

TG36 - Quality Assurance

More about the planned TG36 Global Survey on the Implementation of Quality Systems which was featured in the previous issue of [Information](#).

End Product - Synthesis Report

Joint Coordinator Tapio Koivu tells us that the underlying aim is to put together a picture of how the construction industry has implemented quality management philosophies and methodologies in different countries around the world. He recalls that a similar study was conducted by W088 in 1994 by Peter Barrett and Odd Sjøholt.

The data collected by this survey will be used to produce a synthesis report for a Conference on "Implementation of Construction Quality and Related Systems: A Global Update" to be held in Lisbon from 19th to 21st June 2000. (See [here](#).)

The Joint Coordinators, Dr. Gary Smith and Mr. Tapio Koivu are responsible for producing this report based on the answers to this survey. It will not be simply a collection of national state-of-the-art reports or papers by various authors, but a 20 - 30 page report on the main findings highlighting differences, similarities, best practice cases and lessons to be learned. The report is due in Lisbon and for this purpose, it is crucial that the input from the Task Group members is available no later than 31st December 1999. The Conference Proceedings will contribute to the report and vice versa.

The first version of the report will be edited in February - March 2000 by the Coordinators. A working meeting to edit the report will be held in conjunction with the ACSA Conference "Building Together" on 20th - 22nd February 2000 in Orlando, Florida, USA.

How to Answer?

Explains Tapio Koivu to respondents: The questions in this survey form a series of loose guidelines for expressing your views on how you think quality management systems, quality improvement efforts or quality related issues have been evolving in your country and are implemented today. If you need to express something not covered in the questionnaire, please, do not hesitate to add your views. He says that if questions are left unanswered, this should not be a cause for worry. The main consideration is to get the maximum input possible.

His contact data are:

Tapio Koivu

VTT Building Technology

Box 1808, FIN-02044 VTT, Finland

Email: Tapio.Koivu@vtt.fi

Fax: +358.9.456 7040

CIB realises the wide potential benefits that could accrue from this project and encourages participation.

What to Expect in Return?

Tapio continues: For those who have contributed, a copy of the draft report as well a final version will be provided. Depending on the answers, this report together with the Conference Proceedings, will hopefully give an in-depth view on how quality systems are implemented in various countries around the world.

Now to the Questionnaire itself.

This takes the form of a detailed checklist of items phrased as Questions and bracketed under a number of main headings, each corresponding to an important topic in the overall survey. It is reproduced in full below. Readers may find its design of interest in other contexts.

Legislation & Regulation, Accreditation & Certification

This should cover the main approaches in use, such as is legislation and regulation a driving force? Are authorities - if so, which ones, active in moving the industry towards improving the level of quality in buildings? Are authorities setting demands for quality systems or is the approach more based on voluntary drivers?

- What is the status of legislation for quality assurance or related matters? We are interested in determining your experiences with previous legislation for quality and legislation that is 'in-progress.' Be sure to address the impact of the legislation on government building construction as well as private works.
- How are quality systems requirements deployed through building regulations or standard specifications? Is this an effective method of implementation and have any measures been established to determine the effectiveness of such regulations or specifications?
- Does your current or planned legislation efforts address issues of integration with health and safety or environmental management systems? What other systems are addressed for integration efforts?
- Are quality system certifications mandatory for government construction and private construction activities? Who is covered under the certification requirements (owner, architect, engineer, constructor, construction manager etc)? Whose certification is required? If the certification is not an ISO certification, please take the time to fully describe the non-ISO system requirements.
- If your legislation requires some form of license for contractors to conduct business, how does quality affect their ability to obtain a license?

Other Drivers for Quality System Implementation or Quality Improvement Efforts

- Insurance, warranties, how?
- Savings in costs, time, re-work? Are there any results regarding this?
- Personnel? How?
- Pressure to improve the end-product/buildings? Any experiences?
- Do you have different insurance rates for quality certified firms? Is there a pricing advantage to owners who require quality certified companies?
- What are your standard construction product warranties?
- Do contractors with quality assurance processes or ISO certifications provide completed construction that has a longer warranty period than non-certified or non-QA firms.

Management Approach and Methodologies

- How would you classify most of the management styles of design and construction firms as they relate to the quality assurance function?
- Is a third party certification sought for design and construction?
- Do firms create 'clubs' for mutual advantage in problem solving or share information beneficial to the industry?
- What is the status of TQM in the industry? Is it successful, succeeding, a failure or failing? Do you have any evidence of the status (from surveys etc.)?
- Staffing requirements for the quality management process may depend on many factors. Project size and complexity are two approaches that may be used to define or determine the staffing and management plan from a QA perspective.
- Do trade unions or associations participate in solving or addressing quality assurance issues?

Client

Government Clients

- Do they require a QA plan from the contractor prior to starting work on the project?
- Is a third party certification on quality management processes mandatory for government work?
- Do they maintain their own third party certification process?
- Do they perform any form of prequalification based on quality for design or construction?
- Does the sponsoring client have a third party certification? Do they practice TQM or CQI activities?

Any comments on the approach the client has on setting the requirements regarding the end-product?
(Are performance based methods in use?)

Private Clients

- Is partnering a common element among projects with QA requirements?
- Do they require a third party certification?
- Does the private sector perform quality based selection with a formal process of credential review or is it mostly a hearsay process?

Architects and Engineers

- What is the requirement for third party certifications for architects and engineers on government projects? On private projects?
- How is quality review of the design accomplished? Is there a process to make the design as defect free as possible?
- Do architects and engineers employ construction expertise to assist in reviewing the documents for constructability?
- Does the A/E community institutionally practice TQM/CQI?

Contractors

- Are all contractors required to be third party certified?
- Has the demand been increasing or decreasing? Limited demand or total requirement?
- Is the certification viewed as primarily a marketing tool (a credential) or a genuine quality improvement tool?
- Do contractors encourage partnering or constructability review?

Subcontractors/Suppliers

- Is a third party certification mandated by legislation or by upper tier contractors?
- What forms of quality assurance or guarantee are mandatory for subcontractors? Do they have certified products? If so, under what form of certification?

Environmental Issues, Safety and Health

- What activities have been occurring related to integration of the management systems for environmental, quality and health and safety?
- Has legislation been enacted to permit integration of this function?

Technology, Measurements

- Describe new technological developments that are being applied to or developed for supporting quality assurance on projects.

- How have tools, like quality function deployment, been used in the delivery of quality in construction?
- What measurements are conducted to ascertain the quality of a constructed project? Are they conducted by the owner, the contractor or a third party?
- What new forms of measurements are being performed to measure quality performance?
- Does any sector conduct field audits of projects to assure compliance.
- What project sites have achieved ISO certification?

Education and Training

- Where do field personnel obtain their knowledge of quality requirements?
- What formal education or training is provided to designers on quality issues?
- How have contractors approached their educational programmes for quality assurance?
- Are there minimum educational requirements for quality to be employed on a construction site in any capacity?

Current Research Agenda

- Please provide an abstract of current research that you can identify in the area of construction quality assurance.

