed Yu and Kwon's research into success factors in Korean urban regeneration projects, we found that one factor was the use of standardised decision making processes. Such standardised processes can be found in influential project management handbooks, such as the Project Management Book of Knowledge, published by the Project Management Institute (PMI). In a piece of research supported by the PMI, Ibbs and Kwak (2000) suggested that there was a relationship between a company's project management maturity, which referred broadly to their use of established, standardised project management techniques, and the performance of projects for which they were responsible.

Problems with Success Factors

Finally in this section we should comment upon one or two issues concerning the concept of success factors. It is certainly the case that sometimes the literature seems to confuse success criteria and success factors.

Normally, however, the distinction should be clear. A success criterion measures the performance of a project; a success factor helps a project achieve that level of performance. Research by Fortune and White (2006) did, however, point out that inter-relationships could exist between different success factors e.g. good communication skills by a project manager may lead to support from top management. This does not make the influence of success factors any less important but it does make their relationship with project success a bit more complicated to establish.

Reasons for Project Success and Failure

We will finish this unit by referring you to a number of articles and discussions on common reasons for project success and failure. The first looks at common reasons for failure of government projects that are commissioned from private sector companies. This explains references in the document to things like ministerial ownership and leadership. For projects commissioned by government, ministerial leadership is effectively the same as senior management leadership in a private sector project. The document has been produced by The Office of Government Commerce, a part of the UK Treasury. It provides a list of good practice for those in government who are managing projects and recommends that projects should not go ahead unless that good practice is adhered to. You can access the document at http://www.swan.ac.uk/media/cp_0015.pdf and should read it now.

The 20/20 Business Insight Project Management and Leadership consulting company suggest that the following are the ten most common causes of project failure:

1. Mismatch between the project and organisation's strategic priorities.
 2. No pre-agreed measures of project success.
 3. Ill-defined senior management ownership and leadership.
 4. Ineffective engagement with stakeholders.
 5. Poor project management technical skills.
 6. Non-standard approach to project management and risk management.
 7. Inability to differentiate stages of project development and implementation.
 8. Proposal evaluation focused on price rather than long-term value for money and achievement of business benefits.
 9. Lack of contact with senior management levels in the organisation.
 10. Poor project team integration between clients, the supplier team and supply chain.
- (Information accessed from - <http://2020projectmanagement.com/2013/02/top-10-reasons-for-project-failure/> (Last accessed 4th April 2013).

The 20/20 Business Insight Project Management and Leadership consulting company also suggested the following twenty actions to help ensure project success. As you will see they are structured in terms of actions to be carried out in the different stages of a typical project cycle.

DEFINING YOUR PROJECT

1. Demonstrate the project need and feasibility

1. Produce a document confirming the need for the project deliverables and describing, in broad terms: the deliverables, means of creating the deliverables, costs of creating and implementing the deliverables, benefits to be obtained by implementing the deliverables.

2. Obtain project authorisation

1. A go/no go decision is made by the Sponsor (Company).
2. A Project Manager is assigned.
3. A "Project Charter" is created which:
 4. Formally recognises the project.
 5. Communicates the success factors.
 6. Details the scope of the project and its deliverables.
 7. Is used as a communication document throughout the project.

3. Appraise fully all aspects of the project.

1. Outline the various ways the project objectives can be met.
2. Conduct a comprehensive risk analysis:
 3. Include Technical, Commercial, Environmental and Safety.
 4. Document all risks within the Project Risk register.

PLANNING YOUR PROJECT

4. Describe project scope

1. This includes:
 2. A Statement of Project Scope

2.

3. A Scope Management Plan

4. A Work Breakdown Structure

5. Define and sequence project activities

1. Develop an activity list (A list of all activities that will be performed on the project).
2. Give updates to the work breakdown structure (WBS).
3. Design a Project Network diagram.

6. Estimate durations for activities and resources required

1. Get estimate of durations for each activity and assumptions related to each estimate.
2. Produce a statement of resource requirements.
3. Update the activity list.

7. Develop a Project Schedule

1. Include Gantt Charts, network diagrams, milestone charts, or text tables.
2. Use supporting details, such as resource usage over time, cash flow projections, order/delivery schedules, etc.

8. Estimate costs

1. Get cost estimates for completing each activity.
2. Give supporting detail, including assumptions and constraints.
3. Include cost management plan describing how cost variances will be handled.

9. Build a budget and spending plan

1. A cost baseline or time-phased budget for measuring/monitoring costs.
2. A spending plan, telling how much will be spent on what resources at what time.

10. Create a formal quality plan

1. This is a quality management plan, including operational definitions.
2. Make sure you have quality verification checklists.

11. Create a formal Project Communications Plan

1. A communication plan includes:

- 1.
2. Collection structure.
3. Distribution structure.
4. Distribution structure of information to be disseminated.
5. Schedules listing when information will be produced.
6. A method for updating the communications plan.
12. Organise and acquire staff
 1. Define role and responsibility assignments.
 2. Create a staffing plan.
 3. Produce an organisational chart with detail as appropriate.
 4. Acquire Project Staff.
 5. Create a Project Team Directory.
13. Identify risks and plan to respond
 1. Design a document describing potential risks, including their sources, symptoms, and ways to address them.
14. Plan for, and acquire, outside resources (*if required*)
 1. Use a procurement management plan describing how contractors will be obtained.
 2. Produce a Statement of Work (SOW) or Statement of Requirements (SOR) describing the item (product or service) to be procured.
 3. Create Bid documents, such as RFP (Request for Proposal), IFB (Invitation for Bid), etc.
 4. Identify evaluation criteria - means of scoring contractor's proposals.
 5. Put in place a contract with one or more suppliers of goods or services.
15. Organise the project plan
 1. Put together a comprehensive project plan that pulls together all the outputs of the preceding project planning activities.
16. Close out the project planning phase
 1. Get the Project Plan approved, in writing, by the Client, and obtain a "green light" or okay to

1. begin work on the project.
17. Revisit the Project Plan and re-plan if needed

1. This gives confidence that the detailed plans to execute a particular phase are still accurate and will effectively achieve results as planned.

EXECUTION OF YOUR PROJECT

18. Execute project activities

1. Work results (deliverables) are created.
2. Change requests (i.e. based on expanded or contracted project) are identified.
3. Periodic progress reports are created.
4. Team performance is assessed, guided, and improved if needed.
5. Bids/Proposals for deliverables are solicited, contactors (suppliers) are chosen, and contracts are established.
6. Contracts are administered to achieve desired work results.

19. Control project activities

1. This includes:
2. Decision to accept inspected deliverables.
3. Corrective actions such as rework of deliverables, adjustments to work process, etc.
4. Updates to project plan and scope.
5. Improved quality.
6. Completed evaluation checklists (if applicable).

CLOSING YOUR PROJECT

20. Close out project activities

1. Get formal acceptance, documented in writing, that the Sponsor has accepted the product of this phase or activity.
 2. Give formal acceptance of contractor work products and updates to the contractor's files.
- Update the project records prepared for archiving. (Permission to reproduce pending)We will look in more detail at some of these examples of good practice in the next unit.