

# Fundamental Principles of Project Management

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## ***Introduction***

From time to time, various attempts have been made to enunciate 'Principles and Practices' of project management. However, there appears to be no consensus on either the principles or the practices of 'acceptable' project management, nor does there appear to be much documentation of any 'theories' of project management either supporting these principles and practices or derived from them. Thus, the foundation of the project management discipline appears to be somewhat weak.

On the other hand, there is a wealth of literature researching projects to determine what people do in project management, followed by conclusions drawn, as well as a wealth of advice on 'How to do it better' (practices). However, since few projects appear to pre-define their product success criteria, the results of these projects may be good, bad, or indifferent. Hence, some of the conclusions drawn may be questionable.

What appears to be missing is a set of fundamental project management principles as a basis for comparison. This paper is an attempt to address this gap.

***Issue:*** *What are the Fundamental Principles of Project Management and how do these differ from Project Management Practices*

## ***Definitions***

Webster (1) defines a 'Principle' as "a general truth, a law on which others are founded or from which others are derived..."

Cleland and Kerzner (2) go further in defining 'Principle' as follows:

1. A fundamental rule or law of action based upon desirable ends or objectives. A principle is more basic than a policy or a procedure and generally governs both.
2. A fundamental truth, or what is believed to be truth at a given time, explaining relationships between two or more sets of variables, usually an independent variable and a dependent variable; may be descriptive, explaining what will happen, or prescriptive (or normative), indicating what a person should do. In the latter case, principles reflect some scale of values, such as efficiency, and therefore imply value judgments.

From the above it would appear that the use of the qualifier 'Fundamental' with 'principle' is redundant. However, since there appears to be much indiscriminate use of the term 'Principle' in the marketplace, we will retain its usage to imply that it applies to all examples or aspects of project management and is distinct from the use of the word 'practice'.

Webster defines 'Practice', on the other hand, as "customary use, method or art of doing anything..." Cleland and Kerzner do not include this term.

In other words, a 'Practice' is a way of doing things. From these definitions it would appear that 'Principles' and 'Practices' may be distinguished by the difference between 'What' and 'How'. It would also appear that in Cleland and Kerzner's second definition there is some overlap between principles and practices, perhaps reflecting the confusion evident in the marketplace.

### **Criteria for Establishing a Principle**

Possible criteria for differentiating those principles of project management that are truly fundamental may be enunciated as follows:

A Project Management Principle should

1. Express a basic concept or idea.
2. Be universally applicable if a successful project result is to be achieved.
3. Be capable of straight forward expression in one or two sentences.
4. Be self-evident to project management personnel with considerable experienced of practical project work .
5. Be capable of self-evident naming with one or two words.
6. Provide the basis for research, practical testing as to value, and the development of supporting 'Practices'.

### **Previous Works**

Few authors appear to have addressed the issue of project management principles, although many use the term 'principles' to describe 'practices' all as defined above. One exception, however, is an article by Bing ([3](#)) in which he describes eight "Principles of Successful Projects" based on his extensive practical experience in the field. This article appears to have received remarkably little attention. In it, Bing presents his eight principles as follows:

1. There must be a project as defined in the PMBOK, and not just a task or an ongoing activity.
2. There must be a single leader (project manager), who is experienced and willing to take the responsibility for the work.
3. There must be an informed and supportive management that delegates appropriate authority to the project manager.
4. There must be a dedicated team of qualified people to do the work of the project.

5. The project goal must be clearly defined along with priorities of the “shareholders.”
6. There must be an integrated plan that outlines the action required in order to reach the goal.
7. There must be a schedule establishing the time goals of the project.
8. There must be a budget of costs and/or resources required for the project.

In the original article, each principle is followed by clarifying text. To this list, Bing subsequently added a ninth principle:

9. There must be a system to accommodate changes.

#### Proposed ‘Fundamental Principles’

How do Bing’s ‘principles’ measure up to the ‘criteria’ suggested earlier? And, are they all-encompassing? This author proposes the following consolidation of these ‘principles’ together with other ‘fundamentals’ consistent with the criteria and format presented earlier.

##### 1. The Success Principle

The goal of project management is to produce a successful product.

Without achieving a successful product there is no merit in incurring the project management overhead cost. Contrary to conventional wisdom, there have been many projects that have been “On time and within budget” but the product has not been successful, and similarly many that have not been “On time and within budget” yet the product has been very successful.

##### 2. The Commitment Principle

A mutually acceptable commitment between a project sponsor and a project team must exist before a viable project exists.

A project sponsor is a knowledgeable person representing the eventual owner of the product of the project and who is responsible for providing the necessary resources (money, goods, services, and general direction, as appropriate.) A project team is a knowledgeable and qualified group able and willing to undertake the work of the project. A mutually acceptable commitment is one in which there is agreement on the goals and objectives of the project in terms of the product’s scope, quality grade, time to completion and final cost.

##### 3. The Tetrad-Tradeoff Principle

The core variables of the project management process, namely: product scope, quality grade, time-to-produce and cost-to-complete must all be mutually consistent.

The core variables of scope, quality, time and cost are interrelated somewhat similar to a four-cornered frame with flexible joints. One corner can be anchored and another moved, but not without affecting the other two.

#### 4. The Primary Communication Channel (or Unity-of-Command) Principle

A single channel of communication must exist between the project sponsor and the project team leader for all decisions affecting the product of the project.

This principle is necessary for the effective and efficient administration of the project commitment. The owner of the eventual product, if represented by more than one person, must nevertheless speak with one voice. Similarly, at any given time, the project's team must have a single point of responsibility, a project manager, for the work of the project. Such person must have the skills, experience, dedication, commitment, authority and tenacity to lead the project to success.

#### 5. The Cultural Environment (or Suitability) Principle

An informed management must provide a supportive cultural environment to enable the project team to produce its best work.

An informed management is one which understands the project management process. A supportive cultural environment is one in which the project is clearly backed by management, and project team members are enabled to produce their best work without unnecessary bureaucratic hindrance. This principle includes the need for management to ensure that the leadership profile and management style are suited to both the type of project and its phase in the project life-cycle.

#### 6. The Process Principle

Effective and efficient policies and procedures must be in place for the conduct of the project commitment.

Such policies and procedures must cover, at a minimum, clear roles and responsibilities, delegation of authority, and processes for managing the scope of work, including changes, maintenance of quality, and schedule and cost control.

#### 7. The Life-Cycle Principle

Plan first, then do.

A successful project management process relies on two activities – planning first, and then doing. These two sequential activities form the basis of every project life-cycle, and can be expanded to suit the control requirements of every type of project in every area of project management application. The project life-cycle, characterized by a series of 'milestones' determines when the project starts, the 'control gates' through which it must pass, and when the project is finished.

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2. Cleland, David, & H. Kerzner, A Project Management Dictionary of Terms, Van Nostrand, New York, 1985, p187.
3. Bing, John, A. Principles of Project Management, PMNetwork, PMI, January 1994, p40