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Towards **QUALITY** projects

Identifying the principles of project success

**By Prof JJP (Basie) Verster*



Quality remains just as crucial to project success at the end of the millennium as it has been throughout the history of the modern age, despite the fact that time as an element in the project mix is becoming more important to clients and developers. The challenge facing the project manager, therefore, is to produce a product on time, within set budgets and cost limits and to the required scope and specification standards. Today's clients want more for less, on time, without problems and to the required standards of quality and specification.

It is argued that this outcome is possible only if the process is well managed by skilled and knowledgeable people utilising sound principles. In the following paragraphs, views presented by various international experts at the Quality in Project Management conference in Iceland are outlined to illustrate how such an outcome can be achieved.

The steps to quality

J Dillard (1997), in her paper *Ensuring Quality in Software Development*, identifies five important steps leading to the achievement of quality projects. These are:

- **Know the customer.** Who are the customers; what are they developing and why are they developing? These factors need to be understood.
- **Know the assignment.** The assignment should be identified clearly; the assignment must also be defined and be measurable.
- **Divide and conquer.** Divide the work and accurately conquer it through success. The work must be divided into smaller units that allow more accurate measurement.
- **Frequent reviews.** Internal and external sessions in respect of processes, goals, inspections, audits, etc.
- **Put the team in control.** The team must make decisions; "successful teams" are willing teams: willing to be assessed and reviewed.

Knowledge areas

The Project Management Institute of the USA identifies nine knowledge areas as fundamental to project management. These are:

- integration;
- time;
- scope;
- quality;
- cost;
- human resources;
- communications;
- risk;
- procurement.

To manage these areas successfully and so ensure quality projects, one must add

planning and control to all areas as an integral part of the whole process. Only when the nine areas are well planned and controlled will quality be the result.

M Welch (1997) sees project quality resulting from effective project management as a function of persons with inherent skills and good judgement and a sense for the management of projects. He also argues that, although one can educate and train project managers, inborn skills are also very important.

Vital conditions for quality

The vital conditions to implement project management successfully and ensure project quality are:

- Profound knowledge of agreements, contracts and procedures.
- Deep understanding of the above.
- The order of importance of agreements, contracts, procedures, etc. These are divided on the basis of the most important to the least important.
- The applications of these principles in a proper manner (A Roermund, 1997).

The implementation of these conditions will be on different levels. These are:

- Policy. Policy is set by adherence to the above-mentioned conditions.
- Management. The process is managed by utilising all the above conditions.
- Administration. A sound monitoring system in respect of the above, is required.
- Executive. The execution of a project must be done by adhering to acceptable standards and conditions (A Roermund, 1997).

The road to total quality can be travelled on successfully only when the following become part of the management process:

- Quality and effective leadership.
- Internal and external reviews and auditing.
- Quality education and training and effective support for team members (A Roermund, 1997).

Other conditions that need to be addressed regarding quality projects, both locally and abroad, are:

- Preparing for different cultures and protocol.
- The government's investment objectives.
- Building facilities fit for a specific client and according to the needs of a specific community.
- Estimating to reflect cultural, technical, legal and climate conditions.
- Equipment available.
- Checking available cost data and adjusting the data for specific projects.
- Taking cognisance of local productivity, weather, religious and construction practices.
- Realisation of additional risks regarding cost and schedules (KK Humphreys, 1997).

Techniques for economy

The utilisation and management of capital allocated to a specific project is essential to achieve success and quality. Sound cost management systems and procedures must be implemented to ensure that the best quality, scope and specifications for a certain project related to a set budget are realised.

The role of the quantity surveyor regarding cost management of a construction project is a vital one. Quantity surveying as a profession is well geared to manage costs and budgets relative to real quality.

The quantity surveyor (cost manager) can use the following techniques to ensure acceptable economy for the client and the project:

- viability studies;
- advise on investment alternatives;
- cost benefit analysis;
- cost planning;
- cost control;
- life cycle costing;
- net present value calculations;
- cash flow predictions;
- valuations;
- cost reporting, etc. (R Nilsson, 1997.)

Managing motivation

Different teams are motivated by different rewards. Some teams can be motivated in a rigid military structure by military-like motivational tools, while other teams thrive within a civil environment.

E Arnalds (1997), in his presentation on "Motivation is a Key to Quality", argues that the difference can be expressed in musical terms. Some teams can be motivated by a strong organisational structure, as is the case with classical music, while other teams tend to be motivated by an improvisational type of structure like jazz.

There is, however, a universal set of rules that can assist teams towards quality and success. These could include the following:

- build teams that can work;
- spread responsibility;
- follow leadership;
- credit the team: praise is oxygen;
- concentrate on goals and a set vision, not on problems.

Arguably, various rules are applicable, but those outlined above nevertheless set a good foundation for team success. In her paper entitled *Beyond Teamwork: Hands-on Project Management Techniques for Creating Quality-driven, Empowered Teams*, Deborah Kezsbom (1997) mentions the following factors that influence the creation of quality driven and empowered teams:

- the client's idea of quality;
- diverse team structures;
- upliftment and corrective action;
- people support their own creations;
- worker and team values (meaningful work, dignity, etc.);
- team members and worker involvement heighten productivity;
- project managers must delegate, for example design, cost management, procurement, etc.;
- common goals and visions.

Motivation is therefore not a product of emotions, but a product of sound planning and management. The project manager can plan motivation by adhering to the rules, principles and factors that motivate people. Motivated teams are goal driven to achieve product success and quality.

Project management towards quality

It can be argued that quality is not a function but a product of sound project management. To ensure a quality outcome, scope, cost and time must be well managed and account for universal principles and factors that govern success. Project management towards quality should adhere to the following major elements:

- the client and his/her visions;
- scope and goals;
- budget, cost and economy;
- the steps to quality;
- knowledge and skills;
- documentation and procurement;
- environment and culture;
- teamwork and motivation;
- time constraints and deadlines.

While the above factors are not the only attributes influencing quality and success, they are extremely important and do play a major role in the success of construction projects in particular.

Teamwork and utilisation of the skills, knowledge and commitment of teams are at the centre of quality and success. Quality does not result from a set of rules; it results from a team's commitment and drive utilising sound principles, factors and rules in obtaining set goals and vision.

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