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Introduction

Any discussion of “quality” necessarily involves distinguishing between products and services. It could be said that the provision of quality services is synonymous with professionalism. Architects, like most other professionals, provide a “service.”

Product vs. Service

It is important to distinguish between a “product” and a “service”. Although architectural services usually contribute to the construction of a building (a product), the product of an architectural practice is not the building itself, but rather knowledge expressed in the form of drawings, renderings, reports and other “instruments of service”. Unfortunately, clients sometimes do not have a proper understanding of this distinction and consider architectural services to be a commodity or product. When this occurs the potential value of architectural services is diminished.

A service is a set of singular and perishable benefits:

- delivered from the accountable service provider (an architect), mostly in close co-action with his service suppliers (consultants),
- generated by functions of technical systems and/or by distinct activities of individuals, respectively (design and documentation),
- commissioned according to the needs of his service consumers (the building users) by the service customer (the client) from the accountable service provider (the architect),
- rendered individually to an authorized service consumer at his dedicated request (the client’s representative),
- and, finally, consumed and utilized by the requesting service consumer for executing and/or supporting his/her day-to-day business tasks or private activities (for pricing and construction of a building).

- Definition adapted from Wikipedia

In architecture, the service should be delivered in a competent, professional, and timely manner incorporating good skills in communication, planning and organization, and synergistic problem-solving.

What is Quality?

Although no universally accepted, clear or rigorous definition of quality exists, certain elements help to define quality as it relates to architectural services. These elements (adapted from the Standards Council of Canada) include:

- providing value to clients;
- doing the right things — right the first time, on time, all the time and to the client’s satisfaction;
- fitness for purpose (offering solutions that fit the purpose);
- providing service which consistently meets or exceeds performance levels required by the client.

According to the International Organization for Standardization (ISO):

\[ \text{Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.} \]

Long before the service sector of the economy took a strong interest in quality, manufacturing industries recognized the following principles:

- quality is determined to a much greater degree by management than it is by staff or workers;
- quality applies both to the product itself and the process of creating that product (service);
Quality can be achieved only when the services are delivered in a consistent, professional manner. Because of the diversity and complexity of architectural practice, the achievement of quality is an ongoing challenge. This chapter briefly discusses Quality Management within an architectural practice.

Terminology

Over the years, management consultants and standards-writing organizations have developed terms which relate to quality. Understanding this terminology is important.

Quality Management

Quality Management refers to what an architectural practice does to manage its processes and activities (the architectural services it delivers).

Quality Management is a systematic way of achieving quality at every stage of a process to ensure that the client’s requirements are met on time and all the time. A small practice may have no “quality management system” as such, whereas a larger practice may have extensive written procedures, instructions, forms, and records — in other words, a system.

Quality Assurance

Quality Assurance is sometimes used incorrectly, and interchangeably, with “quality control.” It can be defined as: all the planned and systematic activities implemented within the quality management system and demonstrated as needed to provide adequate confidence that an architectural practice will fulfil requirements for quality. For example, an architect’s field review could be considered “quality assurance”; whereas, the builder’s supervision could be considered “quality control.”

Total Quality Management

Total Quality Management (TQM) is a term originally used by the U.S. Navy to describe a Japanese-style of management which is based on the participation of all members of an organization in improving an organization’s processes, products, services, and culture.

Management System Standards

Management System Standards, or “generic” management system standards, are standards which apply to any organization, large or small. They outline a “quality assurance model” to set up and operate a management system.

Management system standards are different from standards developed for physical products and processes, which are very technical and specific. For a description of these “technical” standards, refer to Chapter 1.2.5, Standards Organizations, Certification and Testing Agencies, and Trade Associations.

Quality Management Systems in Architectural Practice

Quality management for architects focuses on a process to ensure that professional services are consistent and continuously improving. This process will vary from practice to practice and from project to project. A good quality management system has the following objectives:

- ensure a common understanding of the service required and expected;
• ensure that the client receives the expected service and always remains satisfied;
• prevent errors in all aspects of architectural practice;
• prevent delivery delays;
• reduce the costs of architectural practice;
• increase productivity;
• continuously improve the reliability of services;
• meet all the quality assurance requirements agreed to by the client and the architect.

Implementing a quality management system requires the architect or managing principals to:

• seek work that falls within the expertise of the practice and its consultants;
• recruit, train, and retain staff who contribute to both their own individual success and the success of the practice;
• realize the potential of every staff member by providing consistent and creative work methods as well as opportunities for greater involvement;
• facilitate the staff’s professional development;
• ensure that all staff participate in, and influence the quality of, service provided to clients;
• ensure that tasks to be performed and objectives to be achieved are understood, including how they affect quality;
• encourage contributions that enhance quality by giving due recognition and reward for achievement;
• assess periodically the factors that motivate personnel to provide quality service;
• use appropriate information technology and management methods;
• provide a work environment that fosters excellence;

The Royal Institute of British Architects (RIBA) recommends a two-tier approach to a quality management system:

• quality management for the practice;
• quality management for the project.

Quality Management Systems for the Practice

No matter how the practice is organized, ensuring the provision of quality architectural services requires that a number of strategic and administrative functions must be in place, including:

• a committed leadership;
• a mission statement and possibly also a “quality” statement;
• a clear organizational structure (refer also to Chapter 2.1.1, Organization of an Architectural Practice);
• a staffing plan and opportunities for professional development and empowerment (refer also to Chapter 2.1.7, Human Resources);
• an office manual on policies and procedures (refer also to Chapter 2.1.5, Office Administration);
• good document and data filing and retrieval systems (refer also to Chapter 2.1.5, Office Administration).

Quality Management Systems for the Project

The quality management system must be used for every project and for every phase of the project. This includes thorough project planning to ensure that services are delivered on time, accurately, and within budget.

Some architects become members of the Project Management Institute or PMI which has developed and perfected the practice of project management by identifying, defining, documenting generally accepted project management practices and a common project management lexicon. These PMI standards may help architects further their project management skills. More information can be found at www.pmi.org

Refer also to Chapter 2.3.1, Management of the Project and Chapter 2.1.9, Risk Management and Professional Liability. Prior to obtaining a commission it is important to have certain quality management procedures in place in order to determine which prospects to pursue, to screen potential clients, and to assist with contract negotiations. After a project is obtained, the following four activities must be considered in planning and implementation.

1. Project Planning, including:
• design and construction schedule;
• construction budget;
• design requirements;
• communications;
• staffing requirements;
• risk management;
• method of construction project delivery;
• project cost control.
2. **Project Definition**  
This is the pre-design or analysis stage of a project, used to determine quality requirements, including implied and stated needs. Ideally, these needs are described in a functional program provided by the client. (Refer also to Chapter 2.3.4, Pre-design.)

3. **Project Design and Documentation**  
The quality management system should be applied to all processes during the following project phases: schematic design, design development, and construction documents. (Refer also to Chapter 2.1.9, Risk Management and Professional Liability, which provides guidelines for checking documentation; Chapter 2.3.6, Design Development; Chapter 2.3.7, Construction Documents — Drawings; and Chapter 2.3.8, Construction Documents — Specifications.)

4. **Project Implementation**  
Quality management systems must also be applied throughout the construction process, including:  
- procurement (refer also to Chapter 2.3.9, Construction Procurement);  
- construction monitoring and control (refer also to Chapter 2.3.10, Contract Administration — Office Functions, and Chapter 2.3.11, Contract Administration — Field Functions);  
- close-out, commissioning, and post-construction services (refer also to Chapter 2.3.12, Take-over Procedures, Commissioning, and Post-occupancy Evaluations).

**Challenges of Quality Management**

Many challenges must be overcome to implement a quality management system in an architectural practice.

**Resistance to Change**

Some claim that the greatest challenge to implementing a quality management system is due to human nature and our resistance to change the unique culture prevalent within any profession. The culture is influenced by the following realities:

- professionals are very diverse and individualistic;  
- professionals require self-actualization and they need to feel in control of their destiny;  
- professionals are creative and require an environment conducive to creativity.

These characteristics may contribute to a reluctance to adopt systematic quality management, because they:  
- fear losing individual control over their work processes;  
- perceive that such a system creates a work environment that stifles creativity;  
- believe that a quality management system controls the design process.

**Size of Architectural Practice**

Because small practices have the advantage of being “tightly knit” firms with few staff to consult and train, one might assume that implementing a quality management system within such a firm would be easy. However, small firms often lack the financial resources and time to develop policies, procedures, and standard documents. In addition, client demands and cash flow may not provide management (often a sole proprietor) with adequate time to develop and implement a quality management system.

Larger architectural practices are usually able to dedicate more time and resources to quality management systems. Because of their size, larger firms may have had to establish certain policies and procedures. The greatest challenge for larger practices in implementing an effective quality management system is winning the acceptance of all staff including principals, who may have strong views on work processes and a strong need to control their careers and destinies.

The length of time required to achieve measurable results with a quality management system may seem excessive. Architectural practices focus on project work, and may find it difficult to get excited about — and make time for — the implementation of a quality management system. A quality management system should be regarded by staff as improving, not hindering, efficiency. Foresight and commitment are needed to realize of the benefits that can be derived from a quality management system.
Quality Management Benefits

Effective quality management systems do pay off in the following ways:

- improved service and client satisfaction;
- improved efficiency and effectiveness and ultimately higher profit margins;
- increased “marketability”;
- greater “peace of mind” for principals dedicated to quality;
- improved processes and procedures which result in successful building projects;
- greater job satisfaction.

The greatest potential benefit of widespread implementation of quality management systems is an improved public perception of the architectural profession. Quality management can help to ensure that the services and the work of architects are respected and successfully transformed into buildings that improve the human condition. Smaller architectural practices may chose to develop a simple quality management system based on using the many Checklists found in this Canadian Handbook of Practice for Architects, whereas larger firms may elect to adopt a more complex quality management system such as ISO 9001 and become ISO certified.

ISO 9001

The International Organization for Standardization (ISO) has developed the 9000 series of standards for quality management. It consists of standards and guidelines relating to quality management systems and related supporting standards. Some of the benefits claimed by the ISO 9000 quality systems are:

- an internationally consistent set of standards;
- a single set of standards applicable to all industries;
- objective, third-party verification of quality assurance;
- opportunity for continuous improvement.

ISO 9001: 2008 provides a set of standardized requirements for a quality management system, regardless of what the organization does, its size, or whether it is in the private, or public sector. It is the only standard in the family against which organizations can be certified – although certification is not a compulsory requirement of the standard.

Once an architectural practice has instituted an ISO 9001 quality system, the practice may become registered by undergoing an audit conducted by a third-party certifier. Upon registration, the architectural practice can “market” itself as being “ISO Certified.”
Definitions

*Evaluation:* Evaluation involves assessing the strengths and weaknesses of programs, policies, personnel, products, and organizations to improve their effectiveness.

*Quality Assurance:* All the planned and systematic activities implemented within the quality system and demonstrated as needed to provide adequate confidence that an architectural practice will fulfil requirements for quality.

*Quality Control:* Operational techniques and activities that are used to fulfil requirements for quality.

*Total Quality Management:* A management approach of an organization centred on quality, based on the participation of all of its members and aiming at long-term success through client satisfaction and benefits to all members of the organization and to society.

*Verification:* Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. [Note: verification typically deals with a “process,” whereas validation is concerned with a “product.”]
References


Royal Architectural Institute of Canada (RAIC). *ISO 9000 and Your Practice*. RAIC Practice Builder. Ottawa, Ont.: RAIC.


