4.2 Mapping your preferred future

You must know where you are if you wish to go somewhere else!

Neville Smith

Where are we, and where do we want to go? Where is our ‘somewhere else’? Regardless of one’s orientation to quality management, it is impossible to structure an effective quality system without answering these fundamental questions – questions that many practitioners ask themselves frequently, but rarely answer.

Norman Kaderlan has researched the reasons why those questions do not get answered, and his findings are interesting. He says “fear of failure” is the most common reason why practitioners don’t plan, “fear of success” is next, and third that they feel that “the planning process is unsuited to their temperament”.

Yet, we encourage our clients to overcome anxiety about new design, believe that our designs will contribute to their success, and sell planning as a service we are better at than anyone else! Indeed, the process of establishing a quality management system often highlights the importance of a business plan, along with an analysis of the practice’s skills base.

In this regard, one of the great benefits of a QM plan can be a systematic focus on the firm’s strong links and weak links (to use the old chain metaphor).

This process identifies the weak links and gives them the highest priority, such that, gradually, all of the things the firm does are as good as what it does best, but in a way which does not unreasonably strain its resources or induce culture shock.

Under an ISO 9001 system, the self-discovery process is called internal auditing, but this refers to the more formal process of assessing how the quality system is working. Auditing is covered in Chapter 4.10. Quality management relies on the establishment of business goals and objectives, which are part of the outcome of the process of business planning.

Without such goals and objectives, the audit function has no benchmark or standard against which operations can be compared.
Detailed guidance of the business planning process is beyond the scope of this book. There are excellent resources available; for example, Frank Stasiowski’s *Staying Small Successfully* has a comprehensive chapter devoted to business planning for small design practices. Stasiowski defines six elements or steps to the development of a business plan:

- Mission and culture statements
- Marketing plan and direction
- Financial plan
- Organizational plan
- Human resources plan
- Leadership transition

Although the business plan itself is not part of a quality management system, there is a close relationship between the business planning process and quality management.

Another excellent source is Norman Kaderlan’s text, noted earlier. Kaderlan devotes the first part of his book to describing the business planning process in detail.

On the specific subject of external forces acting on the practice – opportunities and threats – there is a whole chapter in Robert Gutman’s book.

An outstanding approach to research in business planning is that of The Coxe Group, published as *Success Strategies for Design Professionals*. This text develops a concept the authors call “SuperPositioning”, which is a business/marketing ‘game plan’ based on the idea that all design firms can be organized according to a six-cell matrix, as shown in Figure 4.2.1, and that a successful strategy can be developed if you know where you fit into this matrix.

The Coxe Group’s book describes the characteristics of these six categories, and how firms can best ‘position’ themselves in the marketplace, depending on where they fit in the matrix.

This system is also a method for matching the firm profile to the client profile.
The Coxe Group analysis questions whether or not the same rules that apply to businesses generally are applicable to design firms. Their conclusion is startling:

For a decade, management ‘authorities’ have been writing article after article for both the professional and business press telling design professionals that they need to be more businesslike to survive in today’s economy. Yet when professional service firms that have applied business principles to the fullest are examined, few cases that confirm the conventional premise of what being ‘businesslike’ implies can be found.

In fact, for every engineering or architecture organization that is doing well under full application of business management, there are probably ten times as many firms doing as well or better by operating under a rather different set of rules – or no rules at all.

It was this conclusion that motivated the The Coxe Group to develop its SuperPositioning theory.

It can fairly be said – as far as ISO 9001 QM issues are concerned – that the drive for a more businesslike approach comes from the business community that is involved in the development of QM methods; for example, the automotive industry. This community is, to a greater or lesser degree, your client group.

The fact that design firms can succeed without necessarily working to some recognized form of business planning may have something to do with size: over 80% of all practices are less than ten persons, and nearly 60% are one to four persons in size. At this level, ‘management’ can function as the direct extension of the personality of the leadership of the practice. An organized person will, simply, be an organized practice.

If you accept the import of The Coxe Group’s conclusion – and certainly many design professionals would agree – it follows that development of QM procedures directly relevant to the design disciplines is the best strategy to achieve both effective quality and business management. That is the position this book takes.
4.3 Diagnostic audits

How will you contrive to make your subjective my objective? How will you shape up something tangible for me? How will I get a footing in this fog?

Louis Sullivan

The diagnostic audit is a term I use to describe an initial assessment of a company’s readiness for quality system implementation. It is not in any of the quality standards.

There are some important differences between this concept of a diagnostic audit and quality audits, which are defined and discussed in Chapters 4.10 and 5.7. All quality audits are formal affairs, and must be conducted with objectivity and impartiality.

There are three tests in the definition of a quality audit for ‘quality activities and related results’: (a) compliance with planned arrangements, (b) implemented effectively, and (c) suitable to achieve objectives.

Prior to adoption of a quality management system, ‘planned arrangements’ and ‘objectives’ are not likely to be formalized, so it is not appropriate to use these measures as yard-sticks in a diagnostic audit.

By contrast, a diagnostic audit can be more informal and relaxed. The main purpose is not to test the practice in any way, but to help it to evaluate itself as a first step in embracing the introduction of new systems.

A secondary purpose is to inform the assessing consultant about the practice if that consultant is going to go on to help the practice develop its quality system.

A key observation from my work with professional design firms is that, because almost all firms value excellence, they focus attention on any perceived problem and fix it as soon as they can.

While the focus of a quality audit tends to be reactive and sometimes results in overlapping systems, these problem-fixing efforts are often successful, and, in many practices, serve to improve the firm’s operations in terms of efficiency, reduction of risk and increased reputation.

This approach does not usually find the firm’s ‘weak links’, however. Determining where the weak links are is an important purpose of the diagnostic audit.
Doing this permits priorities to be established which result in the most dramatic improvement at the least cost and tends to build overall staff confidence in the implementation of quality management.

An outsider will ask the awkward and dumb questions that might not occur to the people within the practice. Thus the objectivity of the external auditor can be an important factor in discovering the firm’s ‘weak links’.

We can see from this discussion that key objectives of the diagnostic audit are to identify the firm’s strengths and weaknesses, and thereby identify those areas that, if improved, will most benefit the firm. This simple ‘cost-benefit analysis’ has several goals:

- Identify and schedule for improvement those areas most likely to cause a firm to fail a formal system audit.
- Protect the firm from exposure to risk.
- Increase the firm’s efficiency.
- Help to shape the firm’s quality objectives.
- Help to create a framework for writing of quality procedures.

To complete a diagnostic audit for a typical small to medium-sized practice, I find I need to spend two, or sometimes three, half-days in the firm, interviewing many of the employees and collecting information on the firm’s systems. This is followed by a half-day to a full day of evaluation and preparation of reports.

The kinds of things we look at in the firm are related to the informal quality management systems the firm has evolved in order to survive in business, such as:

- filing systems; file naming of correspondence and other documents
- general office organizational systems
- standard forms and how they are used
- organization of design briefs and client instructions
- design reviews
- staff role descriptions
- staffing assignments
- task scheduling
- specification data bases and updating
- checklist use
- standards and codes
- checking of contract documents
- tendering and contract administration procedures
- post-occupancy evaluation (POE)
From this assessment, we normally produce two reports:

- One for general distribution to all members of the practice that highlights the positive results of the diagnostic and that responds to questions raised by those interviewed.

  This report has several purposes, but the most important is to assist management in selling the benefits of quality systems to a still-wary staff; in terms that are very practice-specific and that expose, in a non-threatening way, a few of the things everybody would like to see fixed anyway.

- A confidential report to senior management that is completely candid about specific problems as well as strengths. This report focuses on finding the best and most efficient way forward and includes specific recommendations for system design and implementation.
4.4 Building your quality system

Where do you want to go today?

Microsoft Corporation

The structuring decision is the most important one that you will make in the entire design of a QMS, so make it carefully, after considering all the viable options and discussing them with your partners and staff. You really must get this ‘right first time’. Don’t, and you’ll do it all again. Your whole practice should be solidly behind this decision, insofar as possible, which means it may take some time. Time well spent.

Before outlining your options, I’d like you to think about where your firm is now in relation to the discussion in Chapter 4.2. ‘Where you are’ is an important consideration in deciding where you want to go, and how you are going to get there.

Below are four options, all valid solutions (DMS = design management system):

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Option 1: Checklist-based</th>
<th>Option 2: Design mgt. system-based</th>
<th>Option 3: Create incrementally</th>
<th>Option 4: Create from scratch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique to firm</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Time to implement</td>
<td>Fast</td>
<td>Medium</td>
<td>Gradual/slow</td>
<td>Slow</td>
</tr>
<tr>
<td>Cost to implement</td>
<td>Very low</td>
<td>Low</td>
<td>Medium/high</td>
<td>Medium/high</td>
</tr>
<tr>
<td>Retains bad habits</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Staff resistance</td>
<td>They have to be convinced</td>
<td>They have to be convinced</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Ease of use</td>
<td>Easy</td>
<td>Easy if DMS is well designed</td>
<td>Depends on skill of team</td>
<td>Depends on skill of team</td>
</tr>
<tr>
<td>ISO 9001 certifiable</td>
<td>Easy if checklist system is set up for compliance</td>
<td>Easy if DMS is set up for compliance</td>
<td>Probably needs expert help</td>
<td>Almost certainly needs expert help</td>
</tr>
<tr>
<td>Available tools</td>
<td>See CHECKITx™ option below</td>
<td>iProjects™ – see buildingtech.com</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Options 1 and 2 do most of the hard work for you, but embracing either of them means accepting that your practice is not all that unique, and the quality issues you face are not all that different from the quality issues your competitors face.

Options 1 and 2 can be assessed quickly and at very low cost. It’s a good idea to try that first. If, after doing so, you want to develop a unique quality approach, then most of this Part – the rest of this chapter plus Chapters 4.5 through 4.9 – will be your road map.
**Option 1: CHECKITx™ checklist system**

CHECKITx™ is a highly flexible, structured ‘universal’ checklist-based QMS that satisfies all the requirements for a typical design firm. You’ll find it on buildingtech.com. You can download it and set it up for free, including templates for a Practice Quality Manual and Project Quality Plans. Otherwise, it includes no forms, logs or templates – you’ll need to build them (although the ones you’ve already got may be all you need).

The free trial contains samples of the checklists, not all of them. They are enough to evaluate the concept. You’ll need to buy the tool in order to access all checklists. This free trial gives you ten days to think about whether this simple solution is right for your firm. If you decide it is, you’ll have to buy the tool to keep on using it.

The CHECKITx™ approach splits the quality system documentation into two parts: A Practice Quality Manual (four pages) and a Project Quality Plan (three pages). My goal in creating these tools was to take everything I’d learned in three decades of quality consulting, and build an ISO 9001-compliant QMS that was as lean as possible.

What you see is the result. But to achieve this, and for you to use the same idea, there is one very important point to remember: **The “procedures” are actually in the checklists.**

This means that the procedures are applied at the “coalface” rather than existing in a separate document. Although this is not the traditional way to do it, there is nothing in ISO 9001:2015 to prevent it. This approach offers significant advantages besides cutting down on paperwork:

- Establishing critical procedures the firm wants to implement across all projects is simple and easy.
- Establishing which procedures (e.g., checklists) are required for different project types or design disciplines is simple and easy.
- Allowing team leaders to modify procedures to suit the unique needs of different projects is also simple and easy.

There are two more things a user needs to know in order to use this approach (and perhaps to convince an external auditor):

- Unlike the world of manufacturing that spawned quality systems, every design project is unique. Although there will be many facets to projects that will be the same as any other project (e.g., listening to clients), there will also be factors that make every project special – and the project manager/team leader is best positioned to make the call on adjusting quality system details accordingly.
As ‘procedures in disguise’, checklists have to be used, or they will be useless, and will destroy the efficacy of the QMS and the value of the system they support.

When you read the rest of this Part 4, especially Chapter 4.9, you are going to think that Option 1 contradicts that advice – especially with regard to how much this implementation will cost you. Not true: There is no ‘free lunch’. The checklists in CHECKITX™ incorporate most of the concepts contained in this Part 4, although the checklist format makes them look a lot less formidable.

---

### Option 2: iProjects design management system (DMS)

**iProjects™** is a comprehensive suite of design management tools (including the CHECKIT system) that runs under FileMaker Pro™. For more information on iProjects, go to buildingtech.com. iProjects contains all the forms and templates a practice needs to manage the design and project management processes, including quality management.

The checklist system built into iProjects is similar in structure to that in CHECKITx, but offers additional features that automate adapting the system to suit different design disciplines, different project types and different disciplines. The iProjects DMS includes a contacts system, a communications system, and a broad array of design management tools.

As noted above, the rest of this chapter is about creating a QMS that is as original as your practice.

### Option 3: Create your own QMS

Whether you choose Option 3 or 4, there are five steps to creating your own design practice quality system, as outlined below:

- Establish your quality goals and objectives, then give them a 'reality check'.
- Select an appropriate structural approach.
- Find a 'champion'.
- Determine which processes should be documented.
- Create process statements (called 'procedures') to describe your quality system.

### Step 1: Establishing quality goals and objectives

Many people, when starting out on this process, get confused about the difference between goals and objectives. Your goals are elements of your preferred future (See Chapter 4.1, third step under Gap analysis). Your objectives are the means to the end, the methods for realizing your goals.
Goals

Perhaps you think that your goals are self-evident. If they are to you, you are a rare design professional. If you didn’t do the gap analysis process, and think they are, try writing them down. If that works, put them aside for a few days, then see if you have changed your mind. If you haven’t changed your mind by the end of a week, try them on your practice partners, your personal partner, your staff. Do they agree?

There is a lot of help available if you are still chewing your pencil instead of writing your goal statement. A list of good resources is included at the end of Part 4.

Objectives

Objectives are the ‘enablers’ of goals. There is general agreement in the quality industry about what makes a good objective; perhaps best summed up by Roy Fox: “It is most important that objectives be definitive, quantifiable and measurable.”

If you write objectives that do not meet that simple test, they will be of negligible benefit to your quality system. It is the function of being able to measure change against your objectives that tells you whether or not your system is working. Some sample goals and corresponding objectives are shown in the table below.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Corresponding objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce rework to a minimum</td>
<td>Establish a process for recording and classifying rework, including timesheet tracking</td>
</tr>
<tr>
<td></td>
<td>Hold office meetings semi-annually to encourage staff to accurately report rework and to understand that they won’t be penalized for doing so</td>
</tr>
<tr>
<td></td>
<td>Monitor rework, determine causes, and develop strategies to reduce rework</td>
</tr>
<tr>
<td>Reduce drawing and coordination errors to a minimum</td>
<td>Ensure that pre-bid drawing checking has a time allowance on every project schedule</td>
</tr>
<tr>
<td></td>
<td>Record number of errors found in pre-bid checks and analyze quarterly</td>
</tr>
<tr>
<td></td>
<td>Record RFIs on each project and compare them to pre-bid error history</td>
</tr>
<tr>
<td></td>
<td>Establish an in-house training program for improved drawing checking and coordination checking</td>
</tr>
</tbody>
</table>

Is ISO 9001 certification a goal?

It doesn’t have to be, but some practices set this as a goal because their clients expect it, and some set it because they believe it will add a dimension of discipline and rigor to their quality planning. If certification is a goal, you will need to relate your structure to it. If not, you can do whatever you want to improve your quality systems, and ignore the ISO 9001 structure.