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Handbook for the Architectural Manager

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Preface

This is a book for architects. Our aim is to provide a useable framework to stimulate and guide improvements in every aspect of architectural practice. The handbook is designed to sit alongside and complement *Design Management for Architects* (Emmitt, 2014) and *Architectural Management: international research and practice* (Emmitt *et al*., 2009). Therefore, the arguments for why architects need to improve their managerial competences and why we need more research into the field are not repeated. Instead we have provided an accessible and simple-to-use guide to help practitioners in their daily pursuit of excellence.

The work has evolved out of a long-standing working partnership, in which we challenge one another to develop the theoretical and practical aspects of architectural management. Although the primary content of this book is grounded in applied research, we have deliberately played this down and emphasised the practical aspects of architectural management. Additional reading and sources are provided for those interested in further exploring the field.

The underlying driver behind our work is a shared passion for improving the managerial aspects of the architectural profession. It is through better management, not more management, that we are better able to realise design value. We are driven to help practitioners to deliver better architecture through better management of precious resources. Our intention is that this handbook goes some way in helping architects to apply architectural management and improve the performance of every aspect of their businesses.

Stephen Emmitt and Mohammed Alharbi

1

Introduction

Architectural practices are constantly juggling resources to balance many complementary, yet competing, demands. These include the demands of stakeholders and individual projects, the need to continually learn and apply knowledge, and the fundamental requirement to run a profitable business. The business provides the opportunity to create and deliver great architecture. Architectural practices that are able to manage the demands placed on them will make a profit and stay in business. Those that fail to effectively manage all of these aspects will struggle and are likely to fail. In this chapter we introduce the background to the book and set out the rationale for the chapters that follow. Our argument, supported by research, is that architectural practices require a guiding management framework in order to stay in business and return a profit on the resources invested.

1.1 An Argument for a Management Framework

Why do we need a (management) framework in which to practise architecture? Surely architecture is a highly creative, intuitive and often spontaneous response to a particular site and client; something that flourishes outside the world of management? It may be an image promulgated in the rarefied world of architectural education, but as practising architects would readily attest, the effective engagement with others in the co-creation of architecture requires protocols to guide the design team to a successful solution. But somewhat contrary to this, we also know that restrictive managerial tools and onerous management procedures are not conducive to supporting our creative endeavours. Architects and fellow designers require an appropriate framework in which to pursue creative solutions to complex challenges; management that supports rather than hinders the creative process. We need simple, straightforward and pragmatic guidance to help us deliver wonderful buildings and return a profit for our efforts. What we need is *better* management, not *more* management.

These are not new concerns. In the 1960s, the Royal Institute of British Architects (RIBA) published *The Architect and his Office* (RIBA, 1962). The report criticised architects for the way in which they managed their business affairs and in doing so formed the stimulus for early work on architectural management. The first book to use the term 'architectural management' was written by three architects in direct response to the RIBA report (Brunton *et al.*, 1964). In addition to defining architectural management as

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the interrelationship between the management of projects and the architectural business (see Chapter 3) they also claimed that we knew enough about the management of individual projects, and therefore concentrated on the management of the office. Since this time there has been an explosion in the literature relating to the management of construction projects (project management, construction management and more recently design management), somewhat contradicting Brunton *et al.*'s claim that we knew how to do it. In contrast to the project management literature, there is still a comparatively small body of literature on the management of the architect's office. This is known as practice (or office) management and tends to be concerned with the effective administration of the business, which one could argue is not really about 'managing' the business. In many respects, Brunton *et al.*'s call for better management of the architect's business has largely gone unheeded in the literature. Although both streams offer a valuable knowledge source, by concentrating on only one aspect (project or office) we fail to acknowledge the inter-relationship between the two; and hence fail to address the unique environment in which architects work (see Figure 1.1). It is the dynamic interaction between the creative office and the temporal, creative and pragmatic projects that makes the creation and realisation of architecture so exciting.

Early interest in management by architects tended to wane with the dawn of the 1970s, and it was not until the 1990s that interest once more turned to the need for better management by architects, an idea once again promoted by the RIBA. By this time Brunton *et al.*'s (1964) work on architectural management was largely forgotten. Their work was, however, rediscovered and further developed by Emmitt, some 35 years after the publication of their book. Building directly on the seminal work of Brunton *et al.*, Emmitt's (1999a) work was instrumental in expanding and further developing our understanding of architectural management as the inter-relationship between business management and project management. Underlying Emmitt's work is the argument that significant value can be derived from the strategic management of the office *and* the project portfolio (see Emmitt 1999a,b, 2014, 2017).

These two fundamental components of architectural management (management of office and projects) remained unchallenged until relatively recently. Extensive research by Alharbi (2013) resulted in the extension and development of the 'basic' understanding of architectural management. This included a new definition of architectural management and publication of a new architectural management framework (Alharbi 2013; Alharbi *et al.* 2015a,b) on which this book is based. Alharbi's definition is more inclusive than the original, and better reflects the need to deliver value to all

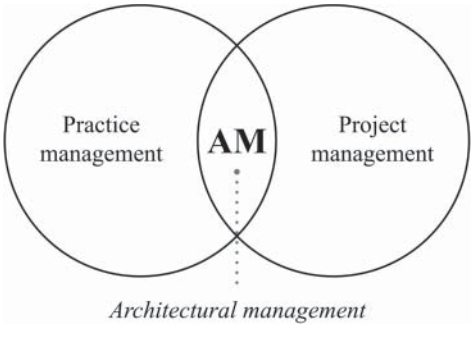

Figure 1.1 The components of architectural management. Adapted from Brunton *et al.* (1964) and Emmitt (1999a).

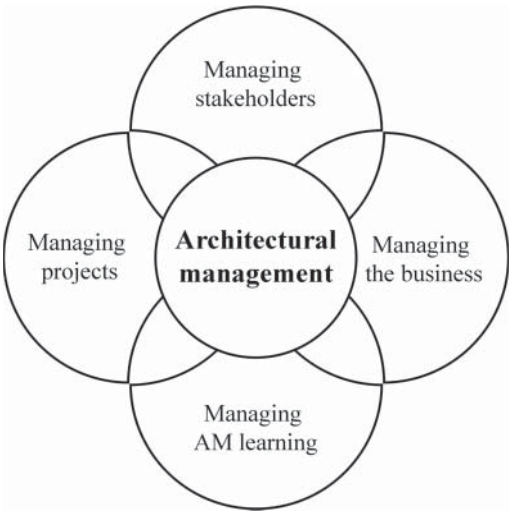

Figure 1.2 Components of architectural management (*source*: Alharbi 2013).

stakeholders. This is particularly pertinent to a collaborative and integrated approach to the delivery of projects within a highly competitive marketplace for services. The definition is (Alharbi, 2013):

> Architectural management (AM) is the strategic management of the architectural firm that assures the effective integration between managing the business aspects of the office with its individual projects in order to design and deliver the best value to all stakeholders.

Alharbi's architectural management framework introduced two new, additional components: 'managing stakeholders' and 'managing learning' (see Figure 1.2). Although one could argue that the management of stakeholders and the management of learning are implicit in the earlier work, this has now become explicit. And in making the management of stakeholders and the management of learning explicit, it has further emphasised the value of people. Managing stakeholders reflects the collaborative and co-dependent nature of design in the digital age. It also reflects the need for architects to satisfy the needs of many stakeholders, ranging from, for example, the client and investors, through the design and delivery teams to the building users and building managers, through to society in general. To manage these complex and constantly evolving relationships requires an understanding and application of stakeholder management (see Chapter 7). Managing learning relates to the need for professionals such as architects to continually update their knowledge and skills, which can be challenging when dealing with a diverse project portfolio and constantly changing technologies. It includes the development and application of knowledge to office and projects, as well as the need to better 'educate' clients and stakeholders of the value of good design (see Chapter 8). Neither of these additional components had been addressed in an integrated manner in previous work on architectural management.

The four components of the architectural management framework are explained further in this book, providing a comprehensive and unique framework that supports architects in our daily pursuit of excellence.

The need for a guiding framework is also evidenced in typical job descriptions, where the architectural manager's role includes the management and supervision of the office staff (for example architects, architectural engineers and technologists, and BIM technicians), overseeing the entire project portfolio and interfacing with clients to attract and retain business. The role also includes responsibility for staff development and learning, recruitment and retention. The role of the architectural manager is explained more fully in Chapter 3.

1.2 Agenda

The aim of the book is to help readers to better manage their architectural businesses, and hence be better positioned to influence the quality of the built environment. The book is grounded in research in which, for the first time, the components of architectural management have been analysed systematically, tested, and developed into a framework for practical application. The result is the first publication to offer a comprehensive evidence-based framework for architectural practice. By following a number of simple steps, it is possible to evaluate the current status of one's practice and take measures to improve specific areas to suit one's own context. Our main objectives in writing the book are to:

1) Provide the tools to help enhance performance and thus enable architectural practices to be more competitive in a challenging marketplace for services.
2) Encourage evidence-based practice. The practical, simple-to-follow framework can be applied to practitioners' own context (regardless of physical location, office size and extent of managerial knowledge).

It is not necessary for every member of the architectural office to be passionate about management, but it is crucial to the smooth running of the business that every member of the office appreciates the commercial factors underpinning the majority of decisions made in a business and project environment. This includes an understanding of how people best work together and the ability to value and embrace a diverse workforce.

1.3 Structure

The book is designed to have a simple and easy to navigate structure (see Figure 1.3). In Chapters 2 and 3 we briefly introduce the underlying theoretical aspects in order to set the context for the framework. We appreciate that this may interest some readers more than others, but it is important to understand that the work is grounded in research and to provide the context for the framework. We explain what architectural management is and how this knowledge can help architects in our daily pursuit of great architecture. Emphasis turns to the practical and strategic issues in Chapter 4, where the framework for practice is introduced as a basis for the chapters that follow. Chapters 5–8 explore each of the four components of architectural management: managing the business, projects, stakeholders and learning. The intention is that readers use these four chapters as a source of inspiration, and also as a means of challenging what we are currently doing. These chapters also include some description of common tools. In Chapter 9 we

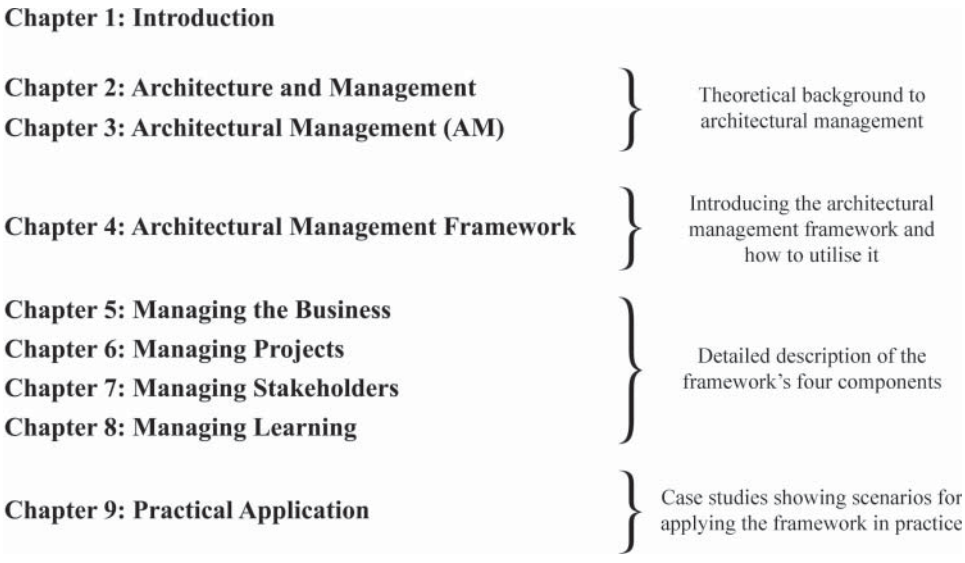

Figure 1.3 The structure of the book contents.

provide examples of practical application of the framework via a number of scenarios that relate to office size. Examples are worked through based on 'case studies' to help illustrate what needs to be done, when and by whom. Combined, the chapters provide a valuable handbook that can be dipped into as the need arises. The ultimate aim is to continually improve performance, reduce risk and realise better value.

1.4 Value

Many of the complaints about projects, such as poor cost, time and quality control can be traced back to ineffective management. Similarly, many design and realisation problems can be traced back to poor team assembly, poor communication and poor leadership; again, a case of ineffective management. Despite considerable advances in digital technologies, many problems still beset construction and many professional service companies continue to find it challenging to make a profit. Although the application of architectural management will not necessarily solve all of one's problems, it will help to identify the root cause of such failings and hence practitioners will then be in a better position to address the challenges.

Architectural management will provide considerable value to both the owners of architectural businesses and those engaged with the business. The concepts and ideas presented in this book are designed to guide novice and more experienced architectural managers. When applied to one's specific context this will help to bring about more effective and efficient processes, which in turn will impact positively on the profitability of the business, the wellbeing of the staff and ultimately improve the quality of the service delivered to clients. These essential elements will help us to deliver great architecture.

2

Architecture and Management

2.1 Setting the Scene

The focus of this book is on the application of management to all aspects of architectural practice. In this chapter we make the link between the worlds of design and management from an architect's perspective, thus providing important context for the chapters that follow. We start by explaining the similarities between architecture and management, before turning to design and the need to manage it. This is followed by an overview of how design is managed by constructors and architectural offices. The chapter concludes by exploring the business of architecture.

2.2 Architecture and Management

The unique value architects add to society is grounded in our ability to deliver something that our competitors cannot: design vision. Design expertise is not, unfortunately, the only differentiating factor, and on its own design expertise is not enough to survive and prosper in a highly competitive and crowded market. Clients seek suppliers who can provide a professionally managed service, effectively, and to agreed levels of performance. Design is one of several important considerations, alongside an ability to deliver value within set parameters. This means that we need to manage the creation and delivery of design services in harmony with the management of the business in which architecture is practised. This implies that we need to have the ability to manage the business of design and the skills to design the business. We need knowledge of the commercial, economic and social drivers underlying the creation, delivery, use and eventual reshaping of our built environment.

For many architects and fellow designers this requires us to venture into the (unfamiliar) world of management and commerce. This is not something many architecture or engineering programmes prepare their graduates for, but nevertheless the skills involved are highly valued in the construction sector, a point long understood by those studying construction management. The reluctance to integrate management into the curriculum means that we need to develop managerial skills 'on the job', supported by continual professional development activities. While this may not be ideal, it is not as daunting as some may envisage. The act of design, the bringing together of many individual parts to make a whole, is not that different to the act of managing. Whereas designers are largely concerned with ideas and technologies, managers are concerned

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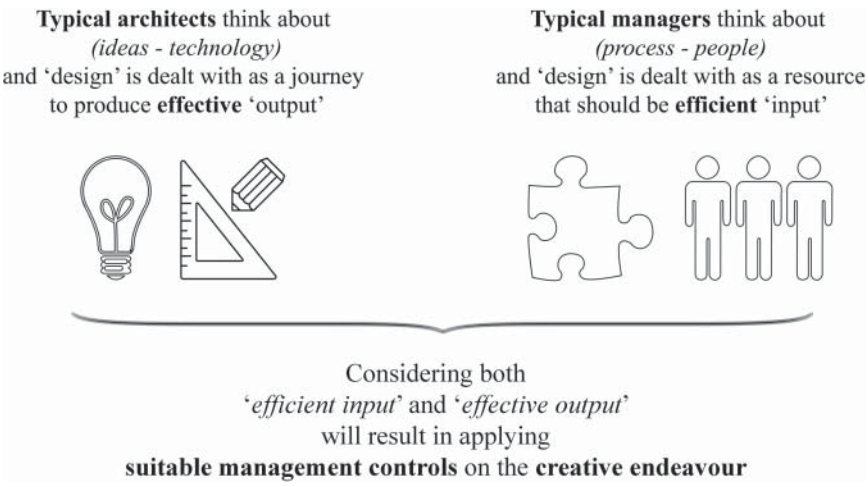

Figure 2.1 The thinking paradigms of architects and managers – typical and ideal scenarios.

with people and processes (see Figure 2.1). The skills honed in architectural education are also fundamental to the art of management. The challenge for many designers is to make the connection between the two, and some of us are better at making the connection than others. This needs to be acknowledged in architectural practice because some of us will excel at design, some at technology, and others will be more suited to management. The challenge is to assemble a business with complementary skills among the staff and to allocate work accordingly. This means recruiting and retaining, and sometimes retraining staff to ensure the office has the best balance of skills to deliver services into the chosen market segment(s).

2.2.1 Architectural Practice

Architectural practice is a creative interaction; a conversation with projects and society. It is a process of testing, developing, applying and reflecting on design and construction knowledge, the effectiveness of delivering projects and the performance of the finished building in use. We learn from projects and from the work of others by developing ideas, propositions and ways of working to suit the culture of our office(s) and the needs of our clients and project stakeholders. We develop a way of working, a type of (architectural) language, which becomes ever richer with each and every interaction and the passing of time. This informs the practice of architecture, which flexes and adapts to each new project. Our collective way of working also informs the business of architecture, a parallel (commercial) language that underpins and nourishes the language of architectural practice. Architectural practices need to constantly monitor the business environment in which they operate and continually improve the way in which they approach the commercial and managerial aspects of design. Failure to do this will impact on the profitability of the business and the ability to deliver an effective and professional service to clients. Management of design and designers plays a crucial role in this regard, helping professional design offices to deliver a consistent level of service, which in turn helps the business to secure a continual flow of finance, return a profit on its projects and provide

a platform for creating great architecture. It is the symbiotic relationship between design and management that makes for a successful architectural business. Management must be one of the core values of a successful architectural practice: the controlling mechanisms that allow the chaotic creative process to be transformed into fee-generating activities.

Some important questions to ask are:

- Why should a client use an architectural practice when the marketplace is full of other 'designers' and 'constructors', all offering what appear to be similar services to architects?
- Why should clients use architectural practices when our competitors are claiming to offer a better-managed service?
- What is it that really adds value to the client, the building users and society at large?

The answers to these questions lie in the ability to demonstrate the value of architecture (good design) to clients and the ability to provide a consistent, reliable and commercially aware level of service to clients. This is achieved by managing designers and the business of design as effectively and efficiently as possible.

2.3 Design

Understanding the value of design is fundamental to a successful business. It follows that understanding the inter-relationship between design and management is crucial for the effective creation of architecture. Although the word 'design' will be familiar to readers of this book, it is necessary to look at design from different perspectives before we are in a position to consider managing it and the environment in which architecture is created (see Figure 2.2). The main themes are explored below.

2.3.1 Design as an Activity (Process)

The verb 'design' is concerned with doing a wide range of activities and the process we call designing. Design activities, by their very nature, are concerned with identifying problems, problem framing, proposing a variety of solutions and making choices

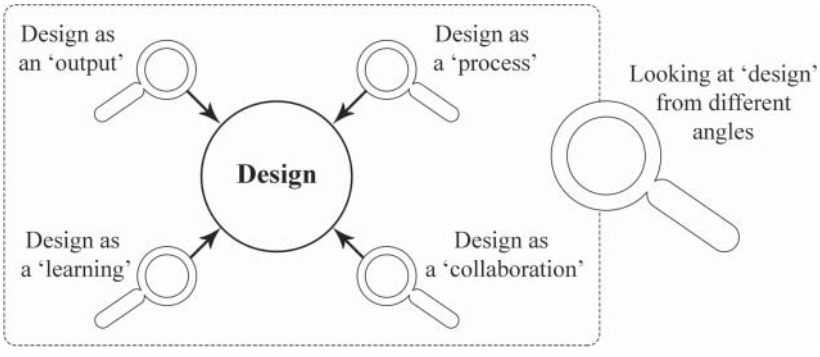

Figure 2.2 Different angles from which to thinking critically and comprehensively of 'design'.

within agreed parameters. One could argue that management is concerned with the same challenges. According to Schön (1983) there are two schools of thought when it comes to design: it is either a rational problem-solving activity or an interactive inquiry. Again, this idea could also be extended to management:

- *A rational activity:* The work on design methods was grounded in the view that design could be approached as a rational, systematic, problem-solving activity (and in some cases an information-processing activity). This school of thought is simplistic and does not reflect the reality of how designers behave in the workplace. The literal reading of process plans is that the design process follows relatively simple steps and can be approved and signed off at given stages. This is misleading because there are many iterations taking place that are difficult to represent in models and hence are challenging to manage effectively. We also know that people do not always behave in a rational and predictable manner, a point worth remembering when managing.
- *An interactive inquiry:* The belief is that design is a creative, artistic and interactive inquiry, strongly grounded in social, cultural and psychological thinking. The design process may appear to be rather chaotic and difficult to comprehend, especially as a great deal of the activity is taking place in the minds of the designers, only to be revealed later in drawings and associated artefacts. Thus, to the uninitiated the management of the design process (and designers) would be a rather daunting prospect. This is why it is important that design managers and architectural managers are experienced designers and architects, at ease with the pressures and idiosyncrasies of designing.

Whatever our view or nature of the design challenge, it is essential that the process is managed to ensure the effective use of resources.

2.3.2 Design as Collaboration (Co-design)

Few designers work in isolation, and other than simple domestic projects it is essential that we work with others in order to realise design value. When designing, we are using cognitive and social skills, thinking, interacting, communicating and making decisions to resolve uncertainty and coordinate interdependent activities to maximise design value. This activity takes place in conjunction with a number of other design disciplines. It is the interdependency of design work that leads to interdisciplinary and collaborative work. This is sometimes referred to as 'co-design' and, needless to say, it is crucial that the disciplines are managed to ensure maximum value can be derived from their interactions.

2.3.3 Design as Learning

It may be a bit of a cliché to state that design is a learning process, but that is exactly what it is. We start out with a poor understanding of the problem before us and start to learn about the client, the site and the context in which we are designing as time progresses. We start in a familiar place and end up somewhere new, picking up new experiences and knowledge along the way. The challenge is not to 're-invent the wheel' every time we design, but to reapply ideas and solutions we know to work to new situations. The challenge for organisations is to capture knowledge and embed it for future use,

encoded in office standards and procedures. This is achieved through the organisation's commitment to continual learning, combined with learning from the collective experience of each and every project, and the sharing of the knowledge within the business.

2.3.4 Design as an Output (Product)

The noun 'design' describes the output or result of doing the design. The design will be represented by artefacts such as design information represented in a virtual model and a physical product such as a building. The act of designing will result in a product (say, a building) or a process (say, a new process plan) that did not previously exist. The output of the design process (information, specifications, schedules and models) is easier to manage than the act of designing because managers are dealing with artefacts rather than people. Here the design manager's attention should be focused on the quality of the information provided by the designers, with particular attention paid to accuracy and the coordination of design information, largely assisted by software and nD computer models.

2.3.5 Types of Design and Management Challenges

It is important to understand the types of challenge facing designers in order to implement the most appropriate management. Rowe (1987) makes a useful distinction between the different types of design problems that may confront a designer. These may also be extended to managing projects and the architectural business:

- *Well-defined problems:* Where the goals are clearly prescribed, an example could be a repeat building type, such as a drive-through fast-food unit, where the building design is already known. The unknowns may relate to site ground conditions and the uncertainties of the town planning process. The design management processes are relatively straightforward and simple process plans can be applied to help the design team realise their goals.
- *Ill-defined problems:* These are common in most architectural projects, where the means and the goals are not clear at the time of appointment. The designer's role is to establish the nature of the problem (problem definition and subsequent redefinition) and clarify the goals of the client and building users. This is usually done through the briefing process and sometimes by starting to design to explore possibilities and preferences, and hence reduce uncertainties. For example, a client may have a specific problem, but is unsure as to whether or not a new building is required. This is where the skill of the designer comes into play in helping to tease out what the client really wants and then deliver value through a creative and functional design solution. Design management processes need to be clearly defined and understood by the design team.
- *Wicked problems:* Wicked problems defy easy formulation and definition, requiring constant inquiry, reformulation and redefinition. Designers will test conceptual designs as a means of trying to tease out the problem. This process is a challenge to manage because there are no clear goals at the outset and there is no definitive stopping point (solution). Designs may have to be continually reworked, and it is not always obvious if solutions are appropriate or not. Some form of constraint relating to time or cost is usually applied to help concentrate minds on finding a solution.

Management frameworks need to be flexible and responsive to allow designers maximum freedom to explore the boundaries.

2.4 The Management of Design

The management of design is not unique to architectural practice. Other consultants, such as structural and mechanical engineers, also need to manage and coordinate their design work. This is also true of constructors, and it is the main contractors who have embraced design management with a passion since the turn of the century. The various approaches to the management of design have resulted in a variety of terms being used in the literature and in industry. In this section we explore the differences from the perspectives of constructors, where the role is both established and evolving, and architects, where the role is not so well developed.

2.4.1 In Construction

Initially, the construction design management role was concerned with checking and coordinating design information provided to the constructor by the architect or design team leader. Construction design managers were based on the construction site for the majority of the working week, interacting with the construction project manager(s) and the contractor's contract managers. In the early years, design managers often referred to themselves as a 'post box', where all design information was sent to be sorted, checked and coordinated, prior to being issued to the workers on the construction site (see Figure 2.3). Since these pioneering days, many countries have witnessed a significant increase in the number of design managers employed by contracting organisations. As experience of design management grew, the constructors started to realise that many of the issues being dealt with by their construction design managers should have been addressed much earlier in the process by the design team. Their response has been to move the design manager role upstream, into the pre-construction stage, thus helping to further improve efficiency during design and construction. This has resulted in two job roles: the pre-construction (or pre-contract) design manager and the construction design manager. There is considerable overlap between the roles of the pre-construction design manager and the design manager/architectural manager in the architectural practices. The focus of each is, however, different depending on the values of their employers.

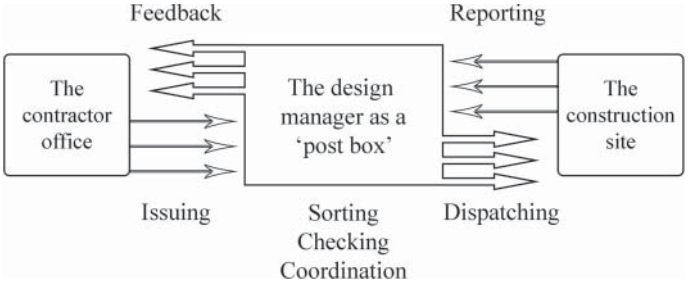

Figure 2.3 Constructors' perspective of the role of 'design managers'.

It is now generally accepted that the design management role should be approximately 75% pre-construction and 25% construction. If working entirely with off-site fabrication, the function would be nearer 95% pre-assembly and 5% at the site assembly stage. This implies the need for greater interaction between the constructors and the architects. It also helps to further reinforce the importance of managing design during the early stages of projects.

2.4.2 In Architecture

It is still relatively unusual for architectural practices to use the terms 'design manager' and 'architectural manager'. The reason for this can be traced back to the early development of the profession and the associated literature. The terms used in architecture relate to the 'running' of projects by 'job' architects. These terms tend to imply the need to administer projects rather than proactively manage projects; in some ways the terms, although long established, appear to be a little out of touch with modern practice.

2.4.3 Comparing Roles

The majority of organisations have a career structure for design managers, which helps to differentiate different functions, tasks and responsibilities. This usually takes the form of a hierarchy, and progression from the bottom to the top will depend as much on experiential learning, desire and ability as it will on qualifications. Typical job titles in construction start at document controller and progress to design coordinator, design manager and finally design director. In architecture, the terms are a little less well defined and several terms exist to describe a similar function, as shown in Table 2.1. Some of the roles are explained below:

- *Document controller or trainee architect:* This is often the entry level into a design management or architectural management career. In construction, it is not uncommon for individuals to enter from the trades, for example carpentry or plumbing. In architecture the role is usually assigned to trainee architects (RIBA Part 1). Aspiring design managers learn about design management and, in some cases, also start to appreciate how the business is managed. The focus is individual projects and the control of project documentation.

Table 2.1 Career path progression for 'design managers' in architecture and construction.

In construction	In architecture
Design director	Director of architecture Architectural manager
Design manager	Senior project architect or job architect Design manager
Design coordinator	Job architect (RIBA Part 2 or 3)
Document controller	Trainee architect/architectural assistant (RIBA Part 1)

- *Design coordinator or job architect:* Design coordinators and job architects are tasked with coordinating a wide range of design information at the project level. They will work alongside and under the direction of the design manager or senior job architect/architectural manager.
- *Design manager or senior project architect:* Design managers and senior project architects (also known as design managers) are tasked with managing people and processes, primarily at the project level, but also forming a link to the organisation's project portfolio and business objectives. An important skill will be the ability to work across institutional and disciplinary boundaries. Individuals will usually have qualifications (or experience) equivalent to full membership of a relevant professional body. At this level, people skills and leadership need to be demonstrated alongside sensitivity to commercial demands.
- *Design director or architectural manager.* The design director or architectural manager will work across multiple projects at a strategic level. Emphasis will be on setting goals for the organisation and individual projects. He or she will form an important interface between the organisation's business objectives and the organisation's project portfolio. This position demands excellent leadership skills, people skills and commercial management skills. Competences in these areas are developed and honed over a period of many years, enhanced with training, education and targeted reading (see Chapter 3).

2.5 The Business of Architecture

What makes architectural practices unique, and hence an interesting management challenge? The answer to this question lies in the characteristics of professional service firms operating in construction. The grouping together of professionals to sell their services to clients more effectively than could be achieved by working alone is known as a professional service firm. Businesses are typically formed as legal partnerships or as limited companies, with partners and directors (owners) responsible for the management of the business. Firms comprise highly skilled individuals who carry out complex work for clients by means of projects. This involves a high degree of client contact and customisation, which needs to be recognised when implementing management frameworks and processes. Architectural firms are characterised by the following:

- *Creative firms:* Clients will commission architects to provide individual design solutions to unique problems. We deliver value to our clients by generating and delivering creative design solutions within the agreed parameters of time, cost and quality. Individual control over design is important to designers. The challenge is to provide a stimulating and creative office environment that allows the space for creativity within a management framework, supported by managers.
- *Professional firms:* Architects are regulated by their professional institutions and bounded by their respective codes of conduct. Although the professional institutions were originally set up as a means of protecting their members' interests, some of their professional rules have limited the manner in which their members can trade, for example by restricting the manner in which they may advertise their services. Registered firms must comply with the relevant professional institution's code of

conduct; otherwise, the firm is free to act in any legal way it chooses. The professional firm holds integrity and impartiality as fundamental values, aiming to serve the interests of both clients and society via ethical and sustainable business practices.

- *Construction sector dependency:* Architects have a special relationship with one industrial sector, namely construction. It is the economic fortunes of the construction sector that influences the workload of architectural practices. In periods of economic growth architects will be in demand, while in periods of recession and stagnation the demand for buildings, and hence design services, will be lower. Being able to foresee shifts in the economy is not an exact science and usually outside the grasp of seasoned economists. Thus it is useful to have a degree of flexibility designed into the office structure to accommodate higher or lower demands on staff.
- *Service providers:* Architectural firms are concerned with providing services to their clients, the extent of which varies depending on the market orientation of the business and the requirements of individual clients. Client orientation and the multi-project environment mean that architectural businesses have to be dynamic and adaptable to market fluctuations. The quality of the service provision, as perceived by the client, is based on the overall experience of the service provided and, depending on the scope of service, the quality of the finished building. Quality of the service provision is largely in the hands of the architectural office, although project stakeholders will have an influence on overall project performance. The client's perception of the architectural service will also be influenced by the quality of the finished building, which may be outside the control of the architects under many types of procurement.

2.5.1 The Challenge of Uniqueness

Architectural firms face a number of well-documented challenges related to their service provision. The services provided may be seen by clients as intangible, the services are context-specific, they have a limited shelf life and they may be difficult to manage to assure a consistent level of service. The points are next considered in more detail:

- *Intangibility*. The product (output) of the architectural business is often hard for the uninitiated to see and hence value. Clients may see a collection of drawings and a finished building, but the work undertaken to be in a position to produce the drawings and the building tends to go unseen, and hence is often not appreciated. This intangibility of service means that professional service firms must constantly communicate with clients to explain the value of the services they offer. Photographs of current and completed projects, design proposals and design awards are displayed in the office reception and on web pages in an attempt to communicate the type and quality of the services provided. Some architectural practices will also explain a typical design process as a means of helping clients to understand what it is they do.
- *Context*. Architectural services are client specific and are usually specific to a given geographical location: the construction site. Many small architectural offices choose to limit their client base to a defined geographical area around their physical office(s). While this can help to reinforce a local presence, it also makes the office vulnerable to fluctuations in local market conditions. Larger offices will usually operate over a much larger geographical area, often working internationally, and are therefore less exposed to regional and national fluctuations in the economy.

- *Consumption*. Services cannot be stockpiled like physical products. The service is consumed as it is produced, so careful workload planning is needed to match the resources of the office to the demands of clients and individual projects. New projects need to be scheduled to suit the office resources available, which will determine the firm's ability to deliver the work to agreed time, cost and quality parameters. Good client relations are required if the workload is to be planned to suit the available resources of the office and the expectations of the client. Staff time needs to be utilised effectively to ensure profitability, and this may mean bringing in freelance staff to help with temporary increases in workload.
- *Consistency*. Consistency of service is also a challenge in a people-orientated service firm. The solo practitioner may be able to provide a consistent service relatively easily. He or she acts in a similar manner across projects and the consistency of service is related to the personality and idiosyncrasies of the individual. Put two or more professionals together in the same business and there needs to be coordination of activities and values to ensure a consistent approach and consistent standards. Scale this up to larger office and the challenge becomes even more pressing. Establishing and maintaining an excellent reputation for service delivery takes a lot of effort and must be managed. Staff must have a clear understanding of what is an acceptable and equally what is not acceptable. The use of management tools such as quality assurance and total quality management can help to maintain a consistent level of service. Equally, the hiring and development of the most appropriate individuals for the business will help.

It is the unique characteristics of architectural practices and the inherent challenges of providing and managing professional services that create the need for a holistic and overarching management framework. Regardless of size, design organisations must harness a number of skills in addition to design talent if they are to be successful in business. The office needs clear direction and effective leadership, as well as the ability to anticipate future markets and adapt to change. Management systems need to be simple and flexible enough to allow the creative side of the business to flourish. A combination of hard and soft management systems is required. The hard management system is the formal structure and systems employed by the architectural firm. The soft management system sits within this and is concerned with the informal, intuitive nature of the firm: with individuals' competences, values and feelings. Soft and hard systems should complement each other and be capable of adjustment to suit changes within the business as it grows and prospers. To implement appropriate management requires an understanding of architectural management (Chapter 3) and an architectural management framework, as described in Chapter 4. More specifically, there is a need for a management framework that is specific to architects and their businesses.

3

Architectural Management

3.1 Setting the Scene

In this chapter the fundamentals of architectural management are explained and illustrated to set the context for the chapters that follow. We start with explaining what architectural management is: what it is we are managing and why. Then we explore the different levels of architectural management that may be applicable to readers. This is followed by a review of the architectural manager's role and the skills required, before we look at ensuring a consistent approach and managing expectations. The chapter concludes with advice for individuals about to become architectural managers.

3.2 Architectural Management: What it is

Armed with an understanding of the need to manage design it is now possible to explore architectural management. As noted in Chapter 1, the roots of architectural management can be traced back to the 1960s. Parallel work into industrial (generic) design management started to emerge a couple of years later, most notably with the book by Farr (1966), *Design Management*. Farr's book was instrumental in highlighting that design management is fundamental and integral to a successful business, a principle that endures today.

The generic literature on design management has matured to cover most industrial design and creative processes, with the exception of architecture, engineering and construction (AEC). The construction fraternity started to adopt design management ideas in the 1990s, primarily in response to changing procurement methods and as a consequence of constructors taking on greater responsibility for design. A body of related literature has since developed, largely in isolation from the architectural management and generic design management literature. What emerges from reviewing the (construction) design management literature is that the focus is on individual projects and the challenges of coordinating and managing design information from a constructor's perspective. There is little recognition of the fact that design management should be fundamental and integral to a successful contracting organisation. It is the focus on projects that sets it aside from the architectural management literature.

Despite emerging first, the architectural management field has developed slowly compared to the literature on generic design management and construction design

Handbook for the Architectural Manager, First Edition. Stephen Emmitt and Mohammed Alharbi.

management. This appears to be related to architects' reluctance to embrace management in our education or our professional lives (see Emmitt 1999a). There is some confusion in this literature because the terms 'design management' and 'architectural management' are used interchangeably in an architectural context. While some of this literature is entirely focused on managing design at a project level, there is a smaller body of work that has adopted the principle that the management of design is fundamental and integral to a successful architect's business. This echoes the earlier work of Farr (1966) and, in exploring the interactions between projects and offices, the work of Brunton *et al.* (1964).

Figure 3.1 is a timeline of the development of architectural management as evidenced through books on architectural management, generic design management and construction design management. We have limited this to what we feel are the most significant texts (see Further Reading for additional resources).

3.2.1 The Meaning of Architectural Management

Architectural management was introduced in the UK to urge architects to better understand and manage the business side of their profession. A similar term, 'comprehensive architectural services', was used in the USA to encourage architects to realise and utilise other business opportunities beyond design (Hunt, 1965). Brunton *et al.* (1964, p. 9) defined architectural management as follows:

> Architectural Management falls into two distinct parts, office or practice management and project management. The former provides an overall framework within which many individual projects will be commenced, managed and completed. In principle, both parts have the same objectives but the techniques vary and mesh only at certain points.

They argued that the office is the vehicle through which projects are delivered, and these two parts 'mesh' at certain points. Their work was focused on internal office activities, from the firm's organisational structure to the selection of the drawing paper size. They took a deliberate decision not to discuss the management of individual projects. Nevertheless, and on the abstract level, Brunton *et al.*'s (1964) definition can be considered as the first framework for architectural management. It can be interpreted graphically, as illustrated in Figure 3.2. This does, of course raise questions about when and where the points mesh, and how and why. Without answers to these questions it is not possible to effectively manage the interface between the project portfolio and the office.

Freling (1995) offers a more philosophical stance, seeing architectural management as a constant reviewing approach to evaluating the position of architects in the construction industry and the tools needed (to be competitive). Whether viewed on a practical level or on a more holistic level, architectural management encompasses the functions required to (better) compete and collaborate (see Emmitt 1999a, Emmitt *et al.*, 2009). By being able to better compete and collaborate it is possible to be better positioned to influence the financial health of the business and also to better influence the quality of our built environment. Architects, as arbiters of design quality, must be involved in the discussions that influence quality, and that means being able to speak the commercial language of clients and developers.

3.2.2 A Practical Definition of Architectural Management

Although the term 'architectural management' was introduced in 1964, there have been very few attempts to define the field. Alharbi (2013) and Alharbi *et al.* (2015a) provide the only systematic review of architectural management and a new definition of the term grounded in research, which is used for this book. Architectural management was defined by Alharbi (2013) as:

> …the strategic management of the architectural firm that assures the effective integration between managing the business aspects of the office with its individual projects in order to design and deliver the best value to all stakeholders.

Figure 3.1 The development of architectural management.

There are many key words in this definition, but the word 'strategic' is perhaps most poignant. The overriding theme in the literature is the inability to take a strategic view and put management on a par with design in the majority of architectural practices. Indeed, it could be argued that until architectural practices embrace management and take a strategic view of management *and* design they may continue to struggle as business concerns.

3.3 Benefits of Adopting Architectural Management

The surveys conducted into architectural practices have consistently identified the need for architects and architectural practices to have better managerial skills. Managerial tools are required by architects in order to compete effectively in the marketplace, while still collaborating with others in the co-creation of architecture. Such tools need to be rigid enough to ensure consistent quality standards yet flexible enough to accommodate wide-ranging project requirements without compromising creativity. This raises questions about which tools are most appropriate for creative businesses. We know that architects need to:

- *Manage the business:* Failure to do this effectively will result in an unsustainable business' no business means no prospect of practising architecture. This requires an understanding of the business context, as explored in Chapter 5.
- *Manage individual projects:* Failure to manage each and every project successfully will put undue financial stress on the business. It is the projects that generate the finances to sustain the business. This requires an understanding of the project context from a variety of perspectives (see Chapter 6).
- *Manage stakeholders (business, projects and society):* Failure to manage stakeholders will lead to missed opportunities, ineffective interactions and in the worst cases conflict. This requires an understanding of people, especially the way in which individuals behave and choose to interact with others (see Chapter 7).
- *Manage knowledge integration (learning and education):* Failure to manage knowledge and incorporate it to the benefit of the business will lead to ineffective, and one may argue, out-dated practices. This will impact on the health of the business and effectiveness of projects. This requires an understanding of the workforce and the motivations that drive individuals and organisations to continually improve. This is explored further in Chapter 8.

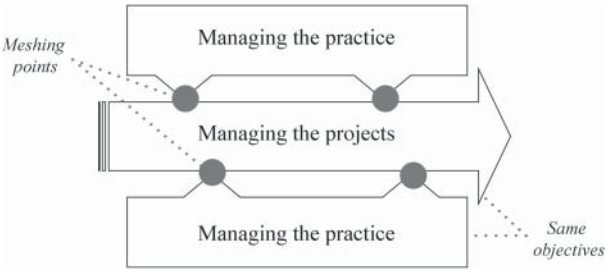

Figure 3.2 Graphical Interpretation of Brunton *et al.*'s (1964) definition.

These requirements necessitate the acquisition of managerial skills and competences, which in turn will bring about more effective, efficient and competitive practices. Porter (1998) defined 'competitiveness' as a firm's ability and capability to sustain a profit that exceeds its rivals in a given market/industry. He further claimed that there are two major types of competitive advantage: cost advantage and differentiation advantage. The former means that the firm can deliver the exact same benefits to customers as its competitors but at a lower cost, while the latter refers to the firm's ability to deliver better benefits to its customers than its rivals. Adopting architectural management enables architectural practices to gain competitive advantages (both cost and differentiation advantages) by enhancing the design and delivery of the best value for all those involved in society. Although architects need to respect their professional Code of Conduct and not compete directly with other architectural practices, it is quite legitimate to compete with other businesses that offer similar design services.

The benefits of applying architectural management may have many aspects, ranging from improving efficiency of the business to, for example, enhancing the wellbeing of staff and contributing to a built environment that makes a positive impact on our environment. Many of the benefits relate to, and are influenced by, the ability to improve the consistency of the service delivered across all business areas.

3.4 Levels of Application

Having looked at the development of architectural management and defining what it is, we now turn to the question of application. Where do architectural practices sit in their current understanding and application of architectural management? To answer this question, it is necessary to have a benchmark by which to assess position and aspirations.

Design Management Excellence (http://www.designmanagementexcellence.com) have developed a 'design management staircase' that graphically illustrates how organisations use design management in their businesses, ranging from a lack of design management at the lowest level rising to the top level where design management is an integral part of the business culture. For the purposes of this book we have expressed the levels as a pyramid (see Figure 3.3) and adapted them to suit architectural management rather than design management. In Figure 3.3 the lowest level of architectural

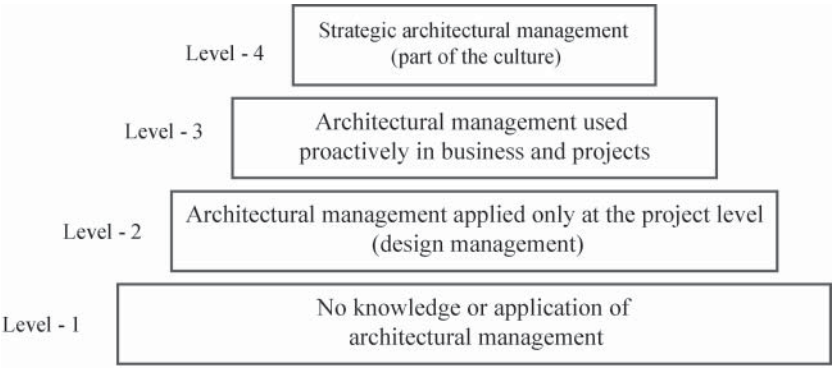

Figure 3.3 The architectural management pyramid.

management lies at the bottom of the pyramid, rising to the highest level at the top. The nearer the architectural practice is to the top of the pyramid, the better positioned it will be to compete and provide an outstanding level of service. Readers should ask themselves where they are currently positioned, where they wish to be positioned in the future, and what they need to do to get there.

The levels are as follows:

- *Level 1: No architectural management:* At this level there is no, or very little, knowledge of how to manage the projects and the office as a coherent whole. Architectural management is not part of the organisation's culture and management tends to be applied 'if necessary' and in an informal, ad-hoc manner. Solo practitioners may be able to survive at this level, but clients will still expect a consistent level of service and adherence to professional standards as a minimum. Small to medium-sized offices operating at this level are unlikely to be profitable and may struggle to grow or even survive in the longer term. These offices will be run in a chaotic manner, often driven by the idiosyncrasies of the business owner. The architectural management framework presented in Chapter 4 helps to raise awareness of the main areas to manage and why it is necessary to do so.
- *Level 2: Architectural management applied only to projects (AKA design management):* The understanding and application of architectural management is restricted solely to individual projects (essentially design management). Although managing design is recognised as important, it is not integrated into business processes or office culture. At this level there is a basic understanding of the value of architectural management, but it has not been applied to the management of the organisation and the business. The small to medium-sized offices will be managing their affairs, but the meshing (to use Brunton *et al.*'s term) will not be managed on a strategic level. A typical example would be an architectural practice with job architects running individual projects, with little in the way of knowledge sharing between projects. Success will be a function of the skills of individuals rather than the collective skills of the office members. Applying the architectural management framework will help to emphasise the integrated nature of the four components of the architectural management framework, thus helping to focus attention on a more holistic approach.
- *Level 3: Architectural management used proactively:* At this level there is an understanding of the importance of architectural management at a senior level within the office. Management is part of the office culture and there are efforts to manage design at an organisational and project portfolio level. It is likely that the office will employ design managers and architectural managers in some capacity. Taking a proactive stance will help to 'mesh' the business and individual project goals. Practitioners will be using an architectural management framework to better understand their business and their projects, keen to exploit their competitive advantage and strive for continual improvement. Performance and reward will be related to the collaborative efforts of the office.
- *Level 4: Architectural management as culture – strategic management:* Architectural management will be central to the culture of the business forming the glue between the project portfolio and the business. Architectural management will have strategic importance for the business, and profitability will be determined by the effectiveness of management across every aspect of the business. Business and design sit on an

equal footing, the importance of one underpinning the other. Organisations will be design-driven with design embedded in all business processes. At least one individual within the office will have the role of architectural manager. This may be one of the owners of the business or a senior member of staff. At this level the architectural manager will be using the framework as a guide and a means of helping to measure, reflect upon and improve performance. In larger offices, design managers will work alongside the architectural manager(s) to ensure the meshing between office and project performance.

3.5 The Architectural Manager

Having established where the architectural practice sits, and more importantly, where it wants to be in the future, we turn to the individual and the role of the architectural manager. Architects, whether we are interested in (architectural) management or not, are required to gain (basic) managerial skills and competences in order to practise successfully. Once qualified, these skills will be developed as they progress to more senior positions within their organisations. Early in their careers they will be concerned with administrating projects. As they gain experience from project work they will develop the ability to manage projects. While some architects are happy to continue a mainly design-focused career, many will develop (either by choice or circumstance) into highly effective design managers and progress into senior management positions within organisations. For individuals aiming to concentrate on the managerial aspects of architectural practice there are two fundamental questions to address.

- What does an architectural manager do?
- What experience and skills are required to effectively undertake the role?

3.5.1 What does the Architectural Manager do?

To be effective, the Architectural Manager requires extensive design experience and judgment to enable them to plan and accomplish short-term and long-term goals and lead and direct the work of others. The majority of the advertisements for architectural managers ask for a minimum of eight to ten years of experience in the field, in addition to being a registered architect. This reflects the need for individuals to have sufficient experience to be able to understand the complex interactions associated with managing a creative professional service firm and hence be in a position to exercise appropriate leadership. The main task of the architectural manager is to be in a strategic position to integrate the management of both the business and project sides of the architectural practice.

The remit of architectural managers will vary across organisations, projects and countries. Indeed, there is often overlap of responsibilities with design managers, so clear lines of communication and responsibilities need to be established and continually reviewed. There are some generic considerations that apply to all situations. These relate to responsibilities at the organisational level and at the individual project level (see Table 3.1).

Organisations must offer a consistent level of service to their clients and therefore the way in which architectural managers operate within and without the organisation

Table 3.1 The architectural manager's responsibilities and tasks.

Responsibility level	Required tasks
Organisation (strategic) level	Identify the organisation's priorities
	Develop the organisation's policy and development plans to help identify risk and maximise value for the business
	Implement standard (and simple-to-use) procedures to achieve the organisation's goals
	Coordinate between construction sites, head office, clients and other stakeholders
	Plan, assign, supervise and evaluate staff
	Lead, monitor and motivate staff
	Advise the senior management team and business owners
	Establish, provide and monitor staff training needs
Design management (project) level	Oversee the various project teams that comprise the project portfolio and coordinate their collective efforts
	Plan and manage all architectural activities within the project portfolio
	Manage architectural designs, coordinate design information, oversee regulatory compliance and advise on procurement routes
	Review designs and specifications, and implement design change protocols to ensure design quality
	Evaluate construction tenders
	Make recommendations at a project level based on informed evidence
	Manage and report on project progress, budgets and design quality
	Feedback and feed-forward into the management of the project portfolio

needs to be reassuringly consistent. Architectural managers must be able to manage the project portfolio in line with the strategic commercial aims of their employer. This means that operational decisions taken at a project level must be taken while cognisant of the organisation's business objectives.

There are some typical responsibilities that apply to architectural and/or design managers. Design managers are primarily responsible for ensuring design quality is realised within the constraints of time, budget and resources. Architectural managers have a wider role and are responsible for nurturing the inter-relationship between projects and office performance. This can be broken down to include tasks such as:

- achieving design quality targets
- arranging, coordinating, attending and chairing design team meetings, reviews and workshops
- collaborating with a wide range of project stakeholders to develop and realise the design
- complying with codes and regulations, for example health and safety legislation and managing environmental compliance (e.g. LEED, BREEAM)
- conducting design reviews and performance appraisals

- delegating and reviewing design team tasks
- ensuring design parameters are adhered to by promotion and defence of design quality
- guiding and leading the design team within the office and within projects
- integrating the design and designers
- meeting business and client (and stakeholder) expectations
- motivating a wide range of designers
- presenting design proposals
- reporting on progress of design tasks and packages
- reviewing budgets and financial reporting
- setting design quality targets (in consultation with the client)
- value engineering the design.

3.5.2 Knowledge and Skills

In large organisations, the architectural manager will report to the business owners, and in many cases he or she will have a financial stake in the organisation. In smaller firms it is likely to be one of the owners who takes on the architectural manager role, often in addition to their other duties. It is inevitable that there will be a difference in the skill set of an individual employed solely as an architectural manager and an individual who

Table 3.2 The architectural manager's knowledge and skill requirements.

Category	Required knowledge and skills
General knowledge	Principles and practices of architectural design
	Project design, construction, operation and maintenance
	Practices of effective project management (including risk management, value management and quality management) and supervision
	Contract development and administration
	Economics and financial management (commercial management)
	Time management and task planning
	Understanding behaviours of staff and stakeholders
Specific skills	Designing and managing complex projects
	Analysing, developing and implementing (incremental) improvements
	Evaluating architectural problems and preparing reports
	Prioritising and managing multiple projects
	Defining staff roles and responsibilities
	Planning, supervising, and evaluating staff tasks and work
	Managing working ethics and relationships between staff
	Implementing change
	Communicating effectively using appropriate tools and technologies

does the job as part of a wider remit. However, there are some generic skills and knowledge required to function effectively. Typical requirements from job advertisements are summarised in Table 3.2.

Regardless of their individual background, an architectural manger must possess comprehensive knowledge of how the design and construction process works. This includes a working knowledge of building technologies, health and safety legislation, environmental legislation, lifecycle costs, employment legislation and so on. They also need to appreciate how the various stakeholders like to work and communicate: they are concerned with understanding and managing behaviours. While some of this knowledge can be taught in universities and acquired from self-study, there is no substitute for learning on the job. Experiential learning comes from the practical application of architectural management, which, combined with self-reflection, will inform and shape architectural managers.

Although many of the skills required are similar to those required of project managers, there is a deliberate bias toward design knowledge and a deep understanding of the design process in a commercial context. Architectural managers must be able to champion and defend design quality while being mindful of the commercial pressures that apply to individual projects and the business. Architectural managers must also demonstrate excellent communication skills, especially the ability to express empathy with stakeholders, and demonstrate excellent interpersonal skills. This will help them to navigate the uncertain waters that lie between the various project stakeholders and the design and construction cultures. Examples of such interpersonal skills are tact and diplomacy, negotiating, coordinating, communicating, integrating, organising and leading. They also need the determination and drive to achieve goals in a multi-disciplinary project environment. It follows that a flexible and agile approach to management is necessary to allow architectural managers the space to respond to unexpected events and rapidly changing situations. This needs to be balanced by a reassuringly consistent and fair approach to day-to-day decision-making. Architectural managers must be able to:

- build trust and develop effective working relationships within the office and the projects
- coordinate diverse work packages
- listen to colleagues and project stakeholders
- promote and defend design quality within the project and the business
- communicate effectively using written, oral and graphical media
- consistently manage the production and realisation of high-quality designs
- lead and motivate the design team
- maintain high standards and commitment within the design team
- realise business objectives through effective management
- resolve challenges in a timely and efficient manner
- supervise design team members.

3.5.3 Who is Best Qualified to Practise or Lead Architectural Management?

The main requirement for the architectural manager's position is that applicants must have balanced skills and knowledge in design, management and technology, as well as expertise in both the design and construction of projects. Architectural managers need

to be design professionals because it is essential that we understand the challenges facing designers in order to manage their work. The natural preference would be for a qualified (registered) architect, or an engineer with a particular penchant for design and business. Whatever their background, they must first and foremost be passionate about management and design and have:

- *Credibility in the eyes of the office staff:* Credibility is earned through a career of delivering projects to demanding targets, being transparent in decision making, and treating everyone equally. This helps to build and maintain trust.
- *Sensitivity and understanding of the impact of decisions on the (design) staff:* This is learned through interacting with others in the design office and with external stakeholders on individual projects. A balance needs to be struck between the pressures on resources relating to individual projects and the resources available within the office.
- *The ability to reflect on daily practice and make the necessary changes to improve performance:* Many of the changes made will be small and incremental, but vital for staying competitive.

3.6 Ensuring Consistency

One of the challenges for large organisations and/or organisations with more than one physical office is to ensure consistency of approach across the entire business. This will help to ensure consistent behaviour of a diverse staff across a diverse project portfolio. Individuals will, inevitably, interpret job roles and responsibilities in a slightly different way to their peers and they will therefore have a tendency to do things that suit them best. Working in a creative business there will be tension between allowing creative freedom and doing things in a consistent manner, and this is where the architectural manager needs to exert clear leadership, supported by managerial protocols.

Despite differences in legislation and local customs (ways of behaving), it is possible to ensure a consistent approach across the organisation's regional offices and the project portfolio. One of the most effective approaches is bringing senior staff together from across the organisation to discuss what they do and why. This helps to share knowledge, identify good practice and also identify less efficient ways of working. These events can be supported with training and education as part of the individual's personal development plan. A typical approach to ensure consistency would be to:

- *Hold an internal knowledge exchange meeting once per year:* All architectural and design managers are invited to discuss what they do and why they do it. This will help to identify good practices and areas in need of improvement. It will also help individuals to adopt and apply a consistent approach to architectural management.
- *Create an architectural manager's handbook that is tailored to how the organisation works:* Staff may use the handbook in their day-to-day tasks to ensure a professional and consistent approach. The handbook will also be invaluable in helping to induct new members of the organisation into how things are done. The framework presented in this book can assist with this task.
- *Instigate and maintain an intranet knowledge exchange hub:* This will allow staff working across the country or globe to share their knowledge about architectural management with other members of the organisation, who they may rarely meet. This

resource can be systematically reviewed, and relevant knowledge then incorporated into the organisation's architectural management handbook.
- *Establish a strategic review system:* This review can be annual or bi-yearly, and looks at what the managers are doing in relation to developments in legislation, technology and ways of working.
- *Stimulate an organisational culture that rewards openness and knowledge sharing:* The office culture should promote and reward collaborative and integrated working and should also pervade every project undertaken by the office.
- *Encourage training in specific architectural management tools and techniques:* This should also include specific training in interpersonal skills.
- *Support and promote continuing professional development activities for all staff:* This will include attendance at conferences in addition to in-house forums. Reading around the subject and engaging in information exchange networks will also be required.

3.7 Self-reflection

The concept of the reflective (and reflexive) practitioner has been known for a long time. These approaches are powerful tools to help individuals improve how they do their job. Typical techniques include keeping a personal reflective diary (or reflective log) and engaging in organisational events that encourage reflection on daily events. A simple, yet effective approach is to:

- *Describe the event*: Concisely record the event and describe what the challenge was and the individuals and organisations involved. Keep it factual.
- *Reflect on the event:* Identify how the challenge could be mitigated in the future. What could have been done differently?
- *Consider action:* Explore some scenarios. How would you respond if faced with the same event in the future? Highlight training and educational needs so that you are better prepared for next time. Read more about the subject.

The reflective diary is a personal document. The aim is to improve individual performance, and some of the issues raised may be fed into the annual performance review when discussing future educational and training needs. Sometimes it is useful to share aspects of the personal reflection with peers, especially when unsure of how best to proceed.

3.8 Managing Expectations

Working at the interfaces of design and construction, and business and projects, it is the architectural manager who will be tasked with managing expectations of a diverse range of individuals (see Figure 3.4). Staff will expect consistent and clear leadership. Stakeholders' expectations relate to the effectiveness of the design and delivery process in addition to the quality of the completed building. Expectations also relate to the business owners and a well-functioning and profitable business in which design can flourish. Having a robust process plan will help all stakeholders to navigate the life of the project.

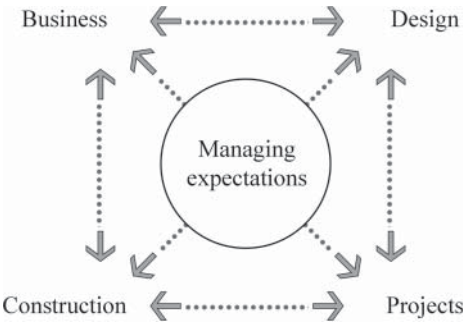

Figure 3.4 Management of expectations by the architectural manager.

Similarly, having a robust office management protocol will help all staff to carry out their tasks effectively. In addition to this there are some simple rules to follow to ensure expectations are managed:

- Before any work is done, meet with the client and stakeholders in a workshop environment to explore exactly what is required, why and when and by whom. This will help the main parties to understand one another and is the first step to exploring and understanding the values of the project stakeholders and establishing trust. All stakeholders should discuss their organisational and professional values and ethics to help establish a way of working for each and every project. Face-to-face discussions will help in developing common (shared) project values. The development of trust helps when discussing commercial issues and dealing with differences of opinion.
- Manage the project briefing process to ensure that the scope of the work, the business plan (finances) and the programme are established before design work commences. Ensure the resources are available within the business to deliver what has been promised. Revisit and revise the brief at regular intervals once the design process has commenced. Revisit the programming and staff allocations on a regular basis to ensure they are fit for purpose.
- Involve the client in all project team meetings. This helps to avoid any surprises later in the project. It also helps the client to better understand the architectural business with a view to retaining the client for future commissions.
- Sign-off the design with the client and key stakeholders. This should be done at important junctures and before starting work on site or starting any offsite production. This will help to reduce uncertainty and unnecessary design changes during construction. It will also help to reduce unnecessary waste. Certainty will allow the constructor to schedule the work accurately and will be instrumental in helping the workforce deliver the building on time, on budget and to agreed quality standards. A quality assurance management system is an essential tool.
- Consult with the client overall design changes, no matter how minor. This will help to reinforce communication with the client and it will also help to eliminate unnecessary rework.
- Involve all stakeholders in decision making and ensure relevant information is to hand so that informed decisions are made. This applies within the office and within the project portfolio.
- Keep all stakeholders informed (on a regular basis).
- Never make unrealistic claims or promises that cannot be honoured.

- Build learning events into the programme. This enables knowledge harvesting and sharing across the business, as well as helping to keep individuals informed.
- If in doubt, ask!

3.9 Taking on the Architectural Manager Role

Management is concerned with leadership and taking action. Good managers know how to work with people and systems; they understand the importance of getting the right people for the required work, getting everything in place before work starts, monitoring performance, encouraging feedback and providing appropriate leadership. Good managers are also empathic to staff and stakeholders.

The architectural management role carries a considerable amount of responsibility and can be a highly rewarding career move. Architects may be promoted to a design management role by their current employer or will move to a new employer to take up the position of architectural manager. In both situations it is important for them to define their management style and ensure the owners of the business and the staff understand how they intends to operate. It is also essential to resist the temptation to design, which may undermine the designers and will distract the design manager from the design management task.

When entering an architectural office as a new member it is inevitable that the 'incomer' will be perceived as an outsider. In the first few weeks the architectural manager will be greeted with a degree of caution and the staff will be defensive and guarded when communicating. New architectural managers should expect to take somewhere between three and six months as a minimum to get to know how the office and the staff work and start to develop empathy and trust. The challenge is slightly different for those promoted internally. They will be familiar with office systems and the staff, which makes the job a little easier at the outset. However, they may be too familiar with office systems and staff, which may make it difficult to be objective and see what needs to be improved. Existing friendships may make it difficult to take challenging decisions that affect colleagues. Moving from being a member of the design office to a management role may prove problematic for some individuals.

All architectural managers should have a desire to take on the role and have empathy with all staff. Architectural managers should be able to do the following within the office and also extend these principles to interactions with project stakeholders:

- *Observe and listen:* Watch how the members of the design office work and interact with their colleagues. Listen to the hum of the office as designs are created and developed; be alert to the discussions. It is the day-to-day actions of the staff and the informal conversations that reveal how well the office procedures fit the working methods of the staff, often helping to identify inefficiencies or bottlenecks in the flow of work.
- *Develop*: Develop empathy with all staff and build trust. Try to get to know individual strengths and weaknesses as fast as possible, since it helps with programming and allocation of duties. Find out what each member likes doing, and also what they dislike about their job function. Try and work with them to maximise the positives and minimise the negatives.

- *Discuss:* Discuss individual workloads and existing procedures with all staff members. Encourage an open communication culture in which individuals are happy discussing difficult issues, confident that the architectural manager will support them.
- *Act:* It may be possible to make a series of minor and incremental changes quite quickly to help improve the effectiveness of the design studio. All changes, no matter how small, must be discussed with the staff and adjusted to accommodate feedback before they are implemented. Failure to do so will result in a loss of trust. Make decisions based on evidence.
- *Provide feedback:* The architectural manager acts as an interface between staff and the owners of the business and must develop a team ethos. Strategic feedback helps to share knowledge and to keep all members of the business up to date with developments. An essential job requirement is to keep everyone informed.
- *Be objective and consistent:* This is a fundamental requirement of all managers. Treat everyone equally and fairly and be mindful of unconscious bias.

By undertaking these tasks architectural managers will be well positioned to minimise ineffective habits (process waste) and maximise good habits (process value). By concentrating on the operational and strategic needs of the individuals within the office and providing consistent leadership it will be possible to develop and maintain an efficient and happy working environment. This will, however, require a managerial framework, as described in the next chapter.

4

Architectural Management Framework

4.1 Setting the Scene

Now that we understand the background to architectural management it is possible to address some of the strategic and practical concerns relating to architectural businesses. Strategic and practical concerns form the basis of the architectural management competitive framework, the capstone of this book. We start with consideration of the suitability of applying management principles and restrictions to the creative process of creating architecture, and consider the question of what management tools are most suitable. Then, the architectural management framework is presented in its visual form, preparing the ground for the detailed discussion in subsequent chapters. We conclude with major points to be considered before adopting the framework in practice.

4.2 The Essentials

Let us start with the essentials. To practise architecture, we need a source of income: a cash flow. Income is generated through the provision of services to a client. People (architects) win engagements by interaction with clients, and people (architects and support staff) do the work to realise the service level promised to the client. To do the work effectively and efficiently, and to deliver a consistent level of service to clients, requires a supporting set of processes and principles (management). Failure to deliver services on time, to budget and to an agreed level of quality will result in the loss of business. As a fundamental requirement, all businesses must employ, retain and develop appropriately qualified and experienced and conscientious staff. Businesses must also deploy processes that support and reward all office members. In simple terms, this means focusing on people and processes to sustain the business and develop the workforce, as discussed further below.

4.2.1 Architectural Offices

Architectural offices are creative, highly stimulating and exciting places in which to work. The managerial structure of the firm and the organisational culture that develops within the office will have a significant impact on how individual projects are developed, and hence the profitability of the business. Successful architectural businesses tend to

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be distinguished by the skills and behaviour of the firm's leader(s), combining design vision, business skills and leadership in a seamless and effective manner. The owners' values will be reflected in the structure and culture of the office, primarily through the type of people employed and the managerial process in train.

The social life of the design office needs careful consideration, so as to create the best possible environment for people to interact, create and share knowledge, and contribute to projects without undue hindrance from onerous management systems. In many respects, the issue is about designing and achieving an appropriate fit. In all but the smallest of offices, the architectural manager will form the link between the business owners, staff and project stakeholders.

The majority of architectural practices are very small, a characteristic of other professional service firms such as accountants and lawyers. Approximately 70% of offices are in the 'very small' band (1–5 architects), 15% in the 'small' category (6–10) and the remaining 15% in offices with 11 architectural staff or more. Although the large offices make up a small proportion of offices when measured by size, they are responsible for a considerable amount of work; and because of their size they tend to be structured and managed in a different way to their smaller counterparts. Small professional service firms do not have the resources to employ managers per se; it is a job done by one of the senior architects or directors within the office alongside other duties. This means that architectural management frameworks need to be relatively generic so as to allow interpretation to suit the size of the architectural office.

4.3 Strategic Concerns: People and Processes

Architectural practices are service providers. They are heavily dependent on the combined skills and application of their staff to deliver services to agreed parameters. This means that architectural offices need to recruit the best possible people to suit their strategic aims, and retain them through an appropriate reward system (such as salary, working environment and professional development). People also need to be supported by appropriate managerial structures and supportive managers.

4.3.1 People

Good people are the design organisation's principal asset, and also the most expensive resource. Depending on size and structure, staff may account for between 50 and 80% of the total running costs of the business. Somewhere around 65% is a useful guide figure when calculating costs. Putting together a collection of individuals with complementary skills and competences and keeping them together is a fundamental concern for the professional service firm. Once assembled, all members of the office must be deployed effectively to ensure profitability. They must also be motivated to continually search for improvements in working methods. Failure to achieve these goals will hinder the development and profitability of the business. The collective knowledge and combined skill-base must be managed sensitively, to maximise the potential of the office while respecting the wellbeing of its staff. The individual knowledge, skill and experiences of staff members combine to give the firm its unique culture, and the manner in which they interact will directly affect the quality of service provided.

Within the office, the architectural manager has two complementary functions. First is the proactive management of the staff to ensure work is strategically planned so as to maximise the available resources and ensure work can flow with as few interruptions as possible. Second is the day-to-day (operational) management of staff, with design managers reacting to unexpected challenges, and providing leadership and support in an attempt to quickly resolve problems and hence maintain an efficient flow of work.

The assembly and maintenance of a dedicated staff are crucial to a firm's success in the marketplace, and to stay competitive requires frequent evaluation and adjustment of staff skills and competences. This is particularly true of a knowledge-based firm, where the proper selection, training and development of staff are essential if a high-quality service is to be delivered. Architectural managers must be involved in staff selection and staff development programmes because these determine the firm's culture and hence its effectiveness and profitability. A well-managed professional service firm will draw on the following interdependent, and complementary types of intellectual capital:

- *Human capital* comprises the knowledge and talents that reside in the human brain. Architectural practices are heavily reliant on their human capital. This type of capital walks into the office in the morning and out again in the evening, or logs on and off the ICT system. The firm does not own human capital; it is 'rented' via the payment of salaries for an agreed number of hours per week. Human capital is fickle and at times can be unreliable. Human capital must be managed with respect for the individual; otherwise it is highly likely that this valuable resource will move to another employer, taking vital knowledge and contacts with it.
- *System capital* is know-how that is contained in a firm's processes and documented in past projects held on databases. System capital changes as working methods and procedures are adjusted to reflect the experiences of the firm. The more a firm can incorporate knowledge into their systems, theoretically at least, the less their reliance on human capital. Quality management systems are a good example of system capital, and ICT provides a vehicle to build system capital through intraweb technologies and data-mining techniques. Knowledge capital is encoded in, for example, standard architectural details, the master specification and BIMs.
- *Customer (client) capital* describes the value of a firm's relationship with its clients. This is shared knowledge and is not owned by either party. The type of client and the frequency of interaction with the design office are unpredictable and as such may be difficult to manage with a high degree of certainty.
- *Collaborative capital* is shared knowledge between collaborating organisations in the co-creation of designs. It is generated through interactions between individuals working towards project goals. This knowledge is mainly project specific, unless firms are working within strategic partnerships and alliances. This is shared knowledge, much of which is embedded in project processes and in the heads of the project stakeholders.

Staff will acquire, filter, analyse and apply knowledge as they go about their day-to-day tasks. Individuals also retain much of this knowledge in their heads and a departing employee represents a considerable loss of knowledge and expertise. This know-how takes time to replace, which can be disruptive to the flow of work in the short term. However, the change in staffing does allow the business to reassess its goals and thus

seek appropriate staff to suit. Staff should be hired with a view to the future growth of the business, as set out in the strategic plan.

4.3.2 Processes

Individuals cannot be left to their own devices to go about their work in any way they see fit, as this will result in an inconsistent and chaotic approach. Management processes are necessary to ensure consistency and prevent unnecessary work and errors. These processes should be designed and implemented to help staff do their job effectively, efficiently and in a consistent manner. Therefore, systems need to be designed to suit the culture of an individual office. Processes should not be seen as static; they need to be reviewed on an annual basis to establish that they are still fit for purpose. In situations where businesses are changing size and/or market orientation it may be necessary to change established procedures to better suit the new situation. Incremental changes to processes are usually easier for staff to accommodate than large wholesale changes. Planning ahead and taking a strategic view will help to limit changes in processes to relatively minor adjustments. Engaging with staff and incorporating feedback about what works and what is too onerous or constraining is also important in achieving a happy, creative and productive workplace. Many of the challenges are likely to be 'bottom-up' staff-driven initiatives rather than 'top-down' owner decisions.

Staff and stakeholders will have expectations linked to the performance of the business and projects. Within the business, regular informal discussions will assist staff with understanding expectations, and this process can be further supported through annual staff performance reviews. In projects the challenge is different. Projects involve large numbers of people, many of whom only contribute to specific tasks, entering and leaving to suit the project schedule. Thus interactions are somewhat temporal in nature and need to be managed accordingly. This means that expectations need to be discussed at the start of projects and at regular intervals throughout the duration of the project, as outlined in the previous chapter. This is particularly important for clients and potential building users who may be unfamiliar with design drawings and construction. Regular and clear communication throughout the life of the project and within the office on a regular basis will be instrumental in avoiding unexpected surprises.

4.4 Practical Concerns: Managing Resources

Regardless of the size of the office and the market orientation of the business, it is essential to establish a sustainable cash flow and return a profit on the resources invested. Establishing simple and easy-to-use processes will support the members of the office and allow individuals to do their jobs to the best of their ability. Onerous and poorly designed processes will hinder the flow of work, and lead to frustrated staff. Simple and minimal processes will be welcome, especially among the more creative members of the office. It is a case of less (management) is more (effective).

Unless the business is set up with effective operating procedures and processes from the outset, and unless these are continually reviewed and adjusted to suit the evolving size and culture of the office, it is likely that there will be no strategic management vision. An ad-hoc approach to the management of the business will not work. This raises the question of what needs to be considered as part of the strategic vision.

4.4.1 Less is More

Although the level of professional fees to be charged is a determining factor in the selection of consultants, it is well known that this is rarely the overriding issue. Clients select architects based on a wide range of criteria, ranging from creativity through to the ability to deliver the project to agreed targets. As a result, the fee should be set at a level that allows the work to be completed and a profit returned. In situations where the profit margins are small, the question has to be asked, how do we get more for less? And the answer to this question lies in the effectiveness of processes and procedures.

Small process improvements that save all members of the office time can be quite significant when viewed over a financial year. Saving 30 minutes per day on a specific task, equates to two and a half hours per week. Multiplied by, say 44 working weeks gives 110 hours per annum, or approximately three weeks' additional time to engage in creative, fee-earning activities and/or CPD per office member. Multiply this across the organisation and the small savings mount up, resulting in a better performing business. For example, in a 15-strong organisation, the savings relate to an additional member of staff. It is the businesses that can offer more for less that will have a competitive advantage over those who cannot.

4.4.2 Managing Design Effort

The amount of effort and hence time required to undertake work is related to the way in which people solve problems. Estimating the effort required for a specific project and estimating the amount of time and resource required within the office to complete the work is important for helping to determine fee levels and manage workflow. This is an important factor in managing the business. Fee income must be related to the amount of time available for a particular design task or work package, and this must be related to the individual skills available within the office and their charge-out (billable) rate. Recognising individuals' patterns of behaviour may help with the estimating and scheduling activities.

To estimate accurately the amount of work required, it is necessary to analyse the difficulty of the project in addition to the work identified through work breakdown structures. Past experience of similar types of project and the client is a useful base indicator. Estimation of the amount of work required for a particular project and/or stage of a project will enable the architectural manager to map individuals' work capacity, and hence the overall capacity of the office. This is needed to help plan the smooth flow of work through the office and to identify periods when staff will be under-utilised. New projects must not be accepted without first mapping the estimated resource availability.

4.4.3 Staff Deployment

From a manager's perspective it may be useful to consider staff in terms of their experience. A balance of enthusiasm and experience is necessary. Individuals may be classified as inexperienced, experienced or over-experienced in terms of particular project requirements:

- *Inexperienced staff:* These are usually students or recently qualified architects and are the cheapest resource in staffing terms. However, the need for constant nurturing

and supervision makes the true cost of this resource considerably higher than it may appear. An ability to consider the advice of experienced colleagues as well as challenging conventional wisdom is desirable. Over time the inexperienced staff will become highly valued members of the office.

- *Experienced staff:* A design organisation's greatest asset is its experienced and competent staff. Capable of working with minimal supervision, they usually produce accurate work fairly rapidly and are able to balance their individual workloads to meet project milestones.
- *Over-experienced staff:* Care should be taken to ensure that all staff stay up to date with current developments and do not rely entirely on overfamiliar (and rarely challenged) solutions. Some staff may become bored and complacent. Re-allocation of duties usually dispels any complacency very quickly and tends to mitigate boredom.

What usually happens in a design office is that the design manager has to use the staff available at the time (those who are least busy with other projects). This sometimes means that the most suitable individuals for a particular project are unavailable.

4.4.4 Identifying Good Habits and Eliminating Inefficiencies

Unlike machines on a factory production line, people are rather unpredictable when it comes to performance, exhibiting both good and bad habits, often somewhat erratically during a working week. One of tasks for the architectural manager is to identify (see Figure 4.1):

- *Good habits that add value:* these need to be identified and discussed within the office, with the aim of disseminating the knowledge to colleagues.
- *Poor habits that create process waste*: these need to be identified and mitigated as quickly as possible.

Identifying and reducing waste can add to the profitability of a business and can help to reduce the incidence of stress and burnout among staff. Architectural managers should allow time in their day to watch and listen to how people within the office go about their business, then analyse the root causes and respond appropriately.

Adopting a policy of continual improvement can be very helpful in identifying wasteful habits and procedures and helping to promote good habits and procedures.

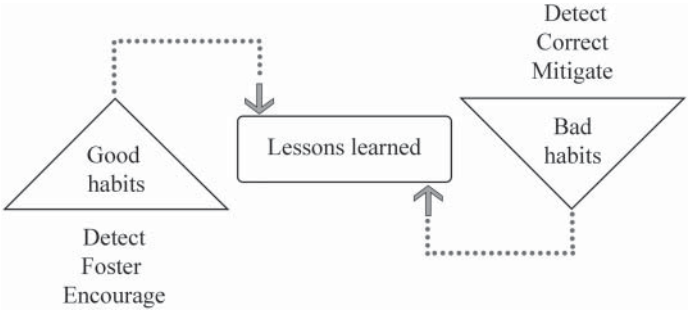


Figure 4.1 The architectural manager's role in managing 'good and bad habits' of the firm's staff.

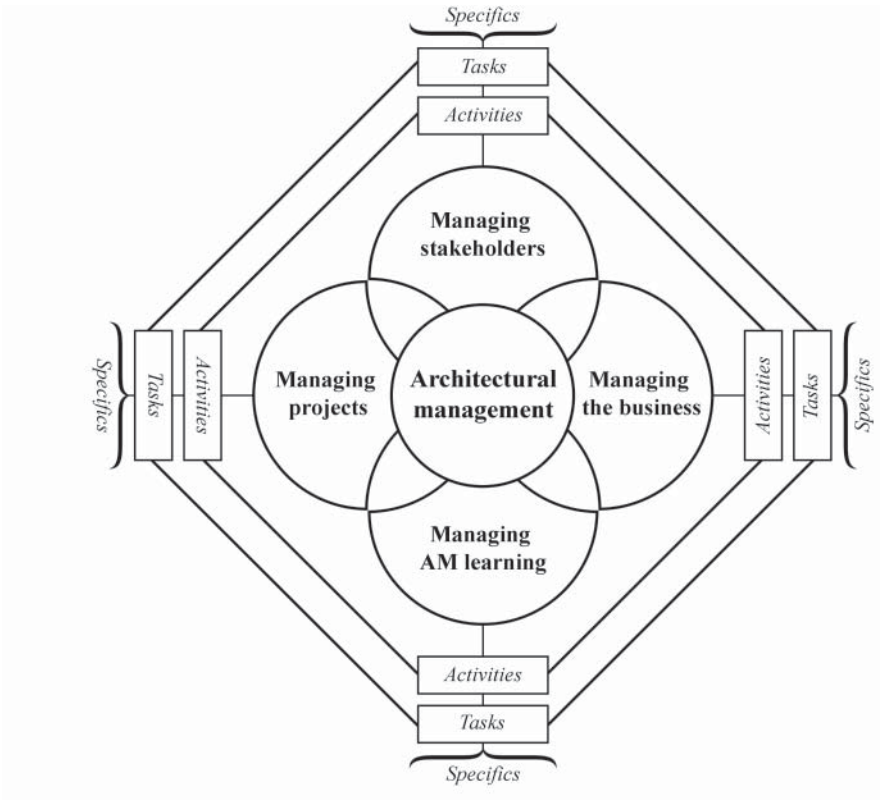
It is obvious that an incomplete drawing will generate waste somewhere in the supply chain as the receiver tries to make some sense of the information. This usually leads to a request to the design office to revisit the information and to clarify any discrepancies, a task that will consume considerably more time than if it had been done correctly in the first place. But there are other habits relating to the production of information that exist within design offices, and which need to be addressed to ensure efficient use of resources. Few staff will admit to the following bad habits, but they are not uncommon:

- *Overworking drawings:* This is a very common habit among architects. Apart from being unnecessary and wasteful it can confuse the reader of the drawings. Accurate allocation of time for completing the work usually prevents too much unnecessary embellishment. Similarly, understanding the needs of those who will use the drawing may help the author to remain focused.
- *Underworking (incomplete) drawings:* This tends to be related to inadequate time to complete a task, resulting in incomplete drawings that have little value to the receiver.
- *Incomplete written specifications:* This is a very common problem and often a result of poor programming: failing to allow enough time for the activity.
- *Failure to follow office protocols and accepted standards for information production:* Assuming these have been implemented correctly, there should be no excuses for failing to comply.
- *Searching for information that should be, or is, located in the office*: The required information is often inaccessible. This problem tends to be related to poor working practices within the office and failure to follow standard procedures.
- *Applying office standards and masters inappropriately:* this results in errors and subsequent reworks.
- *Ineffective use of IT:* This is usually related to a lack of knowledge about how to use specific software packages and tools. The problem is easily rectified through better induction of new staff, training and regular updating of knowledge and skills.

4.4.5 Balancing Risk and Reward

Businesses need to balance their exposure to risk with the level of reward. Each business owner will have their own perceptions of what constitutes an acceptable level of risk, ranging from very conservative organisations to those that are prepared to push the boundaries. Whatever one's stance, the amount of risk should be proportional to the potential rewards, be those rewards financial or related to growing the business. Risk management techniques are available and will need to be applied to all aspects of the business on a regular basis.

We are conscious that risk is evident in everything we do, and it is often addressed both implicitly and explicitly within day-to-day decision-making. Following this line of thought, we have not identified risk or risk management as a separate function within the framework (see Figure 4.2) as we believe that to do so is not particularly helpful. Risk identification and its management within a set of business and professional values should be inherent in every aspect of architecture, and thus every aspect of the framework.



The following list cascades the components of architectural management with their sub-components (activities), *the generic part of the framework.*

The lower levels of the framework (i.e. tasks and specifics) represent a variety of specific models that can be developed by the framework users to suit their individual needs.

Managing the business	***Managing projects***	***Managing stakeholders***	***Managing AM learning***
Business model	Design excellence	Stakeholders identification	The learning arch. firm
Organisation design	Design management	Stakeholders analysis	Individual learning
Marketing	Project management	Stakeholders communication	Group learning
HRM	Construction management	Stakeholders engagement	Organisational learning
IT utilisation	Facilities management	Conflict management	Inter-organisational learning
Workplace design & management	Property 'real-state' development	Value management	Learning from outsiders
Ethics & legal issues	Interior design	Social responsibility	CPD
Knowledge management	Architectural support services	Sustainability	Effectiveness of the learning process & outcome
Growth planning	Investments & other business ventures	Client education	The architectural manager's leadership skills
Financial management	Quality management	Managing client requirements	Professional bodies and educators

Figure 4.2 The architectural management competitive framework.

4.4.6 Ensuring Consistency

A sure way of retaining clients and being respected within temporary project environments is to be reassuringly consistent and reliable. This covers everything a firm does, from answering the telephone to dealing with unexpected problems. Consistency of service provision is achieved by setting appropriate standards, applying simple guidelines that all staff (including business owners) can follow as a habit. Discussing

what individuals are doing and why helps to identify good and less appropriate behaviour within the office and within temporary project teams. For large offices and businesses with offices in more than one geographical location, it is important to meet and discuss how each office manages their business to share good practice and identify areas in need of improvement. Consistency across the business and the project portfolio is achieved by sharing good practices. A consistent approach also serves to reinforce relationships within the business, as noted in the previous chapter.

4.5 A Practical Framework

It is one thing to set out in a book what we should be doing as practitioners, quite another to decide what to do, why, when and how. The framework presented in this book provides a simple, yet effective decision-making tool through which to manage architectural practices and improve performance. In this chapter and the preceding chapters much of the discussion can be readily placed into a number of themes. These themes relate to the management of the business and its projects, helping to highlight the importance of people and the need for continual improvement (learning). It is these themes that feature in the architectural management framework. The chapters that follow are dedicated to each of the four components of the framework.

- Chapter 5: Managing the Business
- Chapter 6: Managing Projects
- Chapter 7: Managing Stakeholders
- Chapter 8: Managing Learning.

The framework (see Figure 4.2) is structured to take the reader from the philosophical and strategic issues (the four components) to more pragmatic and practical considerations (activities, tasks and specifics). At the highest level are the four components of architectural management. Business owners, architectural managers and staff in management positions should be reviewing the business against all four components. Once a component has been selected, the framework then sets out a number of activities to be addressed. The activities given in this book are generic, and it may be that individual offices may wish to add or adjust the activities listed here to suit their specific context. Moving from this level we come to the tasks to be done, which is then followed by a number of specifics relevant to an individual organisation. How different sized offices may use the framework is discussed in Chapter 9. It should be noted that there may be aspects of the framework that are deemed to be at odds with how the architectural profession operates in some countries, for example engaging in property development. This is inevitable in presenting a generic framework to a global readership, and some adjustment to the framework may be required by the reader to suit their context.

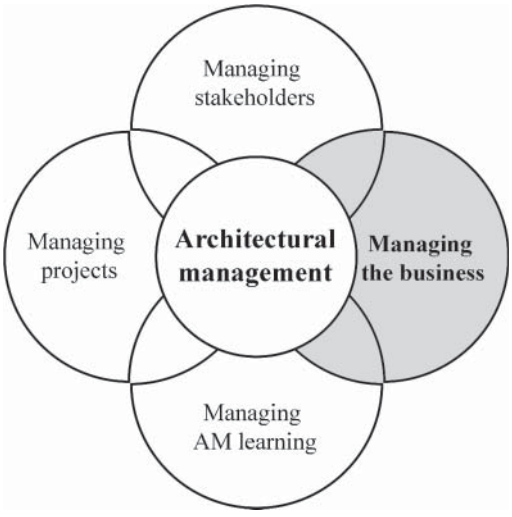
4.6 How to use the Framework

Chapters 5–8 explain the main features of the framework in detail. However, it is vital to highlight some major points here before detailing the components of the architectural management framework in the subsequent chapters.

- The framework has several levels. The higher levels are the major components of AM together with their sub-components (activities). These are listed in Figure 4.2. The lower levels are tasks and specifics that can be developed by the framework users to suit their needs and contexts.
- Using the framework requires understanding and an objective analysis of the practice's strengths, weaknesses, opportunities and threats. Also, it requires consideration of any potential risk associated with new managerial functions.
- The framework does not provide 'business in a box templates' or 'direct business protocols' to follow. Rather, it illustrates a combination of managerial functions and activities that must be considered in targeting competitiveness. Accordingly, the framework user can decide whether to use the framework for providing single-shop architectural services and/or bundled/unbundled services. This can be determined by the organisation's strategic vision and capabilities.
- The framework application requires the presence of a devoted leader: a design-oriented professional with a balanced view of creativity and profit (the architectural manager). This leader is required to facilitate the involvement and contribution of staff to the success of the framework implementation process.
- Prior to implementing any managerial function, the architectural manager should map out the different processes constituting that function, and discuss proposed changes with staff prior to implementation. This helps to identify and empower value-adding processes while eliminating waste of valuable resources.
- Finally, the architectural manager should be creative and be able to identify cross-functional processes that can be efficiently managed and performed concurrently instead of wasting valuable resources on performing them in isolation.

5

Managing the Business



Reading a book about management isn't going to make you a good manager any more than a book about guitar will make you a good guitarist, but it can get you thinking about the most important concepts.

Drew Houston, Founder and CEO of Dropbox, Inc.

The first component of the framework is managing the internal context of the architectural firm, also known as managing the practice, managing the office or managing the business. Managing the internal environment of the firm is paramount to its success in the external business environment: the market. This is because, within this internal context, the firm has to address and examine its strengths and weaknesses (its capabilities) against the market opportunities and threats, for example by undertaking a SWOT analysis. Regardless of the reasons for establishing or leading any architectural practice, the common aim is to have a successful practice in a professional and financial sense. This target requires the acquisition and implementation of interpersonal skills and managerial knowledge that architects often claim not to have (see, for example, Finnigan *et al.* 1992). This is a direct consequence of not being educated in the art of business while in architecture school.

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Figure 5.1 Managing the AM business components.

This chapter does not cover all the possible managerial functions and strategies that could be managed within the internal environment of the architectural firm. However, it sheds light on the basic managerial functions that should be considered by the architectural manager. More specifically, this chapter presents the basic 'whats, whys and hows' of the ten major managerial functions that should be considered by the architectural manager (see Figure 5.1). Some of these managerial functions can be directed entirely by the firm's architectural manager and staff, while others require a full-time specialist or may need to be outsourced to a consultant to manage them effectively.

5.1 Business Model

> *Design firms are trapped in an antiquated business model … The design industry must lay the foundation for a new ecology of firms.*
>
> Kyle Davy AIA and Susan Harris, PhD

A business model is an abstract representation (textual or graphical) of how a firm exists and acts in a chosen market. More specifically, it describes the logic as well as the entire process of how value is created and delivered to the firm's clients and stakeholders. In managing the architectural business, the owners' primary responsibility is to configure the practice business model into a tool to achieve their vision; and to translate it into action plans. The business model should answer several questions related to the

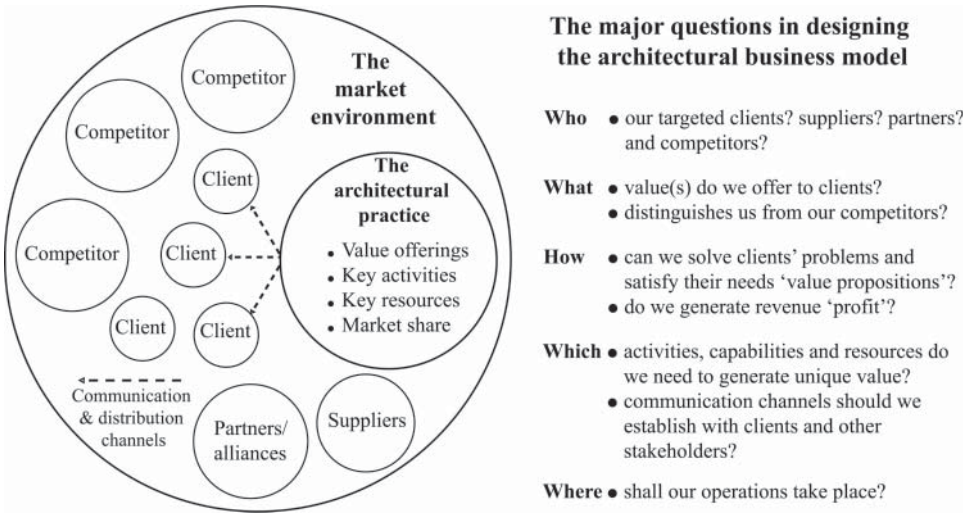


Figure 5.2 The major questions considered during the design of the business model.

practice such as *what, how, where, when, who,* and *which* (see Figure 5.2). The question is: why don't we, as practising architects and educators, have any serious debate about the diverse range of business models available to architectural businesses? And why do we see, again and again, a 'traditional' business model used in architectural firms? Perhaps it is time for a rethink?

Architects (as a result of our education) are well equipped with the tools and skills to produce unique and innovative design solutions to unique problems. We enjoy that in practice. But are we well prepared for designing innovative and unique ways by which we can offer our services competitively to clients? Innovative and unique approaches may lead to changing the construction market structure and process, in a way similar to what happened to the auction industry when the eBay platform emerged. Architectural managers should realise the potential impact of unique business models on practice survival and prosperity through different stages of its lifecycle (see Figure 5.3). This requires a pragmatic approach to constructing the business model.

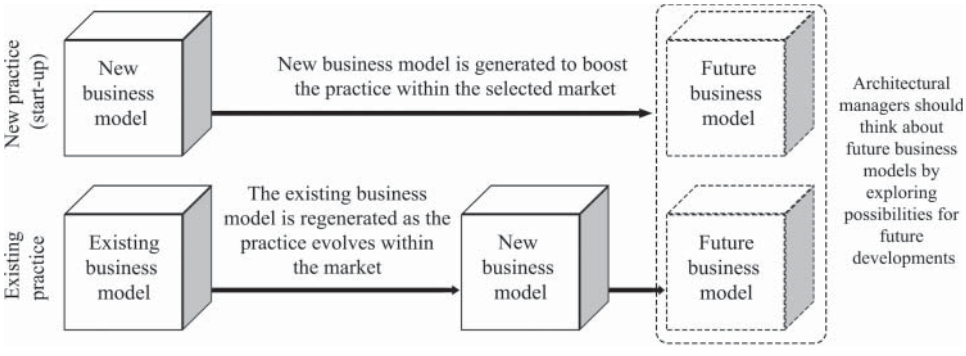


Figure 5.3 The impact of the business model on the different stages of the practice lifecycle.

According to Osterwalder *et al.* (2010), an effective business model comprises two major parts:

- *The practice façade:* This can be thought of as the theatre front stage area. It is transparent to existing clients, potential ones, and sometimes to the public, and it shows the value that the practice offers. It comprises four major elements: client targeting (segmentation), value propositions (offerings), communication channels and revenue streams.
- *Behind the practice façade:* This is the backstage area, which is not visible to clients or the public. Here, value is created through managing four major elements:
  - *key activities:* the identification and design of the work processes
  - *key resources:* identifying, acquiring and managing the different resources for the practice processes (e.g. financial, human)
  - *key partners:* analysing and deciding with whom to form alliances (e.g. suppliers)
  - *cost structure:* the most important costs inherent in the business model.

The business model should not be too rigid or copied from existing competitors. Rather, it should be dynamic and capable of being scaled to cope with any sudden changes in the market. Also, it should be designed by considering the practice's strengths, weaknesses, opportunities and threats. Similarly, it is about collaborative thinking and unified values of the practice's staff, guided and facilitated by the architectural manager. The following list is a basic roadmap to construct an initial business model for the architectural practice:

- Select and define the target market segment that the architectural firm will initially focus on.
- Carefully define the overriding problem (challenge) in the target market to which the firm is offering its solution(s).
- Define and articulate the solution that solves the problem in the targeted market, as well as defining how this solution will be delivered. This involves determining the processes and control measures necessary to deliver the solution effectively and efficiently.
- Design a unique value proposition, a high-level concept that associates the firm's business idea to some competitive aspect (say, added-value design or after-design service) that cannot be copied by the firm's competitors.
- Determine the channels through which this solution will be delivered to the potential clients (say, direct sales vs. through website, customised design vs. standardised design).
- Identify the 'secret sauces' added to the business model. This includes the strategic capabilities of the firm, which are very hard for competitors to imitate.
- Identify the firm's revenue streams. This includes answering questions like: where are we going to make money and how much are we charging for a particular service/product? How is the finance going to flow into the business?
- Identify and highlight the firm's cost structure. Where are we going to spend money and when? This will relate to capital expenses and costs associated with providing services to clients (mainly staff costs).
- Establish key metrics to measure the performance and success of the designed business model in achieving the firm's business objectives.

5.2 Organisation Design

> *I've designed the company to run so that the maximum amount of my time is available for design—which is, after all, our core activity and also a personal passion.*
> Sir Norman Foster, Foster + Partners

The organisation architecture (or organisation design) is a comprehensive blueprint that shows how the firm's tangible and intangible building blocks are linked together. It goes far beyond arranging the arrows and boxes in a typical organisation chart. Rather, it is about determining how:

- people (roles, skills, motivation, reward, performance and habits)
- information
- decision-making processes
- work procedures
- communication
- accountability
- technology

are integrated with the practice's vision, mission and strategy. The essence of organisation design is diagnosing dysfunctionality in any of these elements in the firm's current setting and then arranging them into a new architecture, shaped as closely as possible to its purpose. In other words, it is about combining the different efforts towards a collective and unified purpose. Effective organisation design will result in creating a culture that forms the DNA of the practice.

Because every architectural firm is different, it follows that there is no standard formula for creating effective organisation architecture. An effective organisation design should be aligned with the firm's strategy and its business model. It should also consider the impact of the firm's external environment (the market) on its ability to respond proactively. Accordingly, it must involve the optimal utilisation of the practice's resources: financial, human, informational, physical and other intangibles.

As the architectural practice depends on creative people, its organisation design should focus on increasing staff engagement, empowerment, and overall performance. It must also provide clear lines of accountability. Generally, two major themes guide the choice of organisation design:

- *The systematic 'mechanistic' model:* This is used in markets where demand and supply are predictable. Accordingly, the organisation design is focused on efficiency.
- *The organic 'free' model:* This is used in markets where innovation and creativity are the distinguishing factor for competition.

Selecting one of these two basic models involves considering the following aspects:

- *Choice of business strategy:* The firm could consider focusing on innovation strategy type, cost efficiency and/or an imitation strategy.
- *Organisation size:* Is the practice well planned and structured in such a way as to allow growth in terms of employee numbers and geographical coverage, or is the focus to remain small and dominate a specific geographical area.

- *Technology*: What type of technological resources does the firm have for creating and delivering its value propositions? What type of staff training is required to use the technologies effectively and efficiently?
- *The stability of the market environment:* The organic organisation model is more suitable for dynamic and turbulent markets, while the systematic model suits stable markets.

Similarly, choice among the two models should be the result of considering the basic elements of the organisation's design:

- *work specialisation:* high individual specialisation vs. cross-functional teams;
- *departmentalisation:* rigid network of positions vs. hierarchy of empowered teams;
- *chain of command:* clear lines of authority vs. integrated (collaborative) teams;
- *span of control:* narrow span of control vs. flexible and wide span;
- *decision-making:* centralised decision-making or delegated authority – these must be transparent;
- *formalisation:* standardised work processes vs. customised work procedures;
- *communication channels:* vertical/formal (written) communication vs. lateral and verbal communication;
- *trade-offs:* consistency/efficiency vs. innovation and creativity/freedom.

5.3 Marketing

> *In the '70s and early '80s, principals slowly…and often begrudgingly…bought into the idea that design firms needed marketing specialists. (My favourite aphorism on this subject is this: most designers regard marketing as the price they have to pay for not being famous).*
>
> Mary Breuer, Founder of Breuer Consulting Group

There are still many misconceptions in architecture about what marketing is and the value it can add to a professional service firm. For some, marketing is nothing but an evil endeavour to make more money; it is at odds with professional values. For others, it is narrowed down to advertising and is often seen to be the preserve of the large 'commercial' firms. These misconceptions stem from our education and the failure to see architecture as both a business and a profession. Marketing is a core and continuous business process that aims to align the practice offerings to the clients' needs regardless of practice size. It is about exchanging the practice values with clients, partners and society at large (see Figure 5.4). Marketing covers several sub-functions, such as: market research, public and customer relations, service/product pricing, advertising, and community involvement.

Marketing is essential ingredient to the architectural firm's success and competitiveness. It increases public awareness of the services/products and the value propositions offered by the practice. Similarly, it plays a crucial role in communicating the practice vision, mission and values to current and potential clients, and to the public at large. Marketing is a tool to build and maintain the public's vision of the firm's trustworthiness and reliability. It also helps the firm to attract staff who align themselves with the values and culture of the firm, thus helping to build a successful practice.

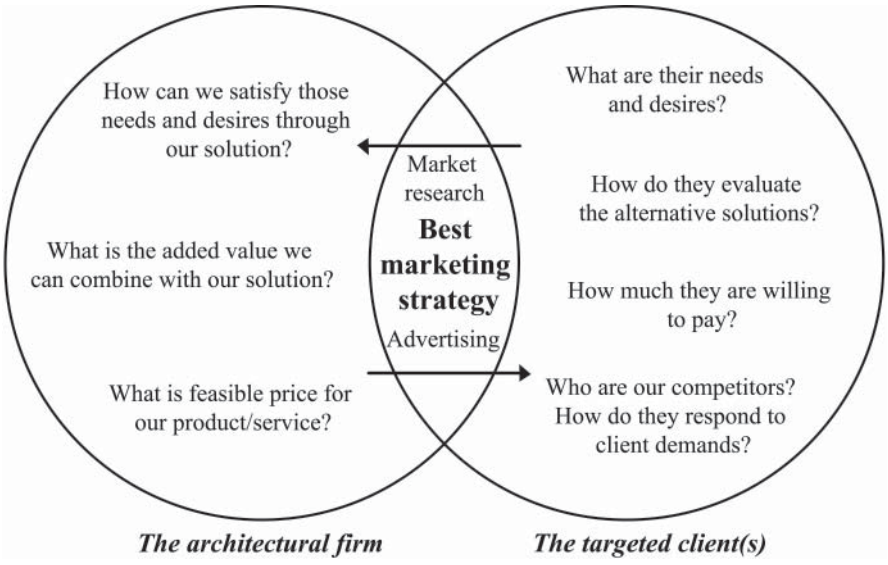


Figure 5.4 The basic concept of marketing.

Although service firms are encouraged to invest a large proportion of turnover on marketing, in reality many of the activities undertaken by architectural firms are part of their marketing activity: interacting with stakeholders and public through to advertising via completed projects. Architects can use their intellectual skills and creativity to design an innovative and competitive marketing plan with the minimum financial resources.

A simple but effective tool to help us do that is the 'Marketing Mix', which was developed by Bitner and Booms (1981) (see Figure 5.5):

- *Product:* This defines the firm's major output 'value proposition' to potential clients. It can take the form of:
  - a tangible product (building element, project 3D physical model, etc)
  - a service (architectural design, project study)
  - a combination of both.
- *Price:* This is the price at which the architectural firm will sell its product/service and should consider factors such as production costs, market share, and profit margin.
- *Place:* This is exactly what was referred to as 'distribution channels' in the business model section of this chapter: how and where the firm and client will exchange value, be it through direct sales or via a website.
- *Promotion:* This is the different efforts made by the architectural firm to inform potential clients of its presence and capabilities through advertisements.
- *People:* This is covered in detail in the HR section of this chapter. It includes managing the entire human capital needed in the firm's offering, from design notions to after-sales services.
- *Physical evidence:* As the name suggests, this is the physical means through wich a client experiences the delivery of the service or product. It includes the firm's office reception, its design studio, website, brochures, business cards, and banner advertisements.

- *Process:* This is the detailed road map of professional steps, procedures and protocols through which the firm designs and delivers its value propositions. It should be designed to be simple, practical and usable by the firm's members.

Regardless of tool used to construct the marketing plan, it is essential to address the following:

- *Understanding the targeted market (or market segment):* What are the client's major concerns, issues and interests? How do clients select among competitors? Who are the favourable clients to target and who are the ones to avoid?
- *Analysing the existing competition:* Who are the current players in the market and the potential future ones? What are the general trends and prevailing themes? What are prevailing fee levels?
- *Analysing the firm's strengths and weaknesses objectively* say, using SWOT analysis and benchmarking.
- *Planning:* To enhance the strengths and eliminating/minimising weaknesses of the firm.
- *Researching the market:* Identifying possibly rewarding opportunities to target.
- *Resources:* Identifying the resources needed to support the sales process.
- *Planning the tactical marketing operations and the KPIs.*

Figure 5.5 The marketing mix tool.

5.4 Human Resource Management

One of the most significant aspects of the practice is its continuing ability to attract the best young talent.

Sir Norman Foster, Foster & Partners

Human resources are the core strength of any organisation. The main purpose of human resource management (HRM) is to maximise the performance of staff in serving the business's strategic and operational objectives. The challenge is to synergise and harmonise the aims of both the firm and its employees in the most efficient manner (see Figure 5.6). This involves the integration of:

- individual values
- knowledge, skills and talents
- individual goals and motivations.

HRM decisions are taken at the strategic level and they define the practice's approach towards the acquisition, motivation, training, and developing of its people. These decisions have a major impact on forming the firm's organisational culture and values. There are three major principles encompassed by modern HRM practices:

- The people working for the practice are the most valuable asset and must be invested in to aid their development.
- This valuable asset cannot be treated like the other physical assets.
- Managing this asset includes managing work processes, relationships between employees and their units and project teams.

Effective HRM enables the practice to react to rapidly emerging challenges and underpins the ability to manage creative people. It helps in attracting and retaining the best talents to work for the practice. developing their skills and attitudes. and fostering cooperation and collaboration. It ensures effective utilisation of skills and capabilities by

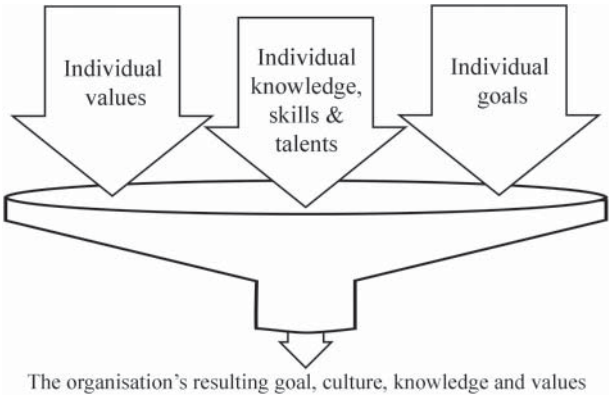


Figure 5.6 The main purposes of HRM.

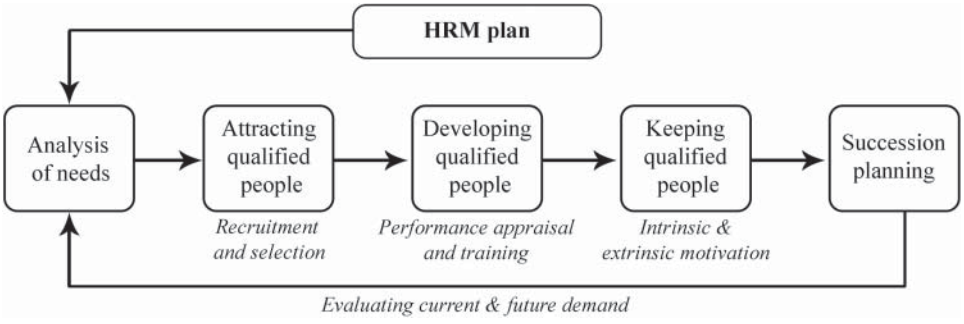


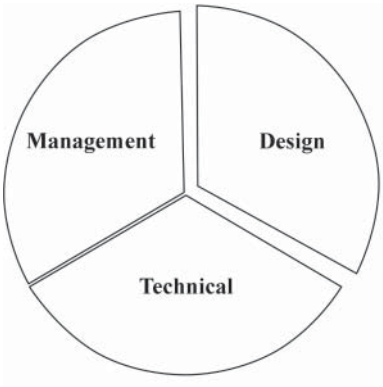
Figure 5.7 An example of a basic HRM plan.

placing the right people in the right roles/positions. A typical HRM plan will include the following items (see Figure 5.7):

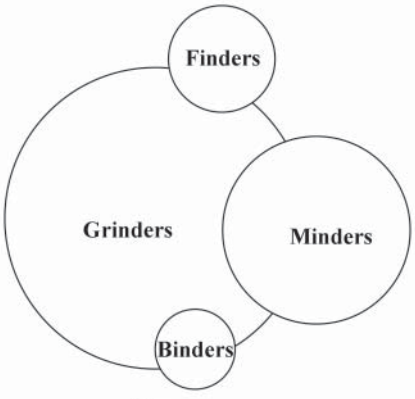
- *Analysis of needs:* What are the current and future set of skills and roles the firm needs in its professional practice? This analysis starts by assessing both the internal and external environments of the architectural practice, with the objective of identifying the currently available human resource within the practice and forecasting the future staffing needs.
- *Staffing:* Based on the analysis of needs, the practice might turn out to have a balanced HR inventory in terms of skilled and knowledgeable staff that satisfy the practice's professional aspirations. However, in many cases the inventory analysis may reveal a shortage or oversupply of appropriately skilled staff. In the former situation, the firm would hire additional staff, assigning roles and overseeing them. In the latter case, the practice has to reduce the number of staff to maintain profitability.
- *Basic workplace policies:* What are the agreed references of every action? These are statements of conduct and principles governing every single process within the practice. Such a set of policies provides the HR department with a guiding framework on how to work: ethically, legally, productively and efficiently. The policy will clearly set out procedures for dealing with difficult situations, conflict and disciplinary action.
- *Compensation and benefits:* Some firms refer to remuneration or to a 'total reward system'. This identifies the intrinsic and extrinsic packages offered to staff. It covers salary and benefits such as flexible working. Providing an effective system of compensation and benefits has a strong influence on how employees are motivated.
- *Retention:* What are the strategies needed to maintain active and loyal employees? Several strategies exist in this regard. However, ensuring all staff perceive that they are part of the firm's success and decision-making process is the most viable strategy to keep individuals active and loyal. These factors should be considered by the architectural manager when designing the organisational culture and structure.
- *Performance appraisal:* How will staff performance be monitored and evaluated? This is to be achieved through control and evaluation of the practice's HR resource on both an individual and team basis, so as to assure that the resource matches the practice's identified needs and attitudes.
- *Training and development:* How will staff performance be improved? This is covered in Section 8.6.

- *Regulatory issues and worker safety:* What are the regulatory and safety precautions that must be complied with by everyone in the firm? Ensuring compliance is most efficiently done by considering and embedding such issues when setting the basic workplace polices. For businesses that have offices that span state and international boundaries there may be differences between individual offices.
- *Succession plans:* This includes identifying the key positions that need to be filled in the future, either by internal or external staff. It usually relates to the promotion of staff and the retirement of staff. What training is required for those who will fill newly vacant positions? Leaving such decisions to chance would create a state of instability for the firm.

When developing any HRM plan/programme, the architectural manager must integrate it with the firm's strategic plan, which will create demands for particular skills and numbers of people required (see Figure 5.8). It is common in architectural practices to think of skills in terms of creative design, technical design and management. In addition to this, the type of position individuals occupy in within the business must be defined. These positions are usually referred to as 'finders, minders, binders and grinders'. The finders are usually the business owners and senior managers who are tasked with finding and retaining clients. The minders are the managers. Typically, the minders include the architectural managers who look after the business, and the design managers who look after project portfolio. The binders are relatively elusive individuals who have the ability and skills to connect different people and bind the business into a cohesive whole. The majority of individuals within the practice will be those who do the work, termed the grinders. In micro-businesses, the roles will exist within a few individuals, whereas in larger firms one individual will be tasked with a specific role. The challenge for any business is to achieve an effective balance between the finders, minders, binders and the grinders.



Specialisation:
The shales for each of these specialisations will be determined by the firm business model.



Roles:
Finders: Those who search for and obtain business projects.
Minders: Staff who are responsible for administering projects from their inception to completion.
Binders: Individuals with the skills to bring about cohesion.
Grinders: The majority of employees who carry out the tasks and activities associated with projects.

Figure 5.8 A balanced approach to staff recruitment.

5.5 Information Technology Utilisation

> *Architects need to embed BIM into their practice and not treat it as an extra, where the building is designed first and BIM it later.*
>
> Casey Rutland, former associate director at Arup

Utilising information technology (IT) and information and communication technologies (ICTs) is imperative in today's business environment. For the architectural practice, the use of IT is not limited to design and engineering software (e.g. CAD and BIM systems) or word processing software. It goes far beyond that, to cover all hardware, software and services that can be used in managing the administrative aspects of the practice, for example communication processes, marketing activities, financial management, payroll systems and many other functions. Similarly, IT covers all project-related activities, such as planning, scheduling, resource allocation, budgeting, cost control, performance analysis and reporting. The list also includes hardware, such as telephones, monitors, scanners, printers and plotters, computers and 3D printers.

All IT and ICT should assist the staff in their daily work, so easy-to-use systems should be used and regularly monitored for their suitability to the needs of the business. Ensuring a good fit between staff and technologies will help to increase operational efficiency and minimise unnecessary work and cost. This is known as the 'socio-technical' system approach. The technical system is concerned with the hardware and software; the socio system is concerned with the values, attitudes, skills and habits of the people. This applies both to the office culture and the temporary project culture, in which the socio-technical system is most likely to differ from that of the office. Compatibility between the office and project cultures needs to be considered by the architectural manager. Clients also expect their projects to be delivered using the most recent technological tools, and so there is external pressure on the business to adopt new technologies and, in the case of BIM technologies, new ways of working. This means investing in training to ensure that newer technologies, such as rapidly evolving BIM systems, are put to best use. Investing in IT is expensive and is usually one of the biggest expenditures for an office, after staffing. Accordingly, the decision to invest in a technology must be driven by the value it will add to the firm. A basic framework for taking such a decision should at least consider the following steps (see Figure 5.9):

- *Assessing business and professional needs:* In this step, the architectural manager should identify, analyse and document the requirements for IT systems, both existing and proposed. The IT systems must address the professional needs of the staff and add value to the practice.
- *Assessing the current and future systems:* Through an accurate inventory of the practice's current IT systems, the architectural manager can compare the requirements identified in the previous step with what is actually available. Similarly, through surveying the professional opinions of the practice staff, the architectural manager can end up with a detailed set of requirements for new IT systems, whether that is an upgrade or a total replacement.
- *Evaluating the available alternatives:* At this stage, the architectural manager can evaluate the available options in the market with what the practice really needs. With

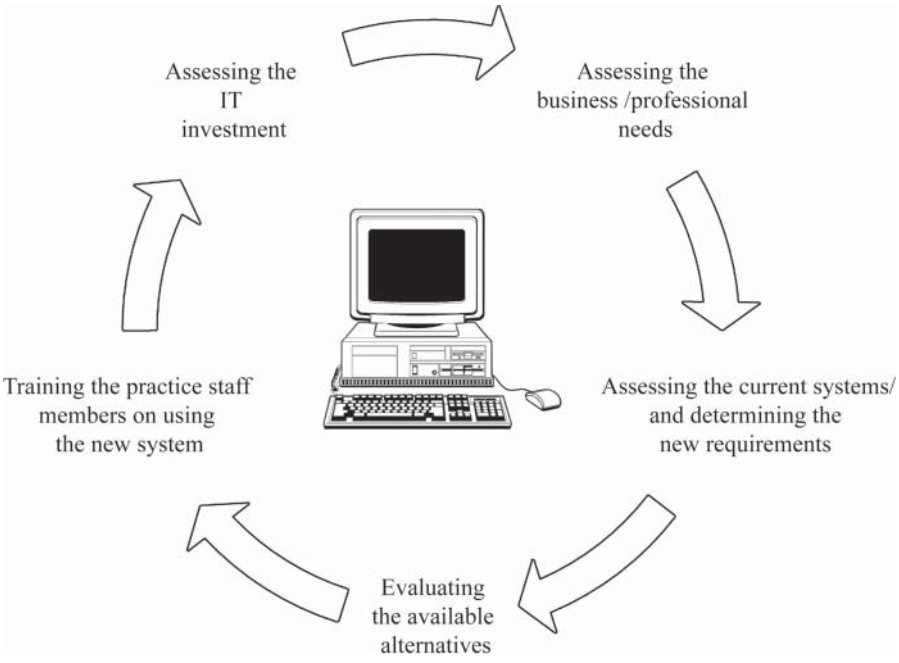


Figure 5.9 A framework to guide the decision in investing IT systems.

the information prepared in the previous steps, it is easy to compare the added value of each option to the practice, in terms of quality, price, support, and ease of upgrading.

- *Training the practice staff members:* It is critical to make sure that the new system can be easily embedded and integrated without disrupting the practice's day-to-day professional endeavours. This implies preparing each member to practise their role using the new system prior to installation.
- *Assessing the IT investment:* This is done through comparing the actual performance of the newly implemented IT system to the planned/targeted results, as established when compiling the investment plan.

5.6 Workplace Design and Management

> *The office building is a building for work, organization, lucidity and economy. Light, spacious working rooms, clearly arranged, undivided, only organized according to the pattern of the firm.*
>
> Ludwig Mies van der Rohe

How do we define the architectural business workplace? Is there a correlation between effective management of the practice workplace and its competitiveness? Each architectural practice has its own views in answering these questions, resulting in very different workplaces from one practice to another. Managing the workplace means managing all the tangible objects and intangible conditions that surround the environment in

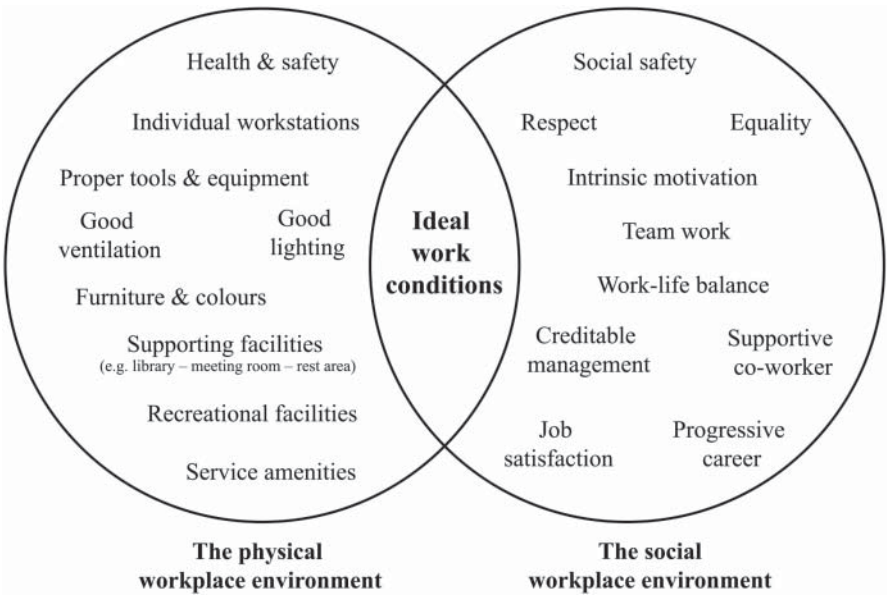


Figure 5.10 The two types of workplace environment.

which employees work. This entails managing two different, but interrelated, types of working environment – the physical and social (see Figure 5.10) – to create a safe, healthy, inspiring and attractive workplace. Managing the physical environment includes consideration of the practice's space layouts, providing staff with the necessary resources, equipment and facilities to perform their jobs, and ensuring compliance with health and safety procedures. Managing the social environment covers all the intangible aspects of the workplace that lead to a good working ambience, such as, for example, ensuring equality and respect.

For designers, the work environment is like a ship: we spend most of our time on the ship working, learning, innovating, relaxing and lastly making a living. The work environment has an influence on how knowledge is created and shared within the practice. Similarly, it plays a major role in inspiring the staff to creativity and to meet their aspirations. The manipulation of objects and conditions in the environment has the potential to enhance staff relationships with each other. It also has the potential to unify and reinforce their values and principles towards one culture: the practice culture. Accordingly, managing this environment effectively will contribute to the practice's efficacy, productivity and the well-being of its employees. Also, and from a marketing perspective, a positive working environment has a strong impact on the client's first impressions, in terms of trusting the professionalism and creativity of this practice and its offerings.

Managing the architectural practice workplace, is a 'design project', similar to the other professional projects delivered by the practice. So it should be a prototype of what the practice is capable of creating. There are limitless solutions to be considered in designing and managing the architectural firm's workplace effectively and innovatively. However, a minimum set of legal and social standards must be met. These cover employment law and health and safety standards for example. However, the

architectural manager must start this 'project' by identifying the client body, which includes the practice staff and its potential future clients. The needs and desires of these two constituencies vary but they share the desire to see 'and live in' a creative and safe (supportive) environment.

An inevitable question relates to the need for physical office space and the balance to be struck with remote working and homeworking. The majority of architectural practices still operate within a physical office space. This is deemed important in terms of having a physical presence in the community the practice serves, as well as a place in which individuals can collaborate and share knowledge interpersonally. Increasingly, this is being supplemented with remote working, reducing the demand for physical space but also creating a need for collaborative ICTs to facilitate virtual communication and collaboration.

5.7 Ethics and Legal Issues

Ignorance of the law excuses no man from practicing it.

Addison Mizner

Ethics deals with moral values and decisions confronting people and their organisations. It focuses on codes of conduct (professional and technical), professional liability and contract law. Ethics is a soft domain of practice and knowledge, and all professions have established their own sets of ethical values, which are often implicit in the way in which they behave. This behaviour represent the culture of the office, and clients expect a professional level of service that is underpinned by ethical values. We must embrace both the letter and spirit of the law and codes of conduct governing our professional affairs.

Practising architecture ethically is important for the success of the firm. Effective ethical actions will enhance the practice's collective reputation and the confidence which that inspires. Similarly, ethics as an input to the decision-making-process provides the practice with a clear, pragmatic and legitimate guide when working towards achieving specific goals.

Common core ethics are founded on honour, integrity and honesty. Common architectural ethics can be further extended to include

- acting with competence, integrity and transparency in all professional matters
- ensuring the safety, health and welfare of the public
- creating efficient solutions for the client while balancing with the needs of the other stakeholders
- considering the social and environmental impact of their professional activities and actions (such as ethical resourcing of labour and resources within projects)
- guarding the reputation of their profession.

These issues can be addressed under six headings as illustrated in Figure 5.11.

An effective strategy for practising ethically is to embed the ethical code of conduct in the practice's total quality management system. In every country, best ethical practices for architects are determined and published by the respective professional regulators and licensing associations, such as the AIA, RIBA, and ARB. However, if any ambiguous ethical issue does arise in practice, the architectural manager can simply

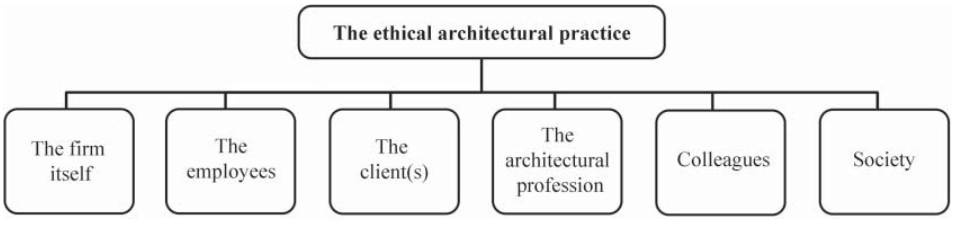


Figure 5.11 The constituencies affected by ethical practices in architecture.

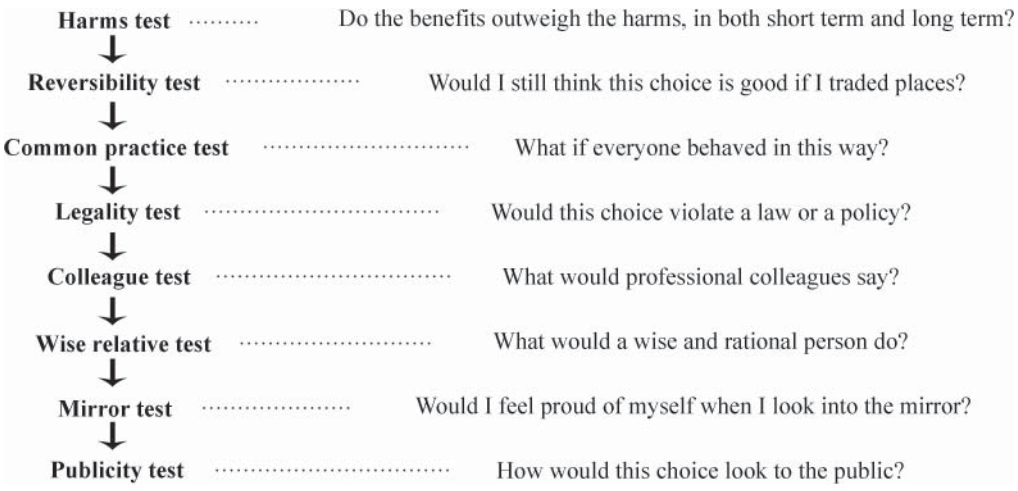


Figure 5.12 A conceptual model to evaluate the morality of available alternatives.

construct a conceptual model to examine the morality of the available alternatives (see Figure 5.12).

If the architectural firm does not have a full-time lawyer working in house to monitor the professional practices of the firm, it should consider outsourcing this function to an external legal consultant.

If the architectural firm decides to establish its own unique code of conduct and ethical practices, the following steps provide the initial procedure in doing so:

- *Building a multidisciplinary ethics team:* This should consist of the practice leaders and representatives of its different departments. A law specialist should be involved, either an employee or a consultant. The diversity of the team members should ensure the designed code addresses potential professional risks.
- *Constructing the code of conduct:* It might be beneficial to start this stage by looking at other practices' codes of conduct. However, the final version of the code of conduct must be tailored to the practice's own identity, culture and values. The statements included in the code must be easy to communicate to practice staff at all levels of the organisation. Accordingly, simple and straightforward language is preferred to complex and convoluted phrasing.
- *Putting the code of conduct into action:* The designed code of conduct means nothing unless it is applied in every single action taken in the practice. It should be disseminated to all staff and should be available as a reference whenever it is needed. Similarly, it should be announced to everyone in the practice that their actions are governed by the code of conduct. This requires ethical leadership by the architectural manager in observing the code and it also requires training sessions to address any ambiguity in applying it.
- *Monitoring, evaluating and developing the code:* The architectural manager is responsible for overseeing compliance and ensuring commitment of everyone to the code. They must monitor its use and determine whether it is delivering its intended result. It is crucial for the architectural manager to review the code regularly and update it to address any changes in professional laws and regulations.

5.8 Knowledge Management

Knowledge has become the key economic resource and the dominant – and perhaps even the only – source of competitive advantage.

Peter Drucker, management educator, consultant and author

Knowledge is an accumulation of contextual information, judgements, values and experiences that can be used for evaluating and incorporating future experiences and scenarios. It is the intellectual capital for any practice and a major driver of its success and competitiveness. This capital originates from the practice databases, written reports, drawings, specifications, schedules, logs, procedures, policies, calculations and previously uncaptured expertise and experience in individual employees' heads. Managing this intellectual asset means following a pragmatic process for identifying, creating, evaluating, storing, retrieving, sharing and using the practice's knowledge assets for the purpose of enhancing learning and performance.

Effective knowledge management (KM) is paramount for the practice's health and sustainability. For the architectural practice, effective KM has the potential to

- facilitate decision-making
- build learning practice by making learning routines
- stimulate cultural change and innovation
- enhance innovation
- improve performance
- improve service/product delivery
- prevent information overload
- minimise mistakes
- increase intellectual capability
- decrease the gap between what the practice knows and what the employees know
- develop better responsiveness to client needs
- retain tacit knowledge (when employees leave)
- enhance responsiveness to market changes
- minimise risk.

In any project, providing the required information at the right time for the right people helps in creating mutual value (understanding and agreement) among them and accordingly should help them making better-informed decisions.

Architectural practices have different modes, patterns and tools for knowledge capture and sharing, for example IT tools, total quality management systems, quality circles, facilitated meetings, and storytelling. In developing any strategy to manage practice knowledge, the architectural manager must consider the impact of the different participants' cultures. Generally, there are four major stages in any knowledge management system (see Figure 5.13):

- *Knowledge generation:* This is the new data and information created as a result of business operations either internally or from external sources. This stage can occur either formally, by intentional research or experiment, or informally, through daily staff interactions. The resultant knowledge at this stage is intangible and can easily depreciate over time.

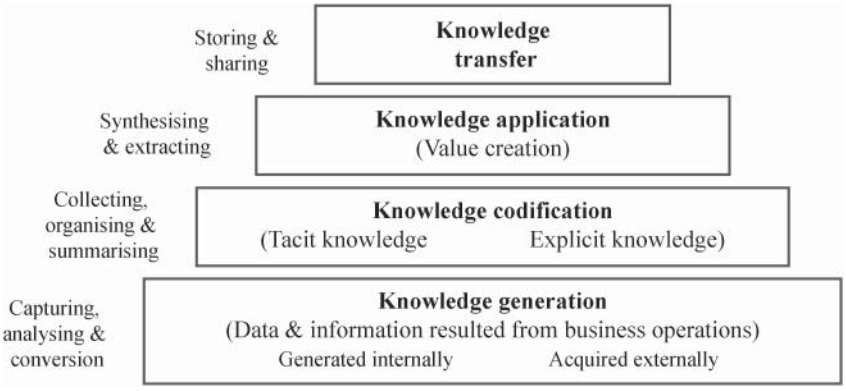


Figure 5.13 A basic conceptual system for knowledge management.

- *Knowledge codification:* This is the capture and conversion of tacit knowledge into explicit knowledge that can be applied and transferred. At this stage, the generated knowledge is organised and represented in a way that it becomes easy and accessible for use, either by individual staff or by the practice.
- *Knowledge application:* This involves extracting value from the available knowledge assets and deploying it in the firm professional processes and operations.
- *Knowledge transfer:* This is the firm's ability to share and disseminate the extracted knowledge efficiently and effectively. This includes the ability to reflect on knowledge and update it as appropriate. This will help to refresh the collective knowledge of the business as individuals interact with new clients and project stakeholders and engage in CPD.

Several strategies for turning the architectural practice into a learning organisation are discussed in Chapter 8.

5.9 Growth Planning

Growth is never by mere chance; it is the result of the forces working together.
James Cash Penney, founder of J.C. Penney stores

The growth of the business can be perceived and measured using different criteria, such as profitability, diversity of the client portfolio, number of employees, physical expansion, or increased market share. These criteria have different degrees of importance to different practices and their owners. Accordingly, successful growth can be judged based on how well the practice performs relative to its stated goals. Once the practice starts to grow, a new set of challenges will emerge, which need to be understood and managed by the architectural manager. In other words, the degree of complexity increases at every stage of the growth process 'cycle', and this complexity must be controlled to ensure a smooth transition. This requires flexible managerial structures, prepared and educated people, and scalable work processes.

The growth of the firm must be planned rather than left to happen by chance and/or as a reaction to external pressures alone. If planned effectively, practice growth can give

greater gains and profits, increased power and market domination, greater efficiencies from economies of scale, a greater ability to withstand marketplace economic fluctuations, and an increased chance of practice survival. Moreover, some potential clients will judge the practice's effectiveness and competitiveness from its growth rate within a market. Similarly, for most employees, practice growth is used as an indicator of how much confidence they should have in the firm's stability and their future career security.

To gain the potential benefits of the business growth, the architectural manager should plan growth strategies effectively. Several models exist to guide the planning of organisational growth. The most common growth strategies are:

- *Forming joint ventures:* This is collaboration with other firm(s) by pooling resources and expertise to achieve shared goals. Risks and rewards are shared. The result of this collaboration is a new business venture that is owned by the parent organisations. For large and complex design projects, joint ventures may be set up with other architectural practices, with engineering consultancies, and with developers and contracting organisations. These tend to be project-specific relationships – a marriage of convenience–that terminate once complete. Sometimes these relationships may develop into longer-term relationships, becoming strategic partnerships and alliances.
- *Strategic alliance:* These are similar to joint ventures in terms of collaboration, but do not involve creating a new company. They may be set up for one project, or more commonly for a series of projects.
- *Penetrating new markets:* This includes expanding the practice in other geographical areas, introducing a newly developed service/product to the existing market, and/or targeting broader client segments.
- *Seeking external funds:* Financial resources for expansion can be raised from banks, investors and other financing agencies.

Regardless of the chosen strategy, the architectural manager must ensure that the firm's resources (people and technologies) can support the growth plan. If not, then there will be a need to invest. Managers and business owners must be mindful of the risks of growing the business (or not) and they should have a risk management plan in place to deal with unexpected market fluctuations.

5.10 Financial Management

> *No profit equals no business…Without profit to support positive cash flow, you don't have a business, you have a potentially dangerous liability.*
>
> Sam Frowine, author and founder of the Institute for Business Owners

Any organisation, be it for profit or non-profit, needs effective financial management in order to achieve its goals and objectives. Architectural firms are no exception. Unfortunately, we are rarely exposed to this fact in architecture schools, where we are told that our future professional success will rely only on our creative and innovative design skills and expertise. However, that is only part of the equation. Successful architectural practices also possess business acumen, at the heart of which lies sound financial

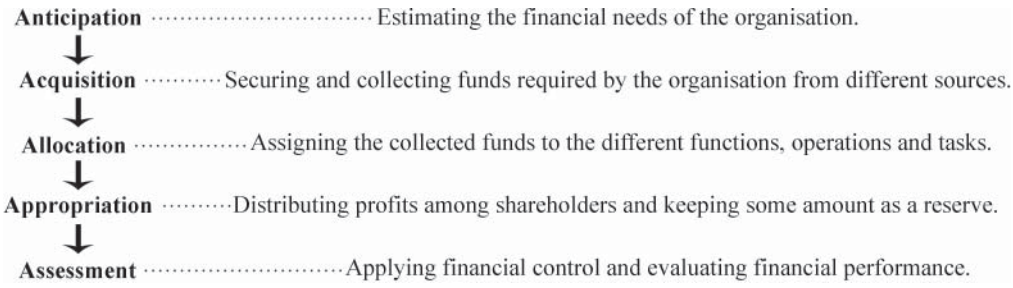


Figure 5.14 The 5As of financial management.

management. Financial management has two major parts: raising financial resources for the firm and ensuring effective utilisation of these resources.

Financial researchers have categorised financial management into the '5 As': anticipation, acquisition, allocation, appropriation and assessment (see Figure 5.14). Understanding these concepts will assist our comprehension and application of financial management.

Money impacts almost everything the firm does. Accordingly, it must be managed effectively. Effective financial management helps the architectural practice by:

- ensuring utilisation of available resources in an effective and efficient manner
- giving competitive advantage in obtaining increasingly scarce resources
- achieving goals and objectives
- ensuring the respect and confidence of funders (funding agencies and partners)
- ensuring a proactive stance ahead of market turbulence
- supporting decisions on diversification of its investments.

Managing the firm's financial issues can be done by the architectural manager in smaller firms, but it is better to employ expertise in finance and accounting where possible. Several models exist for managing the firm's finances, but for any model to be effective it is important to consider:

- *funding:* the source and application of money
- *general accounting:* the records of all monetary transactions
- *project cost accounting:* record-keeping of revenues, reimbursable expenses, direct expenses and direct personnel time
- *profit planning:* goals for profit and uses of capital and operating budgets
- *cash flow:* changes in cash position during a given period
- *cash management:* billing, collecting and disbursing cash
- *remuneration:* staff salaries and benefits
- *the firm's valuation:* pricing for ownership transition.

In addition, the architectural manager should be familiar in preparing and interpreting the different financial statements (see Figure 5.15) and financial indicators (see Figure 5.16).

The following list of steps can be used for making a sound financial plan for the architectural practice:

- *Identification:* This includes identifying the current financial situation of the firm, the desired financial goals and the firm's attitude toward risk. Some of these data can be

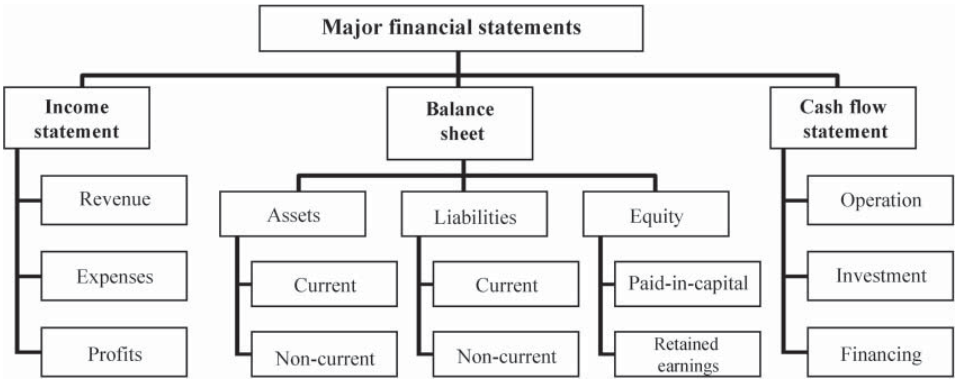


Figure 5.15 The major financial statements to be considered by the architectural manager.

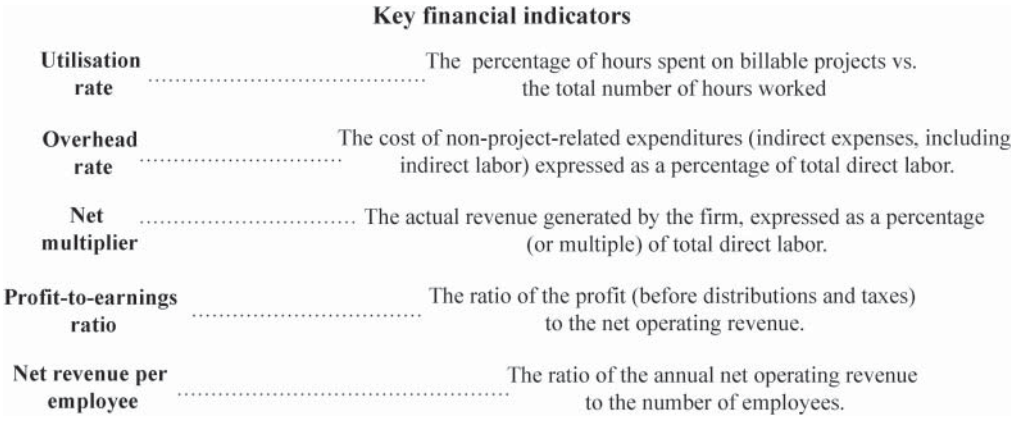


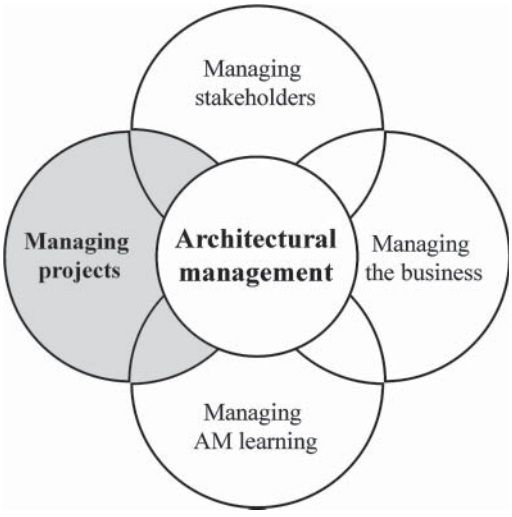
Figure 5.16 The major financial indicators to be considered by the architectural manager.

obtained from the firm's previous financial records, but other data must be derived from the firm's vision, in which case a collaborative approach is required.

- *Analysis:* The data collected in the identification stage need to be analysed critically to assess the financial status of the firm and to identify what actions need to be taken to achieve the desired financial goals. This stage includes analysing the firm's assets, liabilities, cash flow, insurance coverage, tax strategies, and investments.
- *Strategizing:* Based on the goals identified and the analysis conducted, a set of alternative financial decisions are compiled. The architectural manager, as a leader or member of the financial planning team, must evaluate these alternatives against the potential risks and the consequences associated with them.
- *Doing and monitoring:* The selected financial decision above is to be put into action with a defined time-frame and using defined resources. It is critical that the architectural manager defines a set of milestones for monitoring the progress of the implementation in order to identify and correct any variation.
- *Evaluation and feedback:* Once a targeted financial goal is achieved, it is necessary to evaluate the degree of success and to document the lessons learned from this journey, in order to aid future financial decisions.

6

Managing Projects



Architects see the big picture…They don't just design four walls and a roof – they create total environments, both interiors and exteriors, that are functional and exciting places in which to work and live.

AIA Florida chapter website

The second component of architectural management is managing the individual projects that comprise the project portfolio. Managing projects effectively is crucial for the success of the firm and its competiveness, requiring project management and design management skills in addition to design, technical and commercial expertise. Having staff with a balance of design, technical and managerial skills will allow the practice to provide a professional service to clients across all projects. Employing staff with a wide range of knowledge and skills will bring opportunities to explore new markets: perhaps project management and construction management. This provides the potential for additional revenue streams and may be instrumental in helping the architectural firm to better dictate the quality of the project and the resultant building. Architectural firms must be prepared to venture into unfamiliar territory, to better understand the range of services that may be provided; this will help them to accommodate economic swings in specific market sectors. This requires vision and good management from the

Handbook for the Architectural Manager, First Edition. Stephen Emmitt and Mohammed Alharbi.

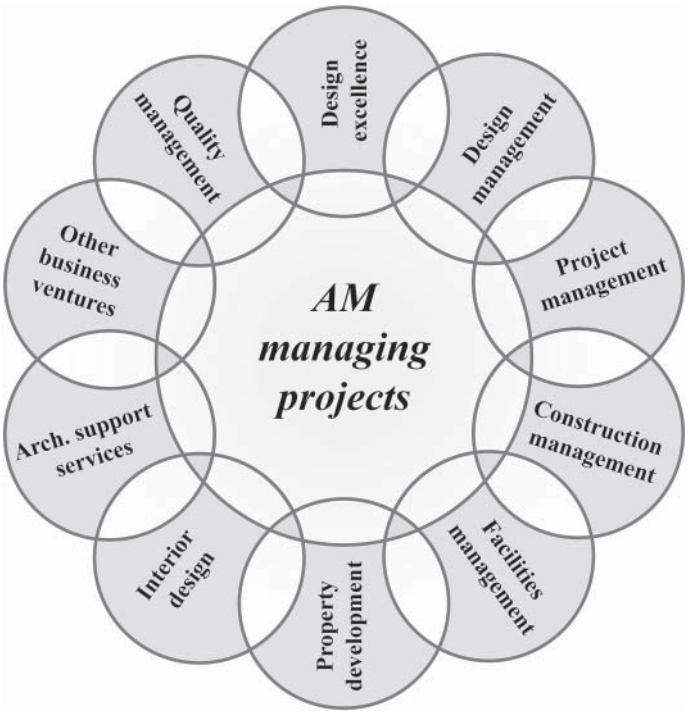


Figure 6.1 Managing the AM project components.

firm's owners, alongside effective employment strategies to create a multidisciplinary organisation. In addition to offering a full architectural service, it will also allow the firm to unbundle particular services to suit specific client requirements. This allows the firm to be more competitive and more responsive to shifts in market conditions.

This chapter does not cover all possible business ventures; instead it highlights the basic domains of practice that can easily fall within the territory of a competitive architectural firm if it has the necessary skills and strategies. More specifically, we present the basic 'whats, whys and hows' of the most common ten business practices and functions (see Figure 6.1) that should be considered by the architectural manager.

6.1 Design Excellence

> *Architects are adept at seeing the big picture, they are multi-skilled and have a holistic overview of a project. We've always had these skills in abstract terms and we use them in order to create something beautiful.*
>
> Russell Curtis, director of RCKa

As architects, we pride ourselves on our creative design abilities; it is what we are educated in, it is what we love doing, and it is what we are best at. No other professional has such an extensive grounding in design, although contributions are made to the project design by people providing additional skills, be they technical or managerial. Design as a process includes generating ideas, evaluating possibilities and preferences, choosing the best solution for a unique context and developing it to maximise value to

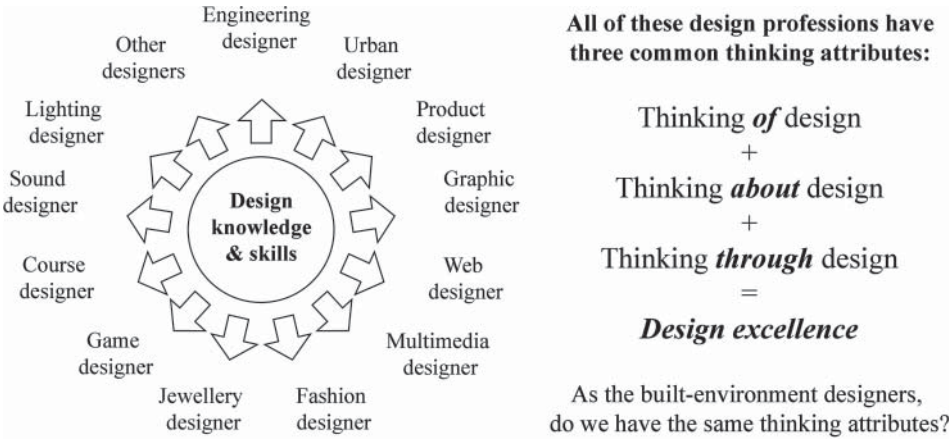


Figure 6.2 The common perception of the design process among different types of designer.

the client. A number of factors that distinguish architects from other types of design professional are shown in Figure 6.2). Design excellence through innovative solutions should be associated with increasing client value. It is about making great buildings, guided by business needs and a wider concern for society.

Having a clear philosophy and a pragmatic approach to both design thinking and design execution will create an interesting ambience for architectural creativity to flourish and prosper. This will be supported by the managerial structures and direction from the firm's owners. Having and implementing such a methodology will continuously create and implement new knowledge to be stored in the firm's dynamic knowledge database. More importantly, clients appreciate a design process that serves their needs. The practice will then be perceived as an innovative ideas-generator and competent deliverer of those ideas, rather than just the supplier of beautiful drawings.

It is difficult to tell architects how we should think about and execute building designs; our thinking and individual approaches to solving design problems is deeply engrained and very much a personal crusade. However, in order to start thinking pragmatically about and reaching design excellence, architects should balance analysis and synthesis. In other words, an equilibrium thinking between problem-based and solution-based approaches must be established (see Figure 6.3).

The following steps are a basic guide for any architectural design methodology that targets design excellence:

- *Design problem exploration:* As architects we are asked to produce creative and innovative solutions to specific problems. Sometimes these problems are clearly and precisely highlighted in the briefing document prepared by the client's project manager. However, most clients are in favour of a more extensive and deeper identification of their design problems by the designer (brief taker) prior to design in order to explore more development opportunities and maximise potential value gains. This requires effective exploration of the design problem, its core elements, and how these elements may fit together. Without an effective briefing process and resultant brief it is difficult to proceed with sufficient certainty, often resulting in unnecessary work and rework.
- *Design context exploration:* Similarly, we are asked to ensure that the solution we design – the building – is properly linked to its surrounding context and the parameters set out in the brief. Accordingly, the project site and its surrounding

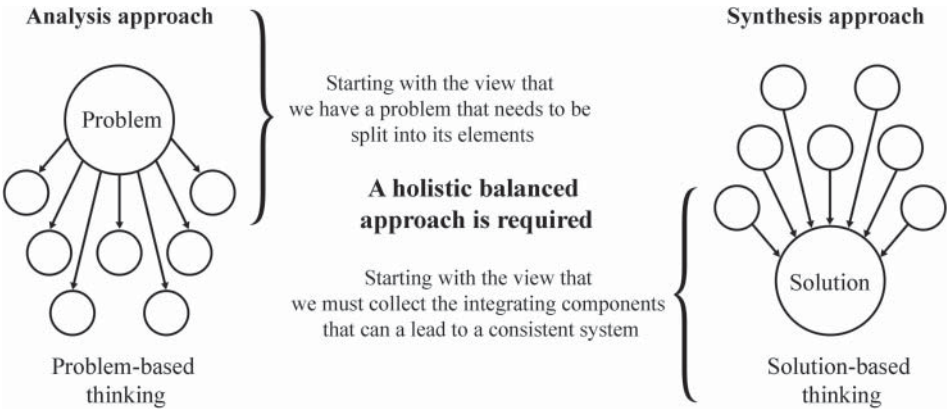


Figure 6.3 A balanced approach to think about the process of architectural design.

features need to be explored, with careful consideration of the resultant impact of the design on its context and vice versa. During this process it is legitimate to question the contents of the brief to ensure they remain current.

- *Solution conceptualisation:* After analysing the gathered data from the previous two steps, the architect can shape a conceptual abstract design parameter, 'a boundary of constraints', within which several design options can be explored and subsequently developed. These options can then be evaluated against several functional, economic, and aesthetic criteria developed by the architect and agreed with the client. This provides a basis for making an objective selection of the options.
- *Solution finalisation:* The selected design option is further developed in light of more advanced criteria such as value-adding to the client and users, ease of constructability, and safety during design and occupation. This ensures the building design can be realised in accordance with the client's wishes.

While this may be a relatively familiar process, it is important that it is formalised and managed in line with the values and standards of the business. This helps to ensure consistency of service and also helps in managing the expectations of clients, staff and project stakeholders. Formalising the process will also help the architectural manager to channel the design process into a value-adding paradigm. This will help to distinguish the practice from its competitors.

6.2 Design Management

> *Everything ever made by human beings first requires design, and in our world today of commercial business, this in fact requires management.*
>
> Design Management Institute – DMI Website

The architectural design process, or rather the means by which it is managed, has significant implications for the architectural firm's survival and competitiveness. Accordingly, the context in which designers work must be understood before the process can be managed effectively. Claims that design cannot be managed because of its 'chaotic' nature

Figure 6.4 The purpose of architectural design management.

have long been debunked by researchers, although it is not uncommon to still find this as an excuse for poor management of the design process. Design management (DM) is inextricably linked to, but often independent of, the management of the architectural firm. It is concerned with finding a balance between creative freedom and managerial control (see Figure 6.4). Creative design needs a supportive managerial environment in which to flourish. For managers, 'design' is just another resource that needs to be managed to ensure the profitability of the firm. Managing this 'core resource' should be delegated to a design manager, someone with a design background and interpersonal and managerial skills, who can be the link between architects and managers.

It is becoming ever more important for firms to monitor their management and design procedures to ensure that they reduce the degree of business risk associated with cost, time and delivery of design projects, and in order to remain competitive. DM enhances both communication and collaboration processes. It enhances time management, reduces design errors, helps in producing high-quality products efficiently and profitably, and enhances the process of knowledge creation and sharing. Furthermore, having an effective DM model has the potential to maximise individual skills as well as to ensure their effective utilisation. Effective DM has the potential to enhance the firm's productivity and improve its ability to respond rapidly to changes in the market.

Several models exist for DM, although there are two main models for managing architectural design (see Figure 6.5):

- *The Traditional DM model:* A 'job architect' is appointed to administer the project from inception through all of its stages to practical completion (with support from architects and technologists within the office). This approach is best suited to smaller practices and projects and is a familiar model to all architects.
- *The DM sequential model:* Individuals with a variety of specialist skills work as a team, each specialising in a specific segment of the project, under the direction of a design manager. This approach is suited to larger practices and projects and will be less familiar to architects, many of whom may not be comfortable with the perceived loss of 'control' over the project.

As mentioned above, it is recommended that the practice assign the duty of managing its core competence – architectural design – to a devoted design manager. However, it is essential for the architectural manager to cooperate and supervise the design manager's

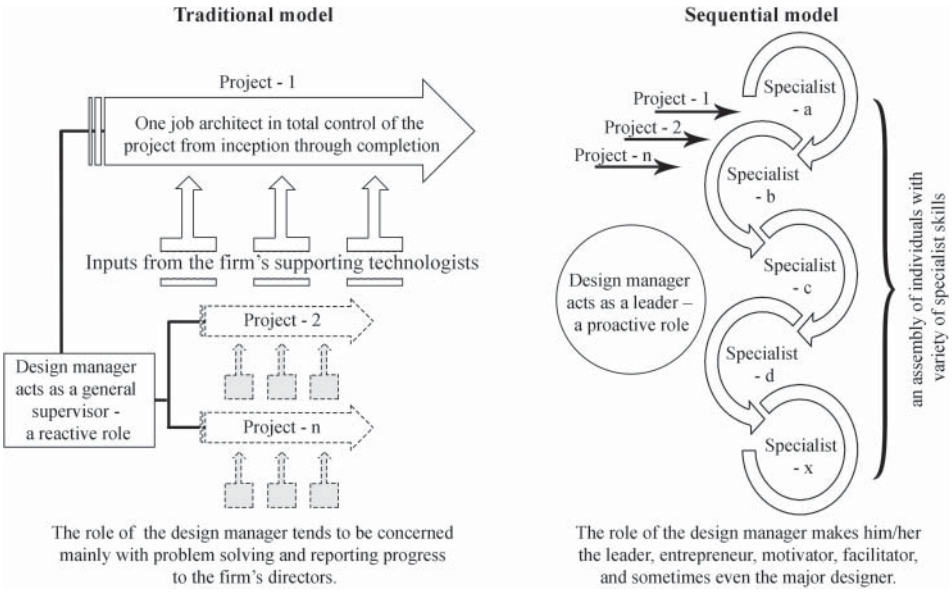


Figure 6.5 The two popular models of architectural design management.

work, especially during the establishment of the design management methodology. The following items should be considered in all design management methodologies:

- Each design project should be thought of as a business project undertaken by the firm. This implies that the design manager should establish a project charter document for each design project. This document contains a detailed description of the client requirements and constraints. Similarly, it must state the design team members, their responsibilities, obligations, deliverables, and design milestones. This is a feature of QA systems.
- Once the design team starts work, it is the responsibility of the design manager to monitor and control the progress of the design process and update the architectural manager. Besides applying these managerial controls, it is the duty of the design manager to provide the design team with motivational leadership and feedback on their progress.
- The milestones of the design process can be used as both quality checks and learning opportunities. For the former, the design can be presented to experienced staff to evaluate and make recommendations for any necessary changes. Presenting the design outcome to senior staff as it progresses can resemble the architectural design studio 'crit', through which valuable feedback and lessons can be harvested.

6.3 Project Management

We all work to empathize with our clients…It is our job to bring it all together in a successful architecture project.

Mark LePage, architect and founder of EntreArchitect

Fundamental to the delivery of a well-designed and well-produced project are the issues of procurement, client empathy and briefing. Responsibility for these issues lies with the guardian of the clients' goals, objectives and interests through the different stages of a project: project manager. Project management (PM) is a well-defined discipline and one that may sit within the architectural firm's portfolio of services. It involves planning, co-ordinating and controlling the complex and diverse activities of modern projects, and the management of time, cost, quality and, most importantly, people (see Figure 6.6). With the emergence of the PM profession, architects have relinquished the role of project leader and in many instances have lost control over design quality (see Figure 6.7). A positive outcome is the professional delivery of projects, but in many projects the important link between the architect and the client is broken. Adopting architectural management can provide the means to manage projects effectively and efficiently, and in doing so provide an additional source of fee income.

PM is an enabling tool that can be used to both retain and attract business by architectural practices. Project management can be offered as part of the architectural firm's service portfolio because it is an excellent opportunity to deliver high quality buildings within an environmentally responsible framework, and generate additional

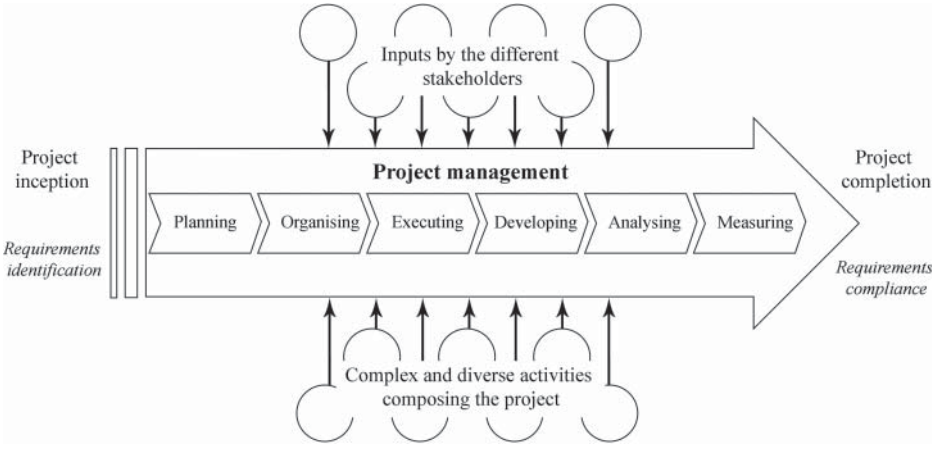


Figure 6.6 The purpose of project management.

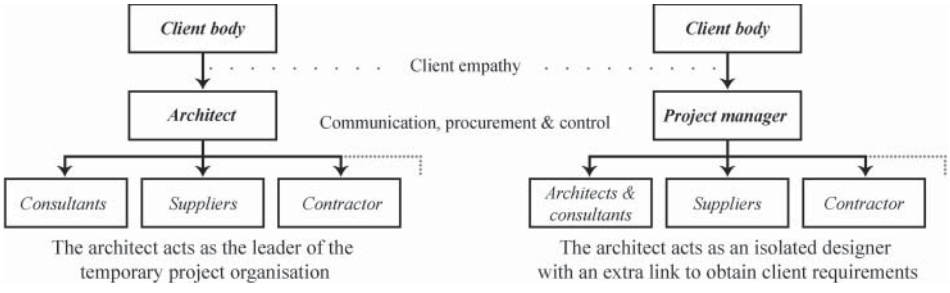


Figure 6.7 Two modes of the architect–client relationship.

fee income. Furthermore, it maintains the direct link between designers and client and thus helps to improve the communication process and outcome, which in turn improves project delivery. By adopting PM, the architectural practice can re-establish control of the building process and in turn (re)gain respect from clients. It is only by adopting the PM role that we will be in position to control the design process, and hence design quality. This means that the staffing profile of the firm will need to be adjusted to employ professional designers with PM skills and project managers with a love for design.

In order to be capable of offering project management services to clients as part of the practice's professional service provision, the architectural manager needs to establish and follow a solid managerial framework for managing every project. In this regard, several frameworks already exist, such as PMP PMBoK, PRINCE2, WATERFALL and many others. Each of these frameworks has its supporters and advocates. However, it is widely accepted that PMI PMBoK is the most popular project management methodology. According to the fifth edition of PMI PMBoK, there are five processes that need to be managed for every project:

- *Project initiating:* This covers all the required tools, techniques and procedures that guide the start of a new project/phase, through effective definition of its objectives, scope of work and deliverables, the critical success factors, and project constraints. In short, this process gives the authority to start the project.
- *Project planning:* This covers all the tools, techniques and procedures such as the project time schedule that result in creating the project baseline.
- *Project execution:* This covers all the tools, techniques and procedures involved in managing the actual creation of the project outcome.
- *Project monitoring and controlling:* This covers all the tools, techniques and procedures for tracking the progress of the project and correcting any deviations.
- *Project closing:* This covers all the tools, techniques and procedures that help in finalising tasks and dealing with any issues from the above processes.

According to the PMI PMBoK, being able to manage these processes productively requires the acquisition of appropriate skills and familiarity with the following ten knowledge areas:

- integration management
- scope management
- time management
- cost management
- quality management
- human resource management
- communication management
- risk management
- procurement management
- stakeholder management.

It is highly unlikely that any one individual within the architectural practice has sufficient understanding of all ten knowledge areas, so a collaborative approach is required to ensure that there are no deficiencies that could negatively impact the project.

6.4 Construction Management

I am often surprised by the number of firms providing architectural design services and forfeiting the final phase of the process, construction administration. Construction administration is not *an option, to be offered as an additional service. It is an integral part of the architectural process.*

Mark LePage, architect and founder of EntreArchitect

Similar to the slow realisation of the importance of utilising and offering project management services, architectural firms have also been slow in realising the importance of adopting and including construction management (CM) as a part of their service provision. Although the thought of getting involved with managing building construction will not appeal to all architects, the adoption of CM services, similar to PM, allows the architect to (re)connect with construction and construction quality. Given that, in many cases, architects are judged on the quality of the building, CM may be a good strategy to exercise more control over how designs are interpreted and realised, subject to procurement and contractual responsibilities (see Figure 6.8). Given the rapid advances in information technologies and off-site construction techniques it is possible to realise buildings without undertaking a traditional contractor role; and this is an opportunity starting to be realised by a growing number of architectural firms who are pursuing a 'creator *and* maker' agenda.

CM is mainly concerned with managing the construction project during the contract period. Many of the tools used to do this, such as total quality management, lean construction, value management, and performance appraisal and control mechanisms will be familiar to the larger practices, and therefore moving into construction management is not such a big step as many may initially think (see Figure 6.9). It will, however, require the acquisition of people with CM experience and the appropriate skills to operate effectively in the world of construction.

By adopting the role of construction managers, architects can manage the process of transferring their abstract ideas into tangible products. In doing so, the opportunity exists to reduce the cost of the finished buildings, improve the level of quality and improve time management to eliminate delays. Additional benefits include the ability to ensure both sustainable processes and products, enhanced feedback to the design office from the construction site, improved communication among the different project parties, and minimisation of claims and variation orders.

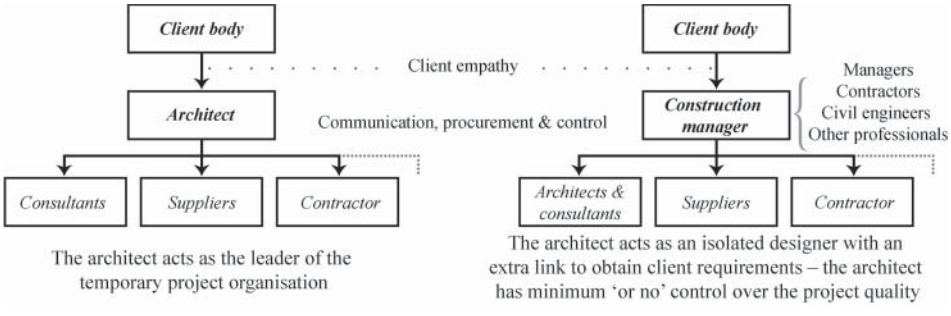


Figure 6.8 The diminishing role of architects with the emergence of the CM layer.

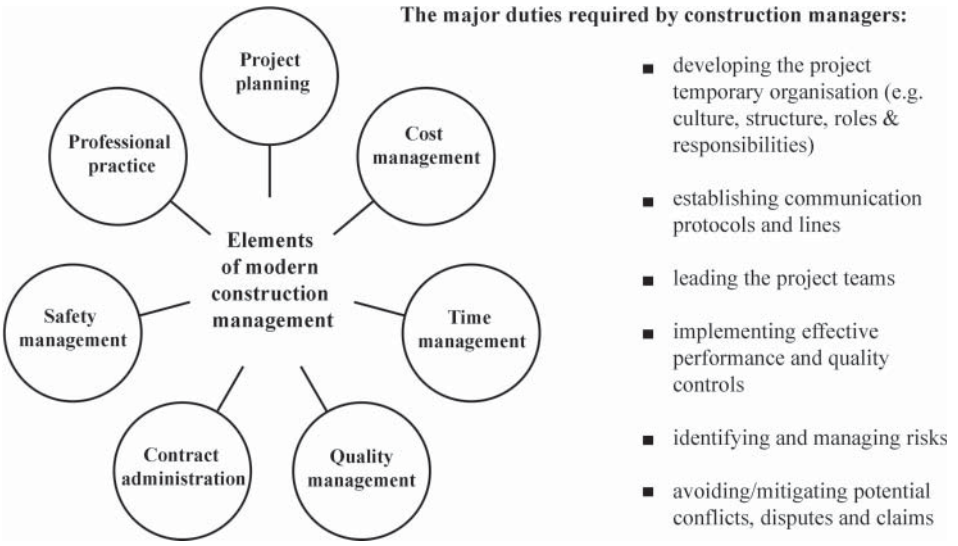


Figure 6.9 The typical elements of CM.

CM is not an alien domain to architectural professionals. Adopting CM implies being responsible for the planning, budgeting, coordinating and supervising the technical execution of the project, from drawing to finished product. In fact, this transferring of an idea to finished product could be the reason why most of us decided to become architects in the first place. There are many ways in which construction management can be realised and delivered, but it is essential to consider the following:

- *Project budgeting:* This involves the accurate estimating of project costs through analysing the detailed work packages and adding a competitive profit margin considering the associated risk of the project and its bespoke conditions.
- *Scheduling:* This involves the planning of work timetables using different techniques, such as CPM, PERT, GERT, and Gantt charts.
- *Execution strategy:* This involves deciding the most efficient methods for producing the products, including analysing decisions such as make or buy, outsourcing, subcontracting, working times and number of shifts.
- *Empathy and communication:* This involves establishing empathy, effective lines of communication and co-operation between the architectural firm, the client, sub-contractors, suppliers, tradespeople, and the construction site.
- *Supervision and coordination:* This involves discussion of technical details with labour foremen and monitoring of personnel performance, cooperation with specialists, working with material and equipment suppliers to improve value to the client, and maximisation of design efficiency.
- *Risk management:* This involves identifying, assessing and managing the potential risks of managing construction projects, be they off-site, on-site or hybrid.

In order to do this successfully, the architectural manager must ensure the balance of the architectural firm's staff in terms of their skills and specialities, including skills related to site operations.

6.5 Facilities Management

As more clients recognise the benefits of integrating facility planning with corporate strategic planning, architecture firms that have the appropriate skills can vastly expand their facility management services.

Robin Ellerthorpe, former director of OWP/P

Unlike many industries, construction tends to look at individual parts, rather than the whole system in which projects are conceived, constructed, refurbished and eventually dismantled. There is clearly a need for a more integrated approach that considers the management of the facility, preferably via a shared digital model (BIM). Facilities management (FM) encompasses all aspects of property maintenance, space planning and supporting services that allow buildings to support and enhance business activities (see Figure 6.10). In any project, the early architectural design decisions have a direct influence and impact on the building's future maintenance, repair and re-use. If architects believe in their continuous role and duty towards the buildings they design, they will recognise that they are the best professionals to offer FM services.

If the architectural firm offers PM and CM services it is familiar with the building's assembly, and hence has great potential to offer maintenance, asset management and other FM services to its clients. And why not? Many of the concepts involved – management, communication, risk and value – are common to the architectural management discipline. Offering FM services potentially allows:

- more control of the building process and product
- more control of the process and product sustainability.

If successful, it will be a new source of income. Involvement in the performance of buildings can also significantly improve how buildings are designed, with knowledge from FM incorporated into the briefing and design process from the outset. From the client's perspective, a single point of responsibility is appealing, strengthening the architectural firm's ability to offer FM services (see Figure 6.11).

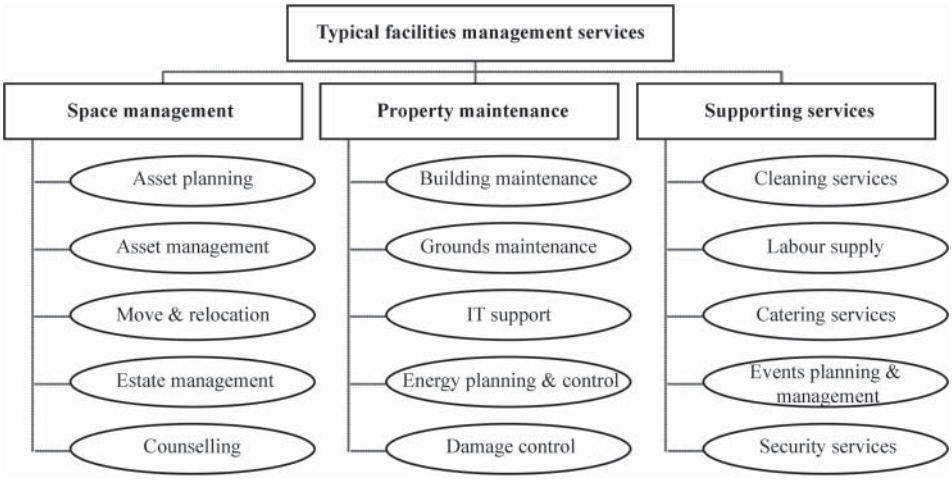


Figure 6.10 The typical elements of FM.

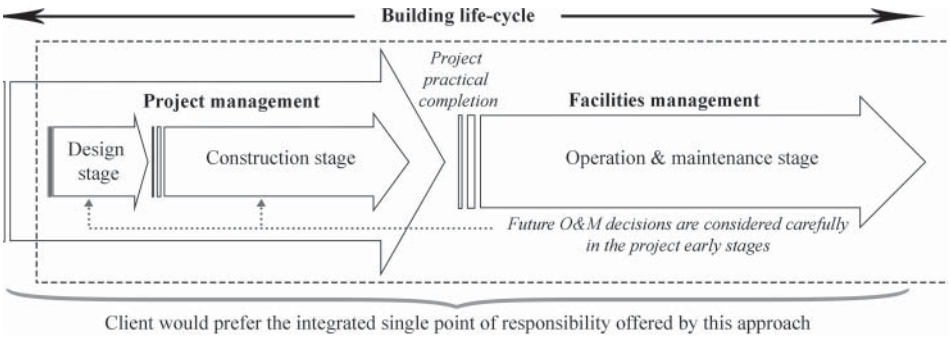


Figure 6.11 The impacts of architects' early decisions on offering of FM services.

In order to offer successful and competitive FM services, the architectural manager must ensure that the firm has the appropriate multidisciplinary qualifications and expertise. Moreover, they should develop a strategy to enable the firm to provide FM services to both clients whose buildings were designed by the firm and clients whose buildings were designed by others. The latter requires extensive research, analysis and evaluation of the building and its design before a decision is taken to offer FM services.

Several strategies exist to enable firms to offer FM as part of their service provision, but it is essential to consider the following items when adopting any of these strategies:

- *Analysis of trends:* This includes identification of frequently demanded services by FM clients. Such services vary with the building and occupant types. The architectural manager should therefore spend some time listing building/project types and the associated services required. Similarly, the practice's strengths and weaknesses must be analysed objectively to examine its ability to deliver any of these services.
- *Ability to engage competitively:* Based on the above analysis, the architectural manager can decide which services can feasibly be provided by the practice. Then, and using a new or updated business model as discussed in Chapter 5, these services should be designed to distinguish the practice from current and potential competitors. Accordingly, the practice will have a portfolio of FM services that can be bundled or offered individually based on client preferences and needs.
- *Client satisfaction:* Usually, FM operation contracts are provided on a long-term basis. This provides the architectural practice with a long-term relationship through which it may be possible to raise the client's and users' satisfaction levels. This requires the architectural manager to monitor and give feedback to those working on these activities.

6.6 Property 'Real Estate' Development

> *Ninety percent of all millionaires become so through owning real estates. More money has been made in real estate than in all industrial investments combined. The wise young man or wage earner of today invests his money in real estate.*
>
> Andrew Carnegie, industrialist, businessman and philanthropist

Despite global economic fluctuations, the property development market offers an opportunity for investment and diversification of the firm's asset portfolio. Property

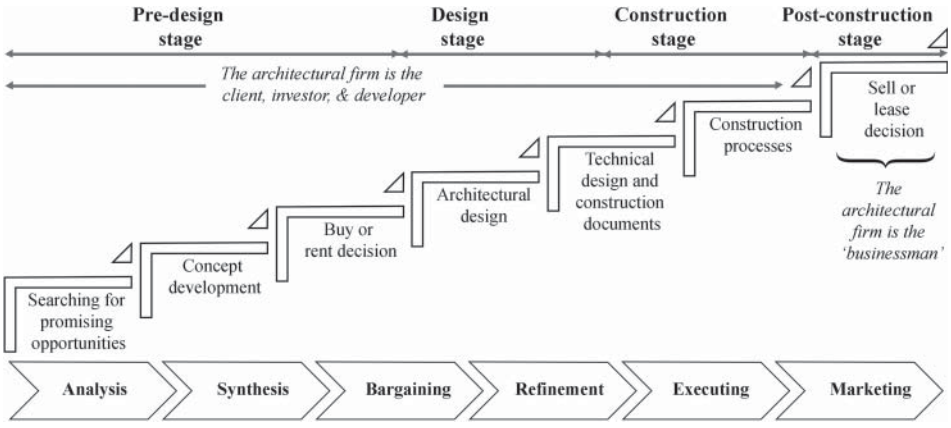


Figure 6.12 Architectural adoption of PD.

development (PD) is a multi-faceted business that covers the different processes of searching for promising opportunities, buying them, transferring them into better entities, arranging their marketing and sale, and selling/leasing the developed product (land and/or building) at a higher price than the cost paid in the entire development processes (see Figure 6.12). PD covers almost everything from renovating a small house to multi-million-dollar development schemes. Although property developers come from a variety of backgrounds, their central role is to orchestrate and lead the entire development process from commencement to completion. Since they come from different backgrounds, several questions about the field of PD should be raised:

- What is the role of architects in the PD process?
- Are we looking at property developers as our clients, collaborators or as business opponents?
- To what extent are we prepared with the necessary skills and expertise to include PD as part of our architectural business offering?

We also need to consider our professional responsibilities and what we can, and cannot, offer as services according to the rules of our professional and regulatory institutions.

Despite the economic risk associated with creating or renovating properties, there is the potential for high rewards. Similarly, there is a risk associated with penetrating a new market that is dominated by large and experienced property developers, but by carefully choosing an effective PD business model the architectural firm can operate in this lucrative market. Collaborating with existing property developers, with their business experience and supply chains, through partnering or joint-ventures can help to reduce exposure to risk, resulting in a yin and yang model (see Figure 6.13).

Regardless of the model and strategies chosen, the architectural manager should construct a methodology for the sequencing of the development processes. The PD methodology should be commensurate with the architectural practice's financial capability and its risk management strategies. A typical methodology would include the following stages:

- *Pro-actively searching for promising opportunities:* This could be a plot of land or an existing building. This stage includes analysing the viability and marketability of the

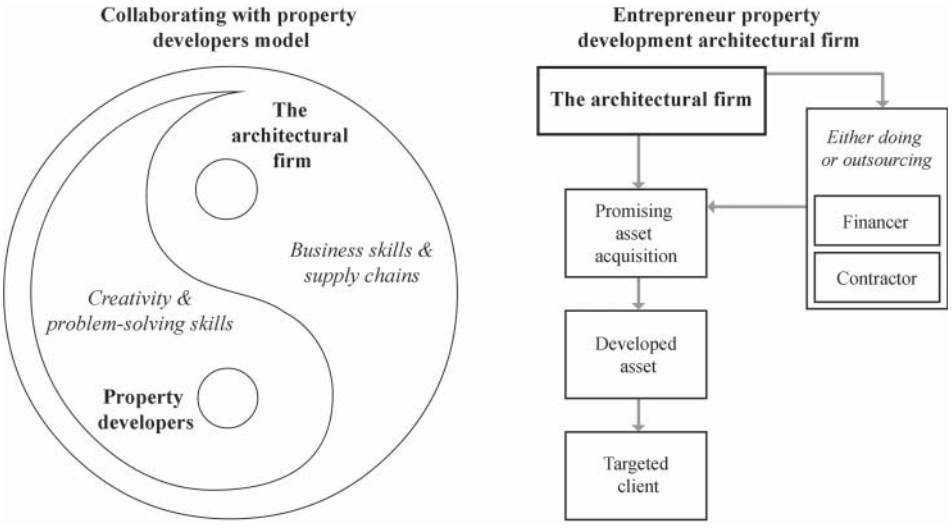


Figure 6.13 Two possible models for adoption of PD by architectural firms.

development project. Similarly, it includes identifying the firm's ability to commit to this project from the financial perspective, whether through available or borrowed funds.

- *Project design:* After identifying a promising opportunity, the firm can start what it does best: prepare an architectural design. However, the architectural manager should identify the characteristics, sources of pain and sources of gain of the potential client in order to establish a proper design brief. Then, a conceptual architectural design is produced, considering the planning regulations and associated legislative constraints.
- *Purchase:* The designed project should be evaluated in terms of its business returns to the practice and balanced against known risks. If it was feasible and viable, then purchasing the property is another stage that needs innovative negotiation strategies by the architectural manager and supported by the practice owners/shareholders.
- *Final design and obtaining municipal/regulators' approval:* This stage's activities are similar to what is usually practised with the firm's design projects.
- *Construction:* Refer to Section 6.4.
- *Launch the project:* This involves a ease or sell decision.

6.7 Interior Design

> *We believe architecture and interior design needs to remain connected – in terms of the guest experience, it's impossible to separate the design of a building from the design of its interior – so we approach design as an integrated process that is all encompassing of the experience.*
>
> Rick Gardner, AIA HBG practice leader

Interior design (ID), as a contemporary profession and practice, is not limited to enhancing the visual appearance or ambient of an interior space. Rather, it aims to

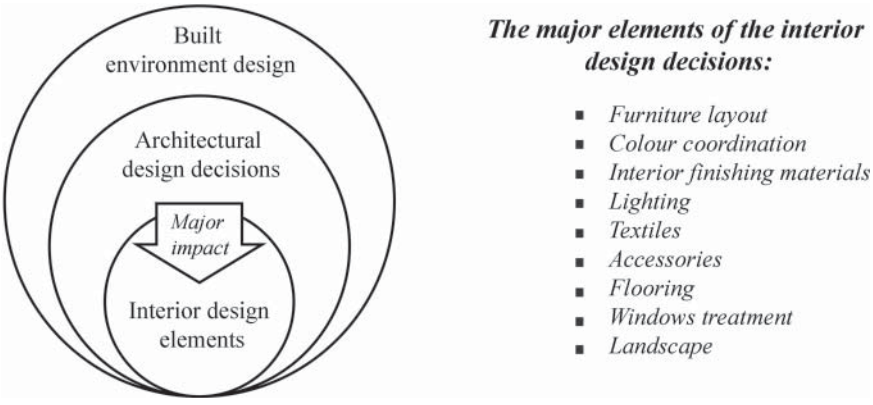


Figure 6.14 The relationship between architectural-design decisions and ID.

create innovative programmed interior spaces that optimise and harmonise the uses of this space as determined initially by the architectural decisions. Accordingly, the ID process cannot be separated from the architectural design, nor can ID proceed it. ID encompasses providing technical and aesthetic solutions to maximise the desired performance of a space. It includes the elements illustrated in Figure 6.14.

Some architectural practices offer ID services, some are happy to leave it to others. There are several reasons why the architectural firm should offer ID as part of its service provision. First, and from a design perspective, architects already set the major guidelines for the ID process and decisions because the interior spaces evolve directly from the architectural ideas, concepts and planning. Conversely, the final building outcome as 'imagined' and planned by the architect is impacted directly by the programmatic and human constraints of the interior. In other words, the final and lasting impression of an architectural space can be promoted by its ID process and output. Second, the firm's individuals have the cross-over skills required to offer competitive ID services: creative thinking, space planning, and artistic/functional-based decision tools, among many others. Accordingly, ID is a function of our domain. Finally, as the architectural firm is equipped with these technical/artistic skills and expertise, it can take on promising and rewarding ID projects across a variety of building types.

ID services can be packaged as part of the standard architectural service offered by the firm or it can be offered as an unbundled service with separate fees. This implies applying a personalised approach to each client–designer relationship. If necessary, the firm can hire a full-time interior designer or it can outsource this role and collaborate with an independent interior designer. Regardless of the business model used, the architectural manager should focus on providing a holistic design methodology and having in-depth knowledge of the available products. A basic ID process goes through the following steps:

- *Project initiating:* This covers outlining the scope of work through a detailed briefing, the client-designer relationship, forming the design team, communication processes, project budget and schedule.
- *Concept design:* Concept studies and preliminary sketches are prepared in this step. A preliminary design is presented to and reviewed by the client.

- *Final design:* The approved preliminary design is developed further into the final design, with more details included resulting in technical drawings.
- *Construct [optional]:* The firm can go a step further to engage in transferring the interior design into reality for an additional fee.

It is obvious that these steps are almost the same as those followed in a typical architectural design, which helps to prove the point that it is an area in which architects should be highly capable of operating.

6.8 Architectural Support Services

> *There are no extra pieces in the universe. Everyone is here because he or she has a place to fill, and every piece must fit itself into the big jigsaw puzzle.*
>
> Deepak Chopra, author and public speaker

The functions outlined in this chapter are the simple and obvious professional business ventures that an architectural firm may engage in to be competitive, proactive and responsive to construction-market fluctuations. With the exception of design excellence and (in some cases) design management, the common feature is the provision of additional services. Some of these services may interest some readers more than others; the point is that the service provision can be expanded. There is another service that is often overlooked in attempting to secure and deliver projects, namely the provision of support services to others. Providing architectural support services means that the firm can market itself beyond its core business and generate additional fees. Examples of such services might include the provision of expertise in thermal modelling of buildings, BIM management and nD modelling, to name just a few of the possibilities. Although these functions are core for many projects, they can be offered individually at competitive rates to external architectural professionals, engineering firms, interior designers, property developers, manufacturers and business owners.

The immediate thoughts of any architectural practice are centred round design. But, what if a firm is dominating a marketplace in terms of its technical ability to provide a particular supporting-service. This will make the firm a hub for such technical solutions, needed even by other architectural firms. Similarly, such services are highly demanded by property developers, design and build contactors, and many other professionals. From an economic perspective, the architectural firm can offer such supporting services during times of recession, where the amount of mainstream work is minimal and competition for the typical design services is high (see Figure 6.15).

Architectural support services can be part of the regular business and offered on a continuous basis or they may be delivered to suit a specific challenge. This depends on the architectural firm's capacity in terms of its skilled staff and IT systems. Regardless of the option taken, such services should be tailored to clients' needs. In addition, the firm must maintain the latest technology for providing such services competitively. SWOT analysis is a powerful tool for the architectural manager to use in order to identify what kind of support services the firm is capable of offering:

- *Strengths:* What distinguishes the practice, in terms of skills and abilities, from others? What do we do best? What is our position and market share within a

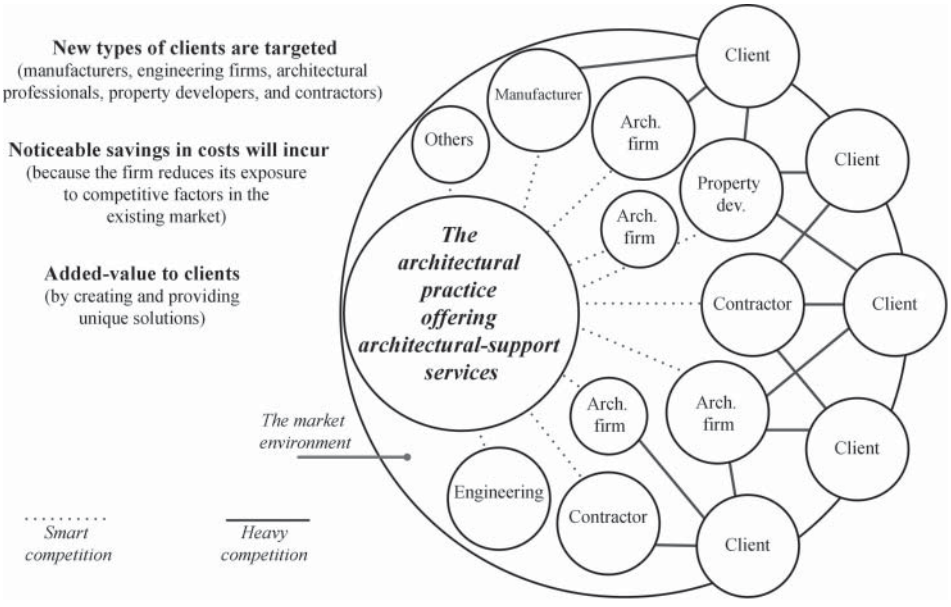


Figure 6.15 The benefits of offering architectural support-services.

particular market segment? What, within our business structure, is unique compared to our competitors?

- *Weaknesses:* What are the factors that hinder our business from practising competitively? What are the resources required for providing a particular service/product that we do not yet have?
- *Opportunities*: What are the current opportunities within the market that we are facing? What are the future opportunities we are forecasting and how can we utilise and target our efforts to dominate such opportunities? What are the external factors 'outside the practice' that can be utilised to enhance our competitiveness?
- *Threats*: What are the current and future forecast threats that can negatively impact our services/products? What are the external factors 'outside the practice' that might hinder our competitiveness?

The SWOT analysis can be used to analyse the firm, its current services/products and any architectural-support services to be offered.

6.9 Investments and other Business Ventures

The emergence of interconnectivity, smart and sensor-driven designs, home automation, clean energy, shared knowledge, and efficient software have created numerous opportunities for those looking to build their businesses around products. This includes architects who, by design, have a large skill set that allows them to engage with a wide variety of business models.

Lidija Grozdanic, architect & environmental journalist

The reason why we became architects is because we love shaping the human, mental and physical experience in terms of designing our immediate surroundings. Being an architectural manager also means nurturing the financial health of the architectural firm to sustain the ability to make architecture. Establishing a healthy cash flow is central to financial stability, but it is possible to diversify into investment for longer-term security. Investing means committing effort and resources to a financial opportunity with the purpose of generating profits in a predetermined timeframe. There are many types of financial investments, for example real estate, bonds, stocks, art and mutual funds and therefore it will be necessary to seek expert advice to help in developing a diverse portfolio.

Successful investments can help the architectural firm in creating new income streams and improving financial returns over the longer term. A diversified investment portfolio can help to improve profitability and the financial value of the business, making it easier to borrow money to invest in the growth of the business. Of course, there must be a reasonable amount of liquidity within the business before it is possible to start investing. If the architectural manager decides to lead the firm beyond its current core products and services to investment in other ventures, they should realise the different available investment options, their associated risks, and their tax implications.

If the architectural practice decides to diversify its portfolio of business ventures and investments, the architectural manager will need to design an investment plan that addresses the following critical points:

- *Investment goals*: It is important to identify a target to be achieved through a particular investment. This could be in the form of a specific profit margin.
- *Timeframe*: For how long should the practice commit its allocated funds to a particular investment? Is it a short-term or long-term investment?
- *Risk management strategies*: What is the practice's accepted tolerable degree of risk associated with a potential investment?
- *Exit strategies*: Whether it was a profitable or an unprofitable investment, it is important to know how and when the practice can decrease its stake or terminate the investment, and whether there are financial penalties associated with early termination.
- *Performance management*: A monitoring and review plan is also required to regularly evaluate the financial performance of the investment portfolio.

Such steps are crucial to the success of the investment plan. A full-time business consultant within the firm can be hired to manage the plan, or the process can be outsourced to external consultants.

6.10 Quality Management

> *Quality is not what you put into a service or a product. It is what the customer gets out of it.*
>
> Peter Drucker, management guru

Like any other professional service firm, architectural firms must give their clients confidence in the quality of the service they provide and in the quality of the building they produce. The challenges of implementing managerial control over the creative process

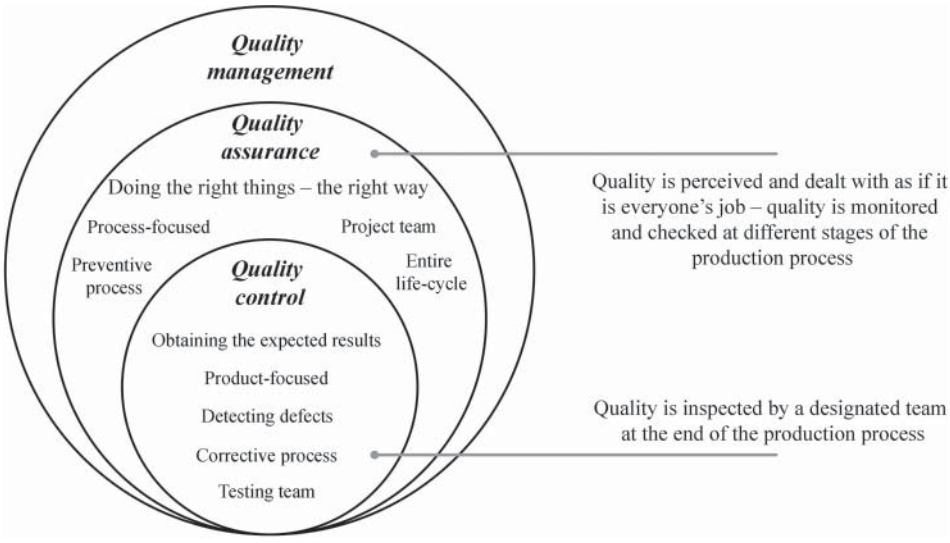


Figure 6.16 The difference between QA and QC.

and more specifically over creative individuals can be mitigated if we know what tools to implement. For creativity-related professionals, there is clear confusion between quality control and quality assurance (see Figure 6.16). Quality control (QC) is a managerial tool that ensures both work input and output conforms to predetermined performance specifications. It was developed by and is associated with manufacturing rather than with service industries. The intangible nature of the architectural firm's output makes QC particularly difficult to achieve; it is commonly restricted to a checking procedure on the drawings produced before issue. On the other hand, quality assurance (QA) is a formally implemented management system that is constantly monitored by an external agency to check that the process 'input' is managed. It comprises a series of procedures: a uniform system of working which is reviewed on a regular basis, has senior management support and is utilised on every contract. A better tool that combines the best of both QC and QA is total quality management (TQM), which encompasses everything the firm does and where the quality working environment is seen as an important influence on the quality of what is produced. It is a people-focused management concept that aims at continuous improvement and integration of all business functions, with a focus on increased client satisfaction. It is a philosophy rather than a technique – it is essentially a soft management system.

Having a practical understanding of quality and the ability to implement an effective TQM system within the architectural firm has the potential to:

- mitigate conflict between creativity and managerial control
- reduce the time taken to ensure the quality of individual processes and projects
- free up time for more creative pursuits
- reduce the firm's exposure to risk
- improve efficiency
- reduce errors
- reduce waste of precious resources.

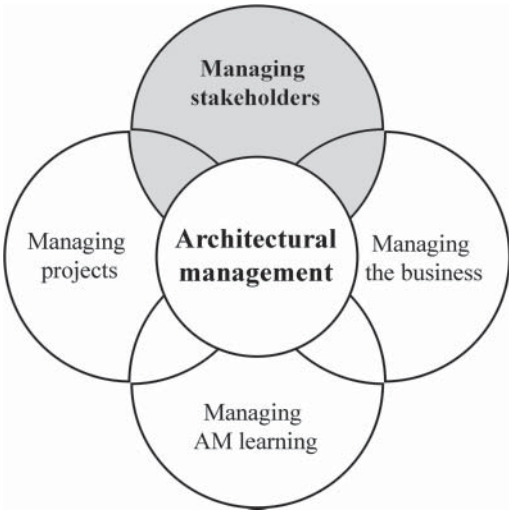
To successfully apply a TQM system within the architectural firm, the architectural manager needs to plan, programme and budget for the implementation and maintenance of the system. Equally important is the mutual commitment and 'buy-in' of the staff, for which quality-specific training and CPD programmes are required. Systems will take time to implement and embed in daily routines; they will also need to be audited, reviewed and adjusted on an annual basis to maintain effectiveness. Regardless of the specifics of the quality system, it has to give specific attention to:

- consistent standards for individual projects
- clear and comprehensive training policy
- comprehensive and proactive risk management
- a consistent approach to client relations
- a consistent review process and procedures
- clear identification of the different roles and responsibilities.

Applying TQM will not only help the architectural manager in managing quality, it will also enable better management of the architectural practice and its service provision.

7

Managing Stakeholders



Your project operates in a dynamic world of stakeholders: from the familiar members of your local project team to hidden project opponents that aren't listed on any organisation chart. And your success hinges on your ability to meet or exceeded their expectations.

Mario Trentim, PMP

It is widely accepted that client is the most important party in the construction project. However, it is crucial for the success of the architectural firm and its projects to consider the interests and needs of other active and passive players in the industry. This can be done by employing effective stakeholder management. Managing stakeholders includes all of the activities required to manage the different types of stakeholder. It also includes the ability to design and deliver the best value for them. There are endless tactics that can be followed by the architectural manager to manage stakeholders: establishing effective communication channels, managing stakeholder interventions, defining the roles and responsibilities of the different parties involved, realising users' interpretation of the concepts of 'usability' and 'aesthetic', considering future users and their needs through adaptable designs, and realising the issues of sustainability, adaptability, and public safety during design decisions. This chapter does not cover all the possible functions

Handbook for the Architectural Manager, First Edition. Stephen Emmitt and Mohammed Alharbi.

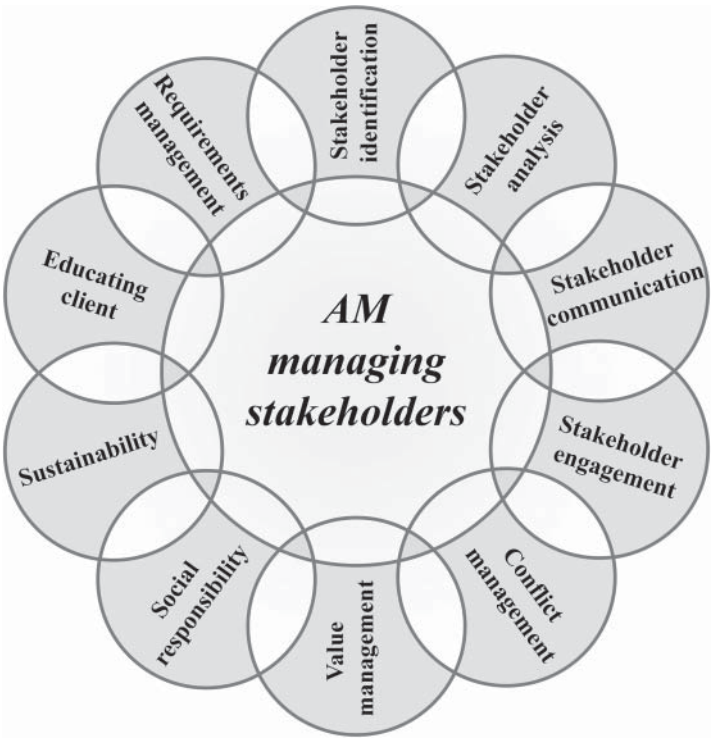


Figure 7.1 Managing AM stakeholders.

that are encapsulated in stakeholder management; it only addresses the essential 'what, why, when and how' questions that will affect the architectural manager (see Figure 7.1).

7.1 Stakeholder Identification

> *A true architect is not an artist but an optimistic realist. They take a diverse number of stakeholders, extract needs, concerns, and dreams, then create a beautiful yet tangible solution that is loved by the users and the community at large. We create vessels in which life happens.*
>
> Cameron Sinclair, founder and principal of Small Works

The term stakeholder refers to any individual or entity that may positively or negatively affect, be affected by, or perceives themselves as being affected directly or indirectly by a decision, action or outcome of an organisation, including its projects. The term also covers individuals or entities that have no direct involvement but have interests in, or expectations of, the firm and its practices (see Figure 7.2). Some of these interests and/or expectations may competing or conflict with each other. If this conflict is not managed effectively or is left to be exacerbated, the performance of the firm and its projects may be impacted in a negative way. An important task for the architectural manager is to design an effective stakeholder management strategy for each project. The first step is

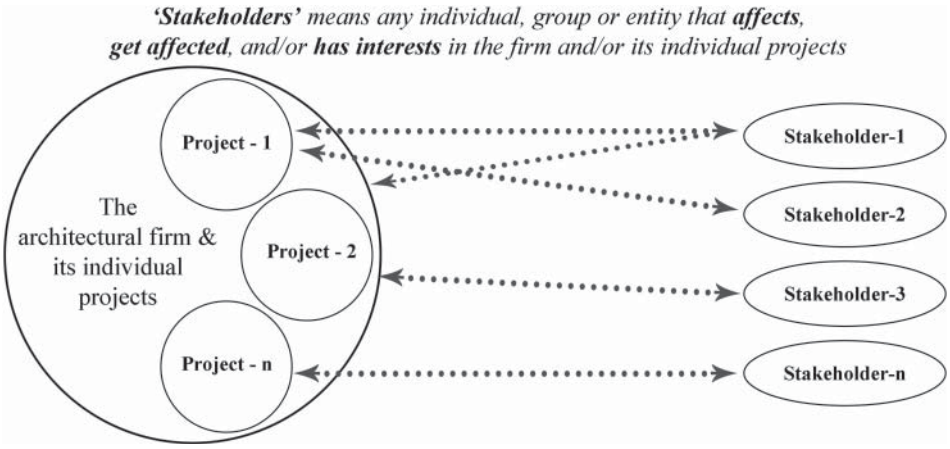


Figure 7.2 The meaning of 'stakeholders'.

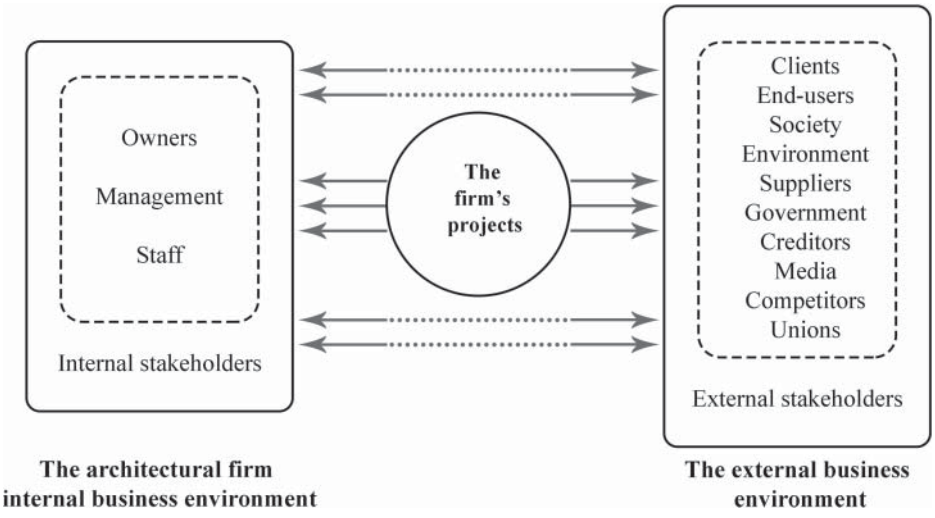


Figure 7.3 The relationship between internal and external stakeholders.

the accurate identification of the stakeholders. Broadly, stakeholders can be clustered into two groups, namely internal and external stakeholders (see Figure 7.3).

Stakeholders' needs, expectations and interests are a driving force and influence the firm's projects and project-specific deliverables. Some of them may mesh smoothly with the project objectives, whereas others may conflict and hence hinder the development of the project. It is essential to identify stakeholders as early as possible in the lifecycle of the project and to proactively manage the points where stakeholders are likely to interact. This needs to be done along with the planning of the project, so that the firm can consider divergent interests and expectations, align them with its project objectives, and be better positioned to create and add value. Taking a proactive approach to stakeholder management will result in projects that run smoothly and that are less prone to conflict

and dispute. This will help the business to gain respect from clients and in turn improve its competitive edge.

Identifying stakeholders can be done in several ways. For example, it could be achieved by brainstorming sessions conducted by the project team members and guided by the architectural manager. More pragmatically, stakeholders can be identified by analysing project documents during the initial planning stage, such as the business case report, the charter, the scope statement, the risk management plan, the quality management plan, the project procurement plan and all the other related documents. Regardless of the method to be used, the most essential and helpful questions for the architectural manager to consider when identifying stakeholders, be they individuals or entities, are:

- Who is involved *directly* with our operations?
- Who is involved *indirectly* with our operations?
- Who may have the power to *influence* our operations and outcomes?
- Who may have *interests* in our outcomes?
- Who may be *affected* positively or negatively by our operations and outcomes?
- Who is the *end user* of our output?
- Who is the *shareholder* of our output?
- Who are the main and secondary *suppliers* of our operations and logistics?
- Who are our *competitors*?

The answers to these questions will provide the architectural manager with a comprehensive list of the stakeholders that will be analysed in the next step.

7.2 Stakeholder Analysis

> *A great building must begin with the unmeasurable, must go through measurable means when it is being designed and in the end must be unmeasurable.*
>
> Louis Kahn, architect

After identifying the stakeholders, the second step is to manage them. This cannot be done without first analysing their different interests, degrees of power, and degrees of influence over the project and, indirectly, over the architectural firm's business. Stakeholder analysis (SA) is a technique used to identify, sort and prioritise stakeholders into key, primary and secondary groups (see Figure 7.4). The objective is to develop a strategic perspective of the stakeholder landscape, which includes the relationship with stakeholders and the issues they most care about. Stakeholder analysis includes identifying

- their values and interests
- the mechanisms through which stakeholders influence each other
- potential risks they present to the project
- their key people for information production and distribution
- groups that should be encouraged to participate in different stages of the project.

This analysis should also consider negative stakeholders, such as neighbours opposed to the development of the project site, and examine ways to manage them and hence minimise their negative impact.

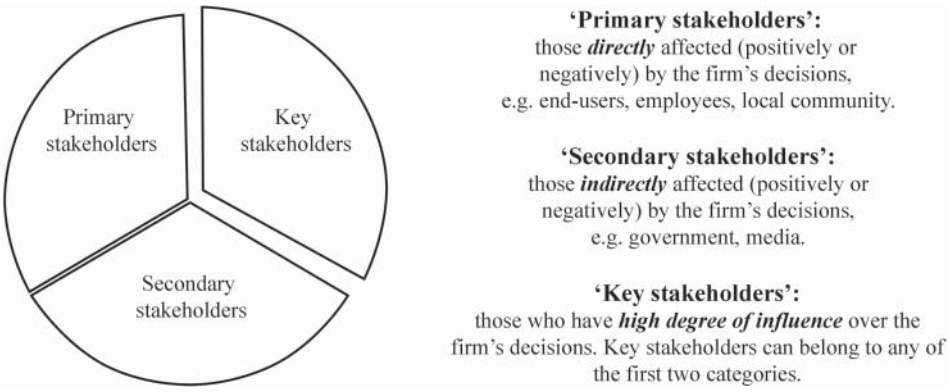


Figure 7.4 Categorising stakeholders into groups for analysis.

Stakeholder analysis enables the architectural manager to effectively address stakeholders' interests in projects and reflect this in the design of the project delivery plan. It is an important initiative towards effective stakeholder involvement, interaction and communication. It is widely acknowledged that not all stakeholders share the same interests, concerns or even perceptions of every aspect of a project. Some of these interests could be in direct conflict with the overall project goal and these objections may often not be revealed until it is too late. Accordingly, SA is an important process to ensure that all these issues are explored, realised, considered and balanced as early as practically possible, ideally prior to the start of the project. Utilising SA enables the architectural manager to exploit the opinions of the most effective and powerful groups of stakeholders to shape the project at its initial stages, and using this support to influence others. Similarly, understanding the conflicting interests of the different groups of stakeholders helps in making appropriate trade-offs, but without compromising the success and quality of the project.

The three major parameters for analysing stakeholders are interests, power and influence. Analysing stakeholders can be achieved in a sequential process. After identifying the stakeholders, the second step is to assess their interests and how these are affected by the project operations and outcome. This includes identifying stakeholder expectations and any potential conflict with the goals for the firm or project. Some of these expectations or interests may be in direct conflict with the expectations of other stakeholders, which makes it very difficult to satisfy everyone. Accordingly, it is essential to understand the degree of power and amount of influence that each stakeholder can exercise. Stakeholder influence can be placed on a numerical scale to allow comparisons to be made.

Several tools exist for analysing stakeholders, but the commonly used one is the stakeholder analysis matrix. Using this matrix enables the architectural manager to place stakeholders in the following categories:

- high power, high interest
- high power, less interest
- low power, high interest
- low power, less interest.

It also allows for shaping of tactics to deal with each category of stakeholder, a process which is described in Section 7.4.

7.3 Stakeholder Communication

To effectively communicate, we must realise that we are all different in the way we perceive the world and use this understanding as a guide to our communication with others.

Tony Robbins, motivational speaker and author

Communication can be defined as the process of creating and sharing information among different individuals with the objective of reaching a mutual understanding and/or agreement. The process can be written (reports, drawings, specifications, schedules, calculations) or spoken (via meetings, phone calls, informal dialogues and influenced by body language). Effective communication is required to ensure that stakeholders provide, receive and understand information relevant to their needs, thus helping to build a positive project culture. Effective communication requires understanding what medium the individual stakeholders prefer to use in different situations. This is because stakeholders have different expectations in terms of communication channels and the frequency of communication. This can sometimes be determined via previous experience of stakeholders and by way of workshops prior to the commencement of projects. Based on the different sources of information and the targeted audience, the architectural manager must develop an effective communication plan in order to promote smooth transmission of information, as well as avoiding information overload (see Figure 7.5).

Effective communication between stakeholders is also necessary in order reach mutual understanding, which allows for better-informed decisions and a stronger likelihood of generating and delivering maximum value. It also helps in building positive and trusting relationships, which is crucial with persuasive people who may help to influence others in a positive manner. These considerations often lead to the development of long-term positive relationships between the firm and its stakeholders. Similarly, they lead to better understanding of the stakeholders' interests, needs and attitudes, which has the potential to positively impact project success.

The essential step in communicating with stakeholders is identifying the target audience for each communication input and output. This process should be deliberate and constant rather than impulsive and intermittent. The architectural manager must

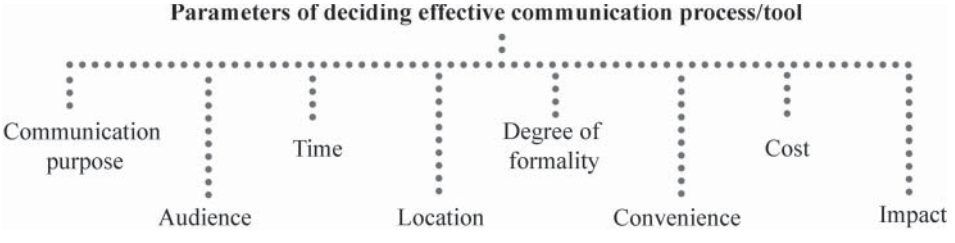


Figure 7.5 The parameters of effective communication processes.

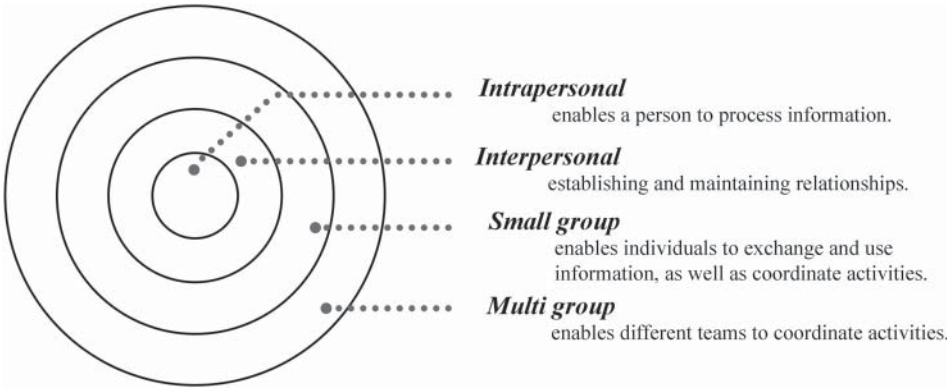


Figure 7.6 The different levels of human communication.

develop a strategy to reduce unnecessary communication (information overload and unnecessary meetings), and maximise the impact of effective communication (the creation, transfer and use of valuable information to the relevant stakeholders at the right time). This requires realising and managing the different levels of human communication (see Figure 7.6):

- intrapersonal
- interpersonal
- small-group
- multi-group.

Similarly, it requires an appreciation that the different channels of communication may be temporary and short-lived (e.g. individual project network), whereas others are more permanent and exist over a long timespan (e.g. communication with internal stakeholder such as the firm staff or repeat clients). The architectural manager should deploy the most suitable communication tool based on an analysis of the context: whether it is an informational or influential situation (see Figure 7.7). To streamline this process, the architectural manager may follow the following steps when developing the stakeholder communication plan:

- *Setting up the communication goal and objectives:* Define the goal and objectives of the communication process and stages considering the different types of stakeholders, their interests, and degree of power and influence. This includes stating clearly the messages that need to be delivered to each targeted group of stakeholders.
- *Deciding the communication channels:* By referring to Figures 7.6 and 7.7, the architectural manager should be able to determine the most effective communication tools and techniques for each communication stage depending upon the characteristics of the targeted stakeholders, the message and the available resources.
- *Monitoring and controlling of the communication process:* After deciding the issues above and putting them into action, it will be necessary to track the progress of each communication stage as well as evaluating its success in addressing the stated communication goals. Similarly, it is essential to keep the communication plan updated and adaptable to any changes during the firm's evolution and the start and completion of its projects.

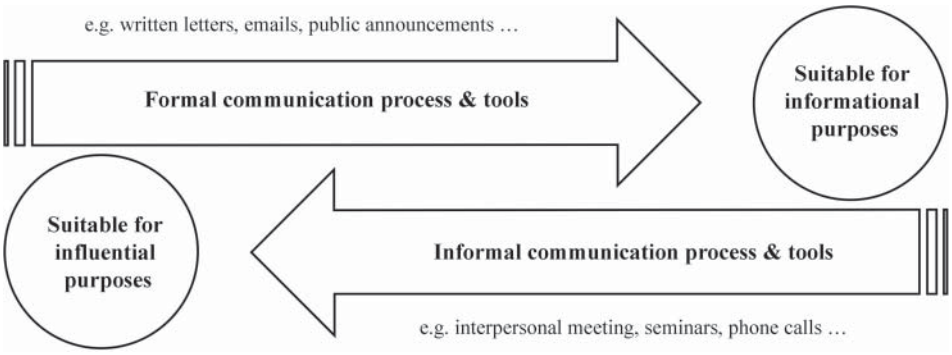


Figure 7.7 The formality of communication tools.

7.4 Stakeholder Engagement

> *Engagement is not an end in itself, but a means to help build better relationships with the societies in which we operate, ultimately resulting in improved business planning and performance.*
>
> Altria Corporate Services, Inc. website

Stakeholder engagement is the managerial process that aims to involve relevant stakeholders in the firm's decisions and actions. The primary objective is to reach the agreed project outcomes. The secondary objective relates to less tangible outcomes, such as developing trust and relationships with a view to future income. Stakeholder engagement is an integral part of achieving the firm's triple bottom line: its social, financial and environmental outcomes (see Figure 7.8). The main questions relating to the positive engagement of stakeholders is deciding when and how best to successfully engage with each. In addition to the firm's professional obligations, it could be argued that there is a moral and ethical reason for engaging with everyone that may affect, or be affected by, the firm's actions so that they can play a part in the decision-making process. Stakeholder engagement should be planned in line with the needs of projects and the firm's overall business objectives. It should be a considered and proactive approach, rather than only reacting to unexpected events.

Stakeholder engagement has the potential to be a valuable input to the decision-making process, giving stakeholders a sense of ownership of and responsibility for decisions. Similarly, effective engagement gives opportunities to further align the firm's objectives with societal needs and expectations, helping to drive long-term value to everyone involved, directly or indirectly, with the firm and its project portfolio. Collaborative efforts between the architectural firm and its stakeholders may also help to improve empathy, and hence contribute to its competitive advantage.

The architectural manager should carefully plan the stakeholder engagement process so as to maximise the benefits, while also minimising bureaucracy and onerous procedures. This requires clear rules of engagement. First, stakeholders should be

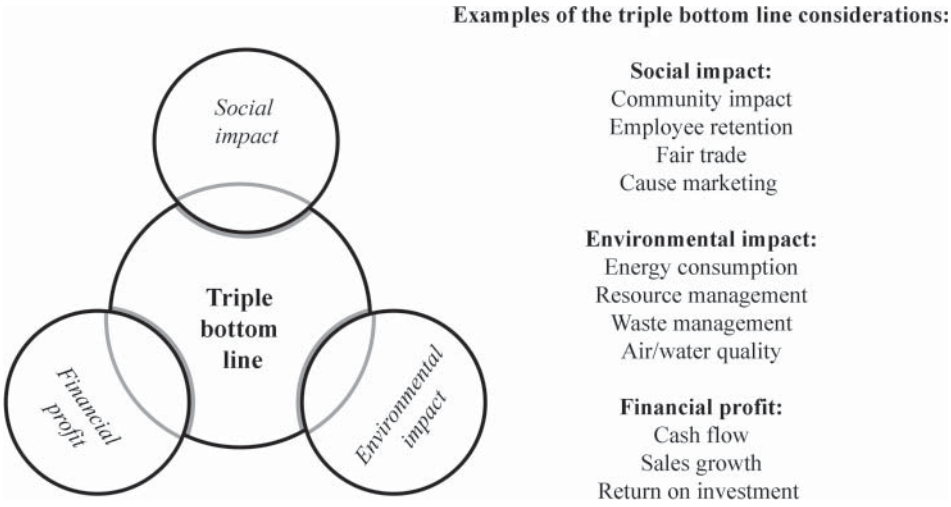


Figure 7.8 Stakeholder engagement and the firm's triple bottom line.

informed about their role, degree of authority, how they can positively contribute, and what benefits they will gain from their contribution. Trust must be built between the firm, the project team, and the stakeholder, and this requires effective and constant communication. A risk management plan must also be put in place to mitigate the impact of stakeholder conflict. There are a variety of ways of achieving these objectives, but one of the most effective is to meet with project stakeholders early in the project and at regular intervals throughout the project to discuss what everyone expects to gain from the project and what value they can add.

As mentioned earlier in this chapter, developing the stakeholders' engagement strategy is crucial in analysing their degrees of power, interests and influence over the firm and its projects. Accordingly, stakeholders can be clustered into the following four categories:

- *High power, high interest:* This category requires full engagement and the greatest efforts should be made throughout the firm's business operations and projects to satisfy them and to gain their full support.
- *High power, less interest:* Although this category has minimal interest in the firm and its projects they can enhance or hinder success by their position within business networks. Thus they should be kept informed and their views acknowledged, in an attempt to keep them supportive of the firm.
- *Low power, high interest:* This category requires effective engagement as they can be valuable sources of information and opinion that can help in the success of the project.
- *Low power, less interest:* The engagement here can be limited to keeping stakeholders informed about decisions that might impact them.

The architectural manager should develop efficient forms of engagement for each category, considering the nature of each decision, operation and/or outcome during each project life cycle. This will require regular communication with all stakeholders and

regular assessment of their respective powers and influence. It may be that over time stakeholders move from one category to another.

7.5 Conflict Management

> *The quality of our lives depends not on whether or not we have conflicts, but on how we respond to them.*
>
> Tom Crum, expert in conflict resolution

It is uncommon to realise a project without any form of conflict. It may be relatively minor, such as disagreeing about a particular issue for a short period of time or it could be more impactful if relationships break down due to arguments over, for example, resources. Regardless of the reasons underlying it, a conflict arises when stakeholders perceive that they are/were negatively affected by others in the project. This is usually the consequence of inadequate information, ineffective communication and engagement, or a lack of appropriate interpersonal skills. If conflict among stakeholders is left to fester, the overall performance of the project and the business is likely to be negatively impacted. Although efforts to engage stakeholders will go a long way to reducing the likelihood of conflict, it is important to develop a conflict management strategy that focuses on identifying how potential interactions among the different stakeholders may affect the project. This plan should also set out how to effectively solve any conflict once triggered. The conflict management plan needs to be discussed and agreed prior to the start of each project.

Conflict can be beneficial if resolved effectively and promptly. Managing stakeholder conflicts may lead to stronger, more trusting relationships if the root cause of the problem can be identified and hence eliminated. A proactive conflict management strategy will help to avoid the waste of time and money associated with legal disputes, which few ever benefit from. It will also help to maintain stakeholder engagement and will contribute to the timely delivery of the project.

The best strategy to manage conflicts is to avoid them in the first place. This can be done through a mutual understanding of the project objectives, roles, responsibilities, and the different stakeholders' values. However, keeping everyone satisfied all of the time is not possible. Accordingly, the firm should establish a proactive conflict management plan; and this plan must be flexible to cope with different situations. Any conflict resolution plan starts with effective identification of the potential conflicts and their root causes. This can be done through the accurate analysis of the competing values of the different stakeholders and their different degrees of power and influence. Once a conflict arises and the root cause is identified, a set of alternative solutions can be prepared. Then, a systematic evaluation of the alternatives should be conducted to understand their impact, likelihood of acceptance, and potential barriers to implementation. It will be necessary to plan the implementation and the evaluation of the proposed solution to monitor its effectiveness. After the conflict is solved, it should be documented in the architectural firm's database of lessons learned. The alternative dispute resolution approach is an effective methodology for managing stakeholder conflicts (see Figure 7.9), due to its ability to resolve conflicts before relationships become acrimonious and it becomes necessary to proceed to legal action and.

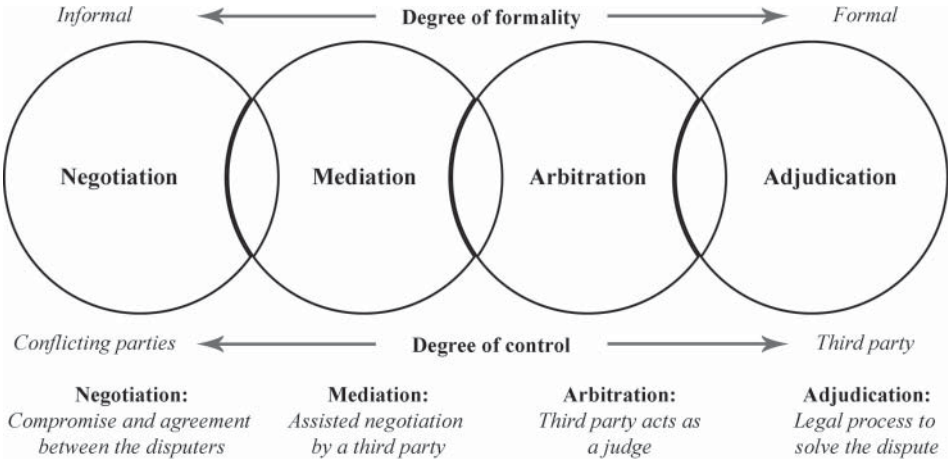


Figure 7.9 The alternative dispute resolution process.

Regardless of the method used to solve a conflict between the architectural project stakeholders, the following steps are common:

- *Understanding the core of the conflict*: It is not impossible that two parties might have a conflict without knowing what each side is complaining about. Disagreements can get out of hand and the root cause lost in the noise of the argument. An intermediary, perhaps the architectural and or design manager, can help both parties to clarify their points of view in order to set the general framework of the problem and give a prompt resolution.
- *Deciding a common perspective of the solution:* Determine what each side of the conflict considers as an ideal outcome in resolving the conflict. By doing so, the architectural manager can establish a degree of commonality among the conflicting parties. They can help both parties to establish a common goal in resolving the conflict.
- *Setting a resolution action plan:* The agreed goal can be split into a list of action steps or objectives, with a clear timescale that both parties must commit to. During this step, it is vital that the architectural manager identify and mitigate any barriers to achieving these objectives.
- *Setting roles and responsibilities:* Finally, all the steps above cannot reach their goal unless each side of the conflict understands and commits to their role and responsibilities in reaching the agreed resolution.

7.6 Value Management

Value management can be an effective technique to assist the architect to identify the critical aspects of a design brief…When used skilfully, value management can share the decision-making responsibility and fully inform the main stakeholders in a project of the critical design and budgetary constraints.

ACUMEN, The Australian Institute of Architects' practice advisory service

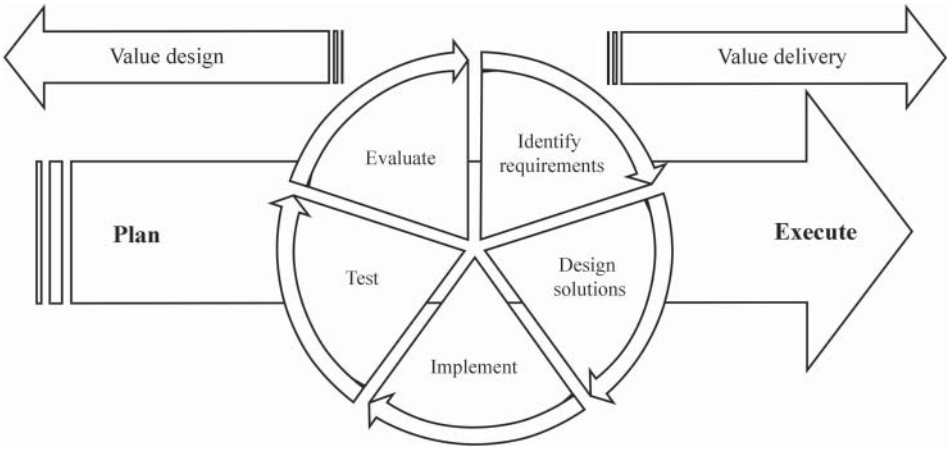


Figure 7.10 The major components of a value management system.

Value means different things to different people. The benefits of a project are perceived differently by the firm and its project stakeholders. Value management (VM) is a business function that covers the diverse processes and techniques used to define the entire scope of values held by the project contributors. This includes identifying the values of the different stakeholders, maximising them, and ensuring a balanced approach to delivery through efficient utilisation of the available resources. It is not, as often wrongly perceived, about saving money or cutting costs. It goes much further, to include intangible benefits enjoyed by all stakeholders. It is about auditing, analysing and comparing the various decisions against the value system as perceived by the different stakeholders. VM is an integrated and structured team effort. The architectural manager should orchestrate this multi-disciplinary endeavour in order to realise the different values of the different stakeholders, with the objective of articulating a unified 'best value' for everyone involved in the project.

The main advantage of adopting value management for architectural practices is the ability to deliver satisfaction to all stakeholders. VM can aid in developing the project brief, the point at which client and stakeholder values are best explored and defined. It can also be used to guide value-based decision-making. Although the most noticeable advantage of applying VM is in the cost savings that can be derived, there are other non-financial benefits, such as improved communications, enhanced collaborative working, better quality results, and better individual learning and mutual understanding.

Value management should be applied proactively and constantly from the initial stages of the project. It is rarely effective if applied retrospectively to fix a problem. Many guides exist to illustrate the application of VM. A basic and consistent plan should consist of two parts: value design and value delivery (see Figure 7.10):

- *Value design*: This covers the entire process of analysing the different values of stakeholders and finding a mutual 'best value' that will satisfy everyone. It needs to be conducted for each project and also outlined for the business deliverables. It requires interaction, usually via a facilitated workshop or a series of workshops, to explore,

discuss and agree values. The workshop approach also helps stakeholders to better understand one another and to build trust and mutual understanding.

- *Value delivery*: This is concerned with designing the process by which these values will be achieved and identifying measures to determine performance. Once the values have been agreed, a delivery process is designed (or an existing one adapted), with the values embedded in key deliverables. Again, workshops are an important aspect of value delivery, used to assess the effectiveness of the process and to review values as knowledge about the project evolves over the process.

7.7 Managing the Firm's Social Responsibility

> *Through their own actions, customers can hold companies responsible to higher standards of social responsibility. Through collective action, they can leverage their dollars to combat the force of those investors who myopically pursue profits at the expense of the rest of society.*
>
> Simon Mainwaring, branding consultant

Social responsibility is a relatively new business concept for many contributors to the construction industry, although professions such as architects and engineers have been applying social and ethical responsibility theories for a long time, embedded in their respective codes of conduct.

Social responsibility is an ethical and professional framework for business. The aim is to create a positive impact on society while delivering the business objectives; principles at the heart of architectural practice. This positive impact could be the result of deliberate processes and activities, or it could come from passive social responsibility, in which the firm avoids engaging in socially harmful acts. Social responsibility (SR), or corporate social responsibility (CSR), is an obligation by both individuals and their organisations to balance financial gains with the welfare of the local community, society and the environment at large. Although one may argue that architects, as professionals, should be committed to acting in a socially responsible manner as a matter of course, it is important to communicate this to clients, project stakeholders and society at large. The architectural manager has a responsibility to encourage and embed SR in the firm's culture. SR should underpin all decisions made within the business and during individual projects. At the business level, the degree of control means that SR and ethical values are relatively easy to control. At a project level it is much more difficult, as architects may be asked to contribute to projects that are already set up and running, but without the required underlying ethical and social principles. This can be quite a challenge for the owners of an architectural business. Does the architectural firm refuse to engage if the project organisations and stakeholders do not have an appropriate SR stance? Or does the firm try to engage and encourage a more responsive approach? These are questions that may, from time to time, challenge the architectural manager and owners of the architectural businesses. The answer will depend on the project context, the strength of feeling about specific social issues and the need to ensure a regular cash flow through the business.

Establishing a new SR programme from scratch can be a very daunting and long task for any firm. For architects, many of these principles are already enshrined in

professional behaviour codes. A specific programme can give better awareness of SR and more understanding of the benefits it can bring. This is the role of the architectural manager, who can start with any SR initiative and focus on serving the three pillars: people, planet, and profit, or in other words the triple bottom line.

Whether starting from scratch or adopting and tailoring a pre-established SR programme, it is essential to link the strategy to the firm's vision and values. This implies that rather than engaging in every possible SR initiative, it is better to consider supporting those initiatives that best match the architectural firm's culture and values. This will help the practice to prosper in its SR endeavours as well as broadcasting its brand and reputation to the public.

7.8 Managing Sustainability

> *Sustainability can't be like some sort of a moral sacrifice or political dilemma or a philanthropically cause. It has to be a design challenge.*
>
> Bjarke Ingels, architect, founder and partner of Bjarke Ingels Group

Sustainability is very much related to SR and ethics, although the term has many meanings depending on one's perspective. In construction, sustainability is often (wrongly) only interpreted as saving energy during construction and use. It is, of course, much more than that, as shown in Figure 7.11, and as described in the United Nations' seventeen sustainability development goals (see www.un.org). It is both a moral and professional consideration for every individual and entity. As such, it should underpin everything a professional design practice does and arguably go beyond environmental compliance.

The architecture, engineering and construction industry is the major consumer of the planet's resources, including raw materials, energy and water; it is also a major producer

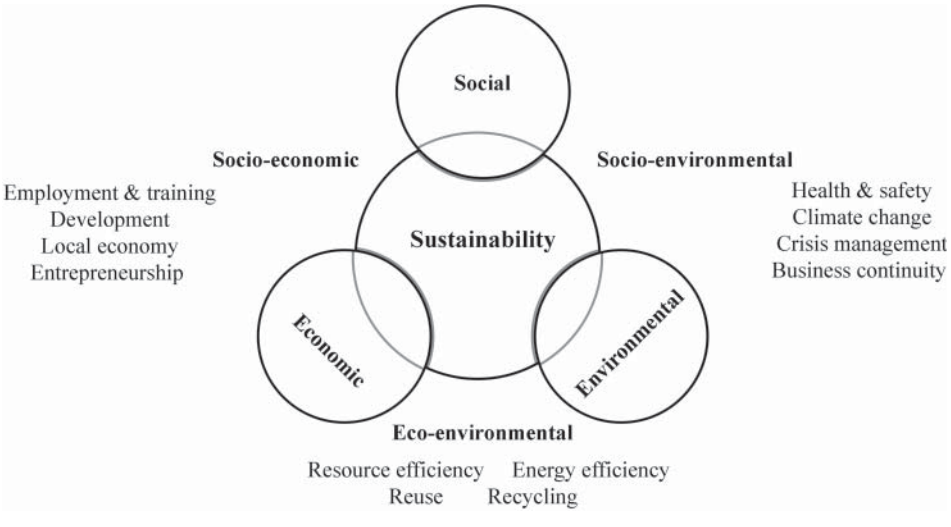


Figure 7.11 Sustainability: meaning and components.

of carbon dioxide emissions and material waste. Embracing sustainability plans and practices adds extra value for the firm and its projects, giving environmental, social and economic benefits. Many of the challenges of designing, constructing and maintaining a more sustainable built environment stem from the design problem and the ability to assemble a project team that is committed to a more sustainable future. This is not just about their beliefs but also their actions. Adopting sustainability thinking results in protecting biodiversity and ecosystems, reducing waste, and helping to conserve scarce natural resources. It also results in better asset values and life-cycle costs. From a social perspective, it results in improving the health of building occupants and overall quality of life. Finally, having a clear vision by all stakeholders to work collaboratively towards an ethical end will ensure effective endeavours and deliver a good reputation for the architectural firm as the leader of this process.

Of course, it is incumbent on architects and project stakeholders to realise the impact of their designs on buildings and environmental sustainability during the early stages of design. Once sustainability features have been identified and embedded in the conceptual design, the design team must enhance them throughout the detailing phase and ensure they are delivered in the construction phase. This can be achieved through:

- establishing sustainability evaluation tools
- realising the impacts of the design on climate, society and economy
- considering the project's whole life-cycle values
- utilising renewable sources of energy
- specifying and using local materials
- recycling materials and building components
- managing waste
- designing for adaptability
- developing sustainable operation and maintenance strategies.

A pragmatic process for implementing sustainability practice must be followed within the architectural business (see Figure 7.12). This process is not so different from other processes in that it involves planning, implementation, evaluation and reporting.

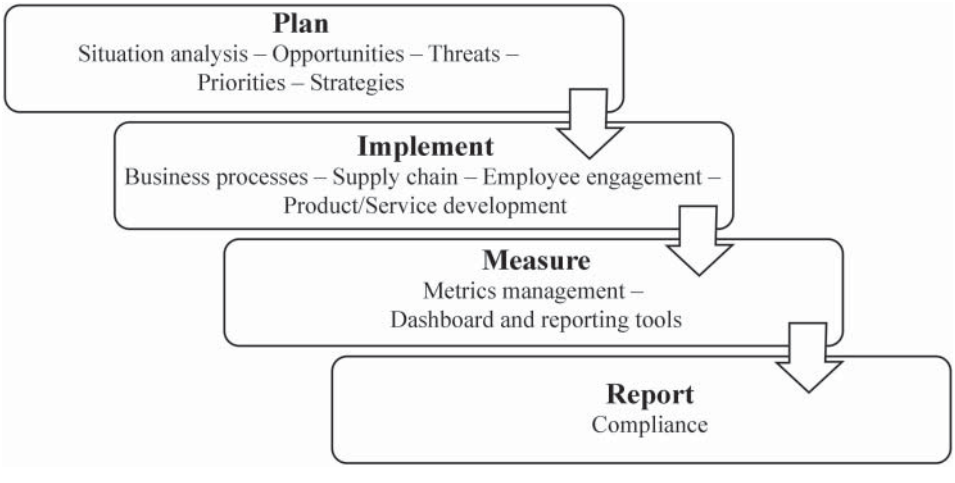


Figure 7.12 Sustainability implementation.

7.9 Client Education

The dialogue between client and architect is about as intimate as any conversation you can have, because when you're talking about building a house, you're talking about dreams.

Robert Stern, architect

The client is the most important stakeholder for the architect as they are the sponsor and initiator of the project. Unlike other professional businesses, the client–architect relationship is distinguished by its long timeframe and high degree of intimacy and trust. Architects are best placed to explore, test, understand, and develop the client's vision; and then transfer it into a design. The process then continues, to include realisation and occupancy of the building. This requires architects to (re)assure their clients that they are the guardian of their interests.

Many clients, especially those new to construction, often lack a full understanding of what architects and related professionals can add to their dreams and hence often fail to appreciate the value of good design. It is important that architects take the initiative to educate their clients about the value of their services and their role and responsibilities. Part of this discussion will involve discussion about sustainable design, life-cycle costs and ethical resourcing. These areas need to be discussed very early in the project if they are to become central to the project ethos. Such conversations help to build trust between architect and client as the architect becomes more knowledgeable about the client's values and desires and the client better understands the value of good design. Interaction also helps to establish empathy. If this cannot be established early in the project, it is unlikely that the client–architect relationship will prosper. Although this interaction is often part of the client briefing process it is important to meet and get to know one another before the briefing process starts. These interactions are not a one-way street. The architects will also be on a learning journey, learning about their client and also their own ability to contribute to the project. This extends to the full lifetime of the project; as both client and delivery team learn more about the project it is likely that changes will be required to the design. It follows that time is required early in the project to explore, inform and educate the client; this can help avoid changes later in the project through a better understanding of what is and is not possible.

The client education process needs to be managed, with clearly defined learning opportunities built into project processes and post-occupancy evaluations. Some clients may also need persuading that they should be more involved in the project than they initially intended. This is again part of the education of the client.

7.10 Managing Client Requirements

Architects work in two ways. One is to respond precisely to a client's needs or demand. Another is to look at what the client asks and reinterpret it.

Rem Koolhaas, architect

Client requirements are explored, tested and confirmed through the briefing process. The resulting requirements are expressed in the written documents that comprise

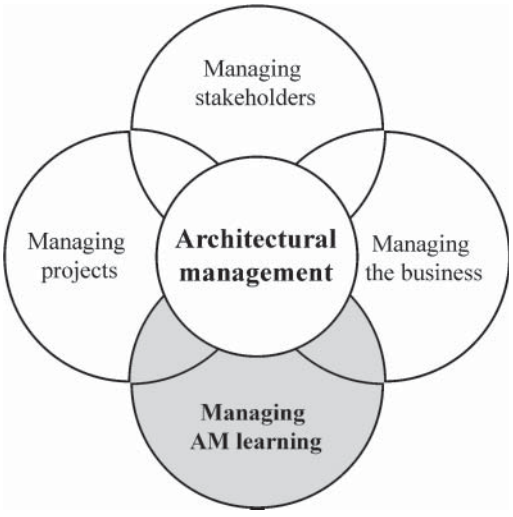
the brief. It is the brief that guides the development of the design; it is essentially the customer requirement document, to which a service and product should conform. Client requirement management (CRM) is a continuous business function that aims to identify, analyse, refine, agree, prioritise and document the client requirements for the project, as well as tracing, controlling and communicating these requirements with the relevant stakeholders. The main objective of CRM is to ensure that all the professional processes in the project are scoped and targeted at meeting the needs and expectations of the client. CRM requires teamwork from all project stakeholders and the architectural manager should lead this effort.

Effective CRM is vital in translating and transforming the client needs and desires into tangible products. It is a planning, organising, controlling and leading function that can guide the project to success with minimum waste of resources and a minimum of misunderstandings among the different stakeholders. It involves documenting baselines and changes in client requirements and it enables an understanding of the impact of future changes. Similarly, CRM enhances teamwork and collaboration, and means easy access to and re-use of requirements in other projects as necessary. More importantly, CRM results in time and cost savings and high levels of client satisfaction.

Client requirements can be managed in a several stages. The architectural manager together with the rest of the project stakeholders must evaluate the requirements in each stage. The first stage is determining the goals of the client and all the other stakeholders and examining the requirements for meeting them. This includes identifying the necessary resources and the potential obstacles. Then, a feasibility study is conducted to determine the most efficient processes. After that, the design and construction processes will commence. Any change of the requirements during this phase should be identified and communicated. During these processes, requirements are carefully monitored and traced. Finally, requirements are tested and benchmarked against what was already planned in the CRM plan. This step provides valuable knowledge that can be fed back to the client and stakeholders as well as helping to further improve the effectiveness of business and project processes.

8

Managing Learning



Life is a series of experiences, each one of which makes us bigger, even though sometimes it is hard to realise this. For the world was built to develop character, and we must learn that the setbacks and grieves which we endure help us in our marching onward.

Henry Ford, industrialist and founder of the Ford Motor Company

The fourth component of architectural management framework is managing the architectural management learning process and the responsibility of the architectural firm in this regard. It covers all the different strategies/actions that must be considered in order to introduce and enhance the concept of architectural management among architects and architecture students. The implementation of the architectural management framework and its related activities/tasks requires that it becomes embedded in architects' basic education and in their continuous professional development (CPD) and, more importantly, that they embrace the idea of making the architectural firm a constantly learning organisation.

This chapter does not cover all the possible managerial functions and strategies that could lead to creating a better learning architectural firm. However, it sheds light on the basic managerial functions that should be considered by the architectural manager.

Handbook for the Architectural Manager, First Edition. Stephen Emmitt and Mohammed Alharbi.

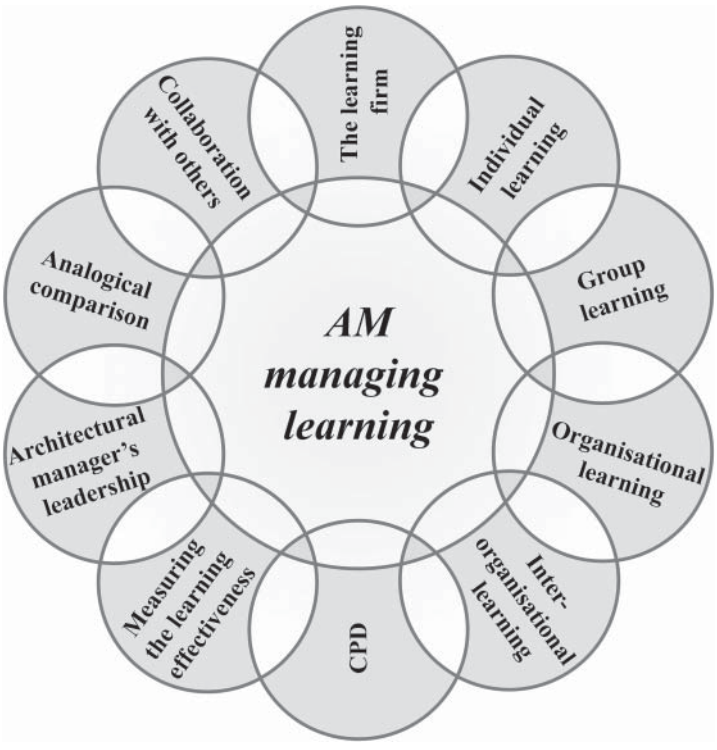


Figure 8.1 Managing the AM learning components.

More specifically, this chapter presents the basic 'whats, whys and hows' of the ten major learning-related managerial functions (see Figure 8.1). Some of these managerial functions can be managed solely within the internal environment of the architectural firm, while others require a collaborative endeavour with other professional and educational organisations.

8.1 The Learning Firm

> *Structure your firm around growth and learning. A key ingredient for successful innovation is rapid learning: understanding what works and what doesn't. Think of each new exploration as an experiment.*
>
> Carl Sterner, owner of Sterner Design

In any professional business, success and prosperity is associated with continuous improvement, which requires a commitment to effective learning. Failure to learn usually results in failure to adjust to changing market conditions, failure to innovate and failure to prosper. In any learning organisation the owners will recognise the link between learning and continuous improvement; it will be part of the organisational culture. The leading authority in this domain, Peter Senge, defined the learning organisation as:

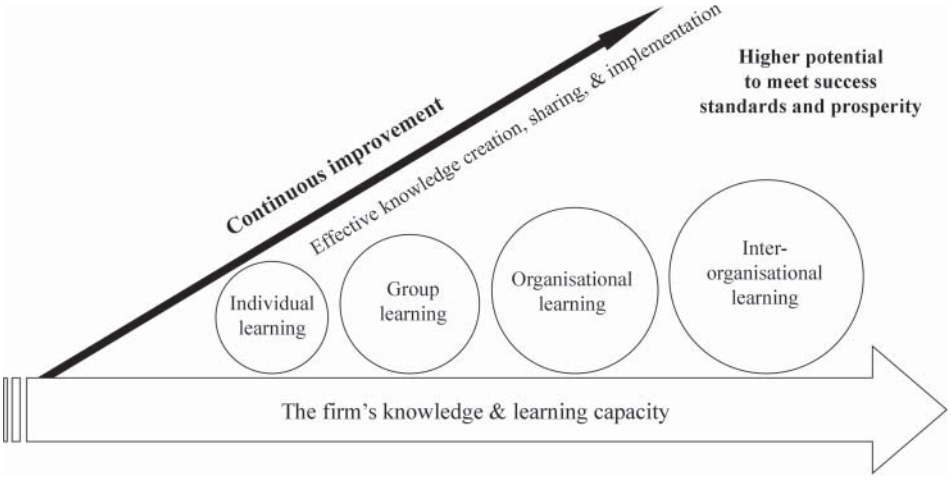


Figure 8.2 The purpose of the learning organisation.

> …where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continuously learning how to learn together.

It is the role of the architectural manager to design an office environment where it is the norm to create, invent and share knowledge; a place where everyone is part of the knowledge creation and sharing process (see Figure 8.2). While this may seem a rather obvious statement, it is not uncommon for staff to be so consumed with project work that the sharing of knowledge gets overlooked and hence opportunities are missed.

Organisations that embed learning into their daily routines will be better positioned to be proactive in the market than competitors. They will be better able to:

- sustain high levels of innovation and thus remain competitive
- respond to external environment forces
- improve the firm's output (service and/or product) in terms of its quality, efficiency and effectiveness
- retain talented staff and keep them motivated
- improve the firm's image to public by becoming more people-oriented.

To become a successful learning firm every member of the architectural office must be part of this transitional process. However, this process requires a change agent, and it is the architectural manager who should play the role of facilitating the different efforts and contributions, directing them towards one mutual target. Seng (1990) suggested the following five components should be considered and managed in order to become a professional learning organisation:

- *Systems thinking:* This is developing the capacity of the firm to realise the 'big picture', and understanding how the different parts of the firm affect each other and the firm's systems as a whole. This could be as fundamental as recognising the interdependency of the projects and the business. Given that architects are good at seeing buildings as

a series of inter-related systems, it should not be too difficult to consider the business in a similar way and design the components so that they work as a system rather than disparate parts.

- *Personal mastery:* This involves having the goals of both the staff and the business be developed, realised, aligned and achieved together. It requires a clear vision for the business and an equally clear vision for recruiting and rewarding staff. In the more enlightened offices, it includes major clients and strategic stakeholders.
- *Mental models:* This involves challenging and changing the way we perceive and think about the world around us, and/or examining the knowledge we already have. Few architects would need much encouragement in this respect in relation to design, but they are likely to need prompting when it comes to the business aspects of architecture.
- *Shared vision:* This involves building a collective and mutual goal as the vision of the firm and how can we achieve it as a system working in unity. It requires effective communication within the firm and between stakeholders (especially clients). The larger the firm in terms of staff, the greater the need for more structured communications and interaction mechanisms.
- *Team learning:* This involves creating a collaborative working culture that will lead to a collective ability and intelligence better than the sum of individuals' abilities. This means ensuring engagement within the office, within every project and with stakeholders.

8.2 Managing Individual Learning

> *Ah, mastery…what a profoundly satisfying feeling when one finally gets on the top of a new set of skills…and then sees the light under the new door those skills can open, even as another door is closing.*
>
> Gail Sheehy, author, journalist and lecturer

The dynamic nature of the AEC sector requires the competitive architectural firm to have an innovative, skilled and knowledgeable workforce. This is one of the main human resource management (HRM) responsibilities of the architectural manager. The architectural manager should help employees to develop their individual learning plans and plan career development and personal growth through mentoring and regular performance reviews. Professionals should need little encouragement to keep up to date with developments in their field; it is one of the characteristics of being a professional. Staff will therefore take responsibility for their learning. However, in contemporary organisations the management of employee learning is a shared responsibility between the firm, the architectural manager and the employee (see Figure 8.3). The firm's role in this process will be explained later in this chapter. This section focuses on the role of architectural manager in leading employees' individual learning.

Managing the employees' individual learning as a business function will result in many advantages for the firm and the employees alike. First, it will help in identifying the workers' strengths, weaknesses, values and interests by maintaining a two-way open dialogue with their mentor, the architectural manager. Identifying these points helps the architectural manager to understand the degree of compatibility between

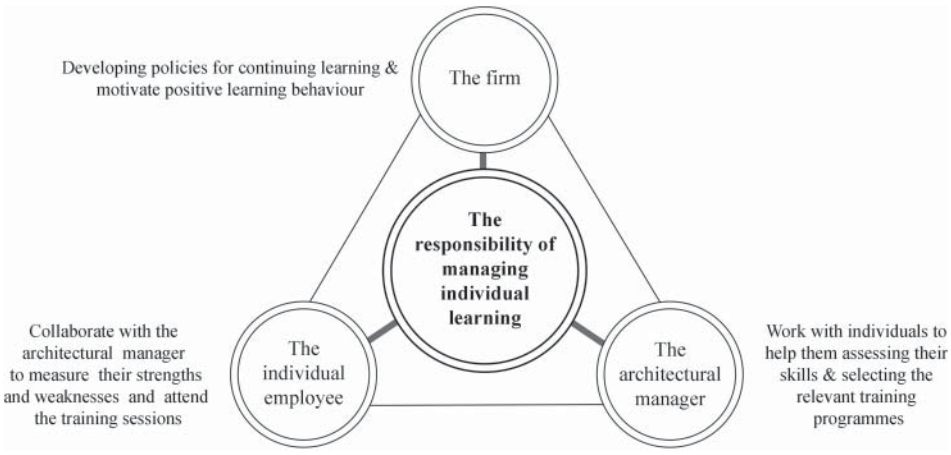


Figure 8.3 The shared responsibility for employees' individual learning.

the needs of the firm and the knowledge/skills of the employee. The needs of the firm and the synergy with employees may vary over time as the organisation evolves and responds to changing markets and opportunities. It is therefore necessary to review all staff skills and knowledge on a regular basis to ensure a good fit. Effective management of employees' individual learning plans will contribute to performance and productivity. Well-managed individual learning will also add positively to self-esteem, self-confidence and job satisfaction. This helps to retain staff and also helps to attract the best in the profession, keen to work in supportive and progressive firms.

Several plans and guides for managing individual learning are available. All tend to adopt a circular or stepped process, as shown in Figure 8.4.

- *Self-assessment:* This is to be carried out by each employee in the architectural firm. The purpose of this step is about auditing the currently available skills, abilities, values, strengths and weaknesses of each employee. This could be done by the architectural manager distributing a standard self-assessment form (while ensuring confidentiality of individual assessments). It could also form part of the preparation for an annual staff appraisal exercise.
- *Role-assessment:* Modern firms are more about roles than jobs. It is the duty of the architectural manager, supported by the firm's departments' heads, to determine the needs of the job holders in order to effectively align their contributions to the firm's vision and values. This will result in a description of the expectations for each job/role and the necessary skills. It will also require the architectural manager to work with the employees to evaluate their interpretations of their roles in achieving the firm's short-term and long-term goals.
- *Training:* Based on the first two steps the architectural manager should aid individuals in designing self-learning initiatives. These initiatives will help staff to develop their skills, knowledge and attitudes in order to meet the requirements of their roles within the architectural firm.
- *Implementation:* Putting the budgeted training initiatives into action and continually monitoring the progress of each 'trainee' can be enhanced by motivation from the architectural manager.

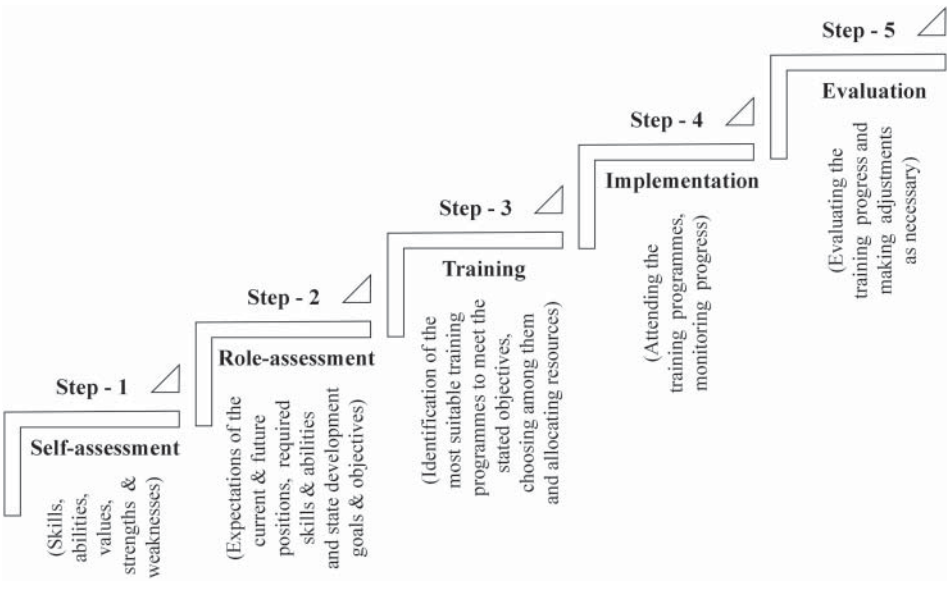


Figure 8.4 Basic procedure for planning an employee's individual learning.

- *Evaluation:* Based on the outcome of each individual training initiative, the individual and the architectural manager should be able to assess the results of the intervention and embed the results as a learned lesson for future training initiatives.

However, the most important consideration is to direct the individual learning process, aligning the needs of the individual employees and the needs of the firm. There are several cost-effective methods that can be used to enhance the individual learning process and provide effective learning opportunities within the firm. The benefits of one over another will be context specific.

8.3 Managing Group Learning

> *Working together in concert more smoothly not only helps us move more quickly; it changes the nature of what we can undertake. When we have the confidence that we can orchestrate the group effort required to realise them, we dare bigger dreams.*
>
> Justin Rosenstein, software programmer, co-founder of Asana

Group learning is about creating, acquiring, sharing, and utilising knowledge within a group of employees. It can occur in one of two forms:

- when an employee shares knowledge directly with other employees
- when a group of employees works together, takes action, gets feedback and implements this feedback to modify and develop their future actions (see Figure 8.5).

Any of these practices will convert individual knowledge into group knowledge. In architectural offices it is usual to work in small groups and teams to meet project deliverables.

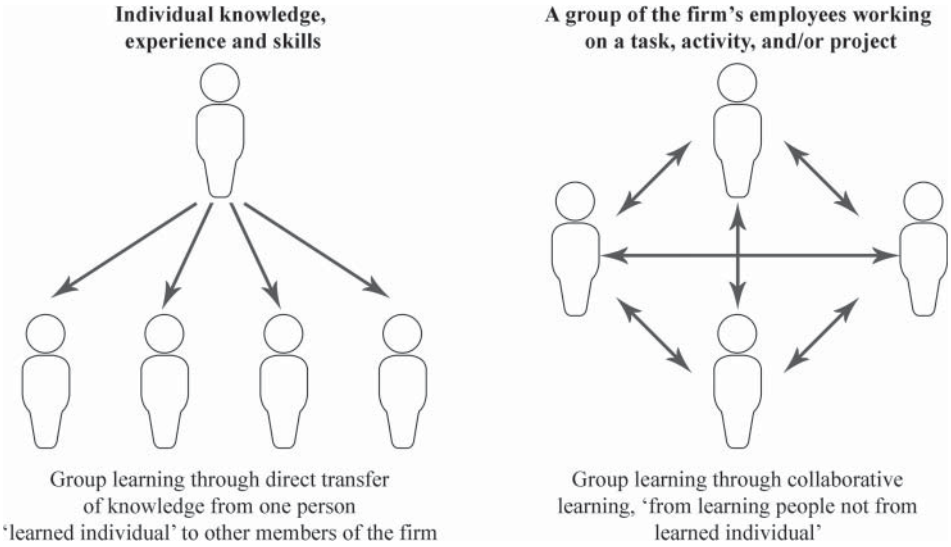


Figure 8.5 Two popular modes of group learning within firms.

These groupings are formed for the life of the project. They may involve members drawn from other offices, forming inter-organisational groups (see Section 8.5). In the very large offices, groups may be formed to deal with specific issues, such as for example a group specialising in facade engineering. In most architectural firms, this type of learning happens as a by-product of addressing the project and, if not managed strategically, can be lost. The architectural manager needs to put processes in place that encourage group learning and help capture knowledge for future application. This will help to share knowledge within the office and within project teams, leading to fewer errors and less wasted effort. This will benefit staff and the development of the firm.

Group learning has many advantages for the firm and its employees. Many educators and professionals claim that people prefer to learn side by side, by doing rather than by only listening or reading. Group learning leads to better collaboration and teamwork. It also enables employees to develop higher-level thinking skills, contributing to self-management, leadership and communication skills. Furthermore, it will enrich the employee's sense of belonging to the group and firm and will develop their self-esteem and sense of personal accountability. For the firm, group learning will add positively to the capability of its workforce. It will also help with staff retention and attracting new talent.

Group learning directed by the architectural manager must be planned and structured in order to make it part of everyday practice in the firm and within projects. First, the architectural manger must design a purposeful learning paradigm that will enable employees to develop their skills and knowledge. This should be part of the firm's culture. Although the focus will be on project groups, it can be helpful to establish specific groupings within the organisation to deal with matters central to the development and competitiveness of the business. These groups typically span projects. Figure 8.6 shows a popular roadmap for planning the group learning function:

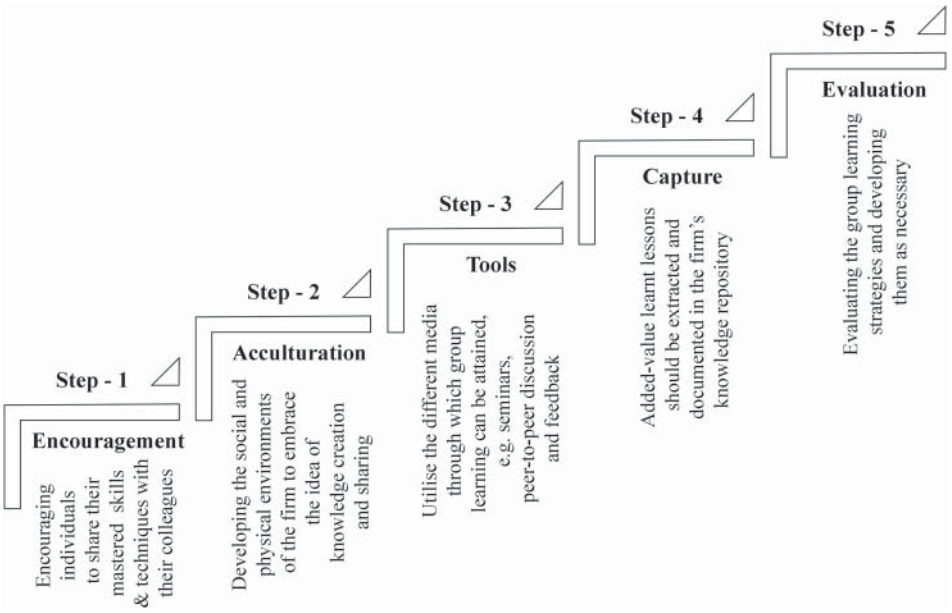


Figure 8.6 A basic procedure for planning employees' group learning.

- *Encouragement:* Increasing the employees' willingness to share their skills and knowledge with their office colleagues and project stakeholders depends on how efficiently they interact with each other. It is the duty of the architectural manager to shape this interaction as a value-added tool for the architectural practice.
- *Acculturation:* Creating a social ambience in the most appropriate physical setting will be fundamental to establishing and embedding a culture of group learning, which is paramount in achieving success. The 'secret' is in providing space where people are happy to meet and exchange ideas, both informally and in a more structured manner. This means that the physical arrangement of floors and rooms need to encourage, not hamper, interaction.
- *Tools:* Efficient interaction for the purpose of group learning can be enhanced by face-to-face meetings, weekly seminars, peer-to-peer feedback, intranet(s) and/or a combination of these tools. These enabling tools need to be planned and embedded in standard routines.
- *Capture:* It is important to ask what types of knowledge are most sought after: what adds the most value to the firm and its employees. Once this is understood it is a little easier to capture the right sort of knowledge for the firm's specific context and transfer this into explicit knowledge.
- *Evaluation:* An essential part of this process is to evaluate the way in which knowledge is generated, captured and embedded into standard working methods. It may be that some initiatives do not work out as well as intended, resulting in wasted resources. Conversely, it may be that some interventions are more successful than could have been hoped for. Evaluation helps to reduce and eliminate processes that are not effective and enhance those that are providing value to the firm and its staff. Regular evaluation and feedback from staff will be central to an effective group learning process.

8.4 Managing Organisational Learning

An organisation's ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.

Jack Welch, author, businessman and former CEO of General Electric

Organisational learning is a business function that concerns the continuous process in which the firm creates, captures, organises, and utilises knowledge related to its business practices. It is not restricted to the sum of knowledge possessed by the firm's employees; rather it is about the firm's ability to adapt to market changes through its capability to develop, store, apply and embed new knowledge. Organisational learning is a higher level of the learning process than individual and group learning, and is based on applying knowledge purposefully with the objective to learn from both the process and outcome (see Figure 8.7). Organisational learning aims to align innovation to daily (routine) tasks and practices; in other words, it aims to integrate learning and action. Most competitive firms, in almost every industry, apply the concept of organisational learning. The architectural manager must create the ideal organisational environment, decide the 'what, why, and how' of something to be learned, and ensuring that organisational learning is adding value to the firm.

Applying organisational learning is beneficial for the architectural firm as it should help to increase efficiency, flexibility and productivity via the better integration of knowledge, thus leading to a financially more robust business. Such approaches are also known to increase the sense of ownership, shared responsibility and a collective mindset orientated to continual improvement. The slightly less tangible benefits may include the ability to retain staff through higher levels of job satisfaction.

The architectural manager should approach organisational learning as a dynamic and continuous process. Organisational learning can be viewed as one of two major forms (see Figure 8.8):

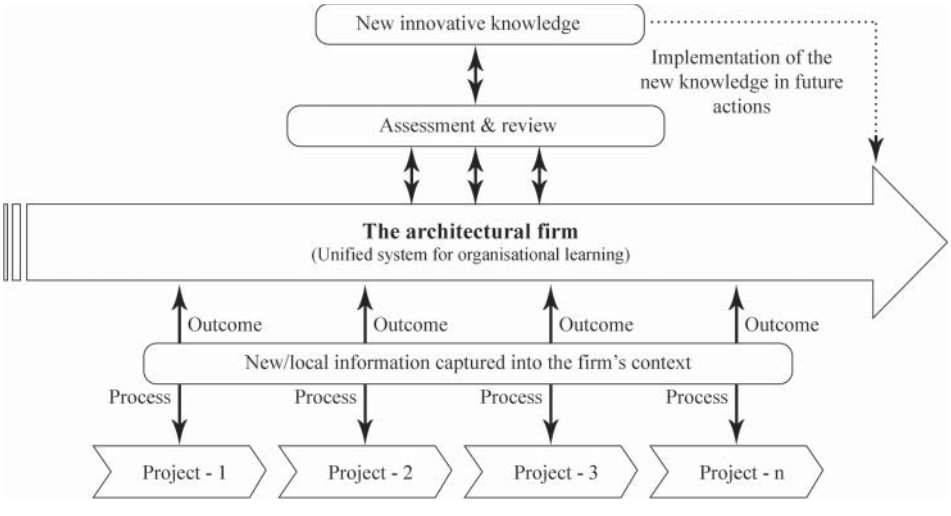


Figure 8.7 The purpose of the architectural firm's organisational learning.

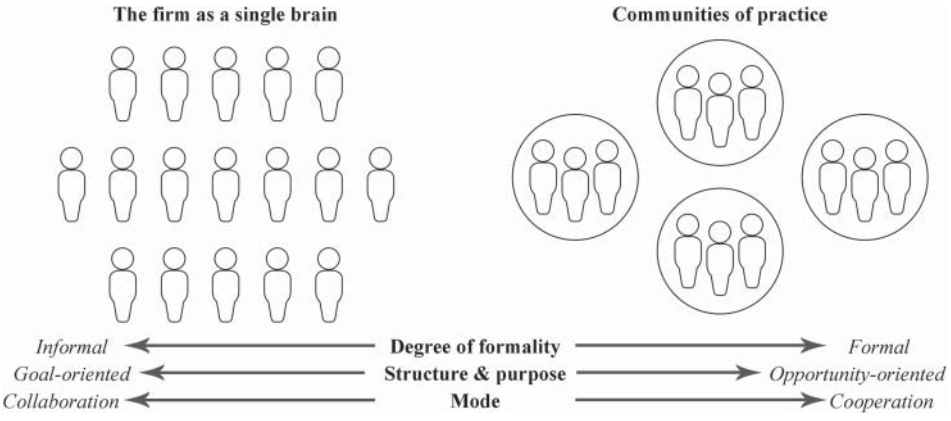


Figure 8.8 Two models of the architectural firm's organisational learning.

- *The firm as a single entity, or 'one large brain':* In this mode of organisational learning, the dominant culture of the architectural firm is to encourage its staff to be part of one professional team, experiencing daily challenges and learning opportunities. Staff members are encouraged to immediately share their new insights and newly gained skills with their colleagues in informal ways, such as chatting over coffee breaks and informal weekly seminars. In this model, each individual is assumed to embed a piece of the puzzle to the firm's bank of knowledge. This mode of organisational learning is more suitable for small architectural firms.
- *The firm as an umbrella of communities of practice:* This style of organisational learning is more suitable for medium and large architectural firms, where the size of the staff means that several projects can be undertaken concurrently, and/or its structure consists of several teams or departments based on staff specialisation. Because of these two attributes the organisational learning process requires more structure and a formal approach. Based on their daily experiences, each project team or department gains new learning insights that are initially confined to the boundary of the community of practice. It is the duty of the architectural manager to facilitate and encourage each community of practice to share their knowledge and add to the firm's cumulative knowledge.

It is sensible to combine both approaches to achieve better organisational learning. The architectural manager needs to demonstrate commitment to the learning process by setting and sharing a clear vision. Similarly, they make continuous improvement part of the firm's culture. This can be achieved through acting as a role model, participating in the process of learning, as well as by providing incentives for positive learning behaviour. This means that the firm must have a clear and well-established structure that specifies:

- the employees who are accountable for capturing, distilling, applying and sharing knowledge
- the formal and informal channels of knowledge flow.

8.5 Managing Inter-Organisational Learning

Creating a better world requires teamwork, partnerships, and collaboration, as we need an entire army of companies to work together to build a better world within the next few decades. This means corporations must embrace the benefits of cooperating with one another.

Simon Mainwaring, CEO We First Branding, author and speaker

Inter-organisational learning (IOL) is the highest level of learning (see Figure 8.9). IOL is about how several firms in an alliance collaborate, create and share their knowledge and experiences. This knowledge can be in the form of processes, services and products, and/or outcomes. Project-orientated service providers such as architects and engineers are pre-positioned to use IOL, but it will not happen unless it is thought through and planned. Representatives of the different firms will collaborate using IOL in order to secure benefits for their own firms and for the collective. IOL can result in a firm applying the same ideas used by its alliance partners or by modifying and tailoring them, thereby creating innovation. The architectural manager may be well positioned to act as the representative of the architectural firm, operating as a knowledge agent between the firm and other members of the collective.

IOL complements the other modes of learning. Benefits to the architectural firm may include

- stimulating innovation, through increasing the multidisciplinary experiences and skills
- time and cost savings, through creating collaborative values achieved with specialised and complementary knowledge
- risk minimisation, through sharing past and combined experiences
- better professional relationships between the allied firms and their employees, which leads to faster individual, group, and organisational learning for everyone involved.

Figure 8.9 The different levels of the learning process within organisations.

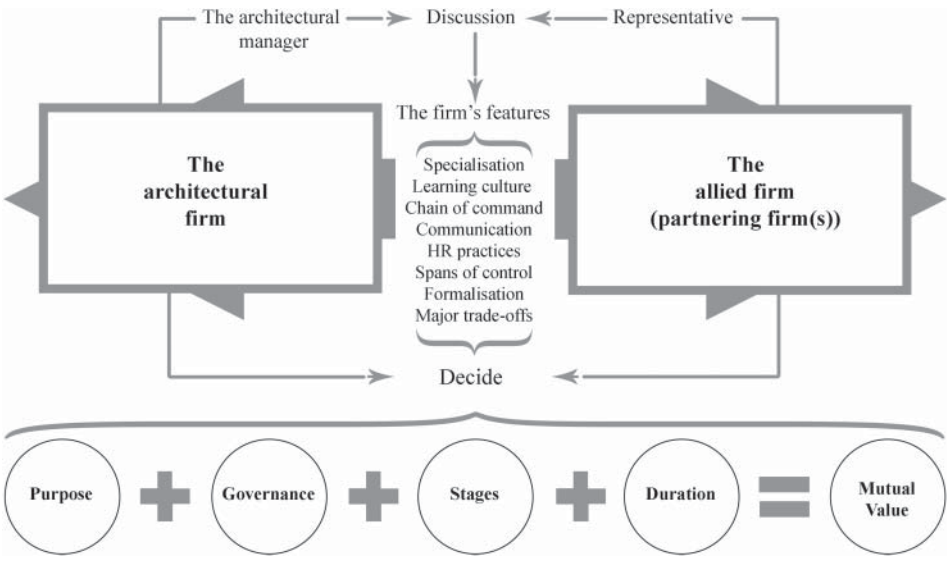


Figure 8.10 A model for inter-organisational learning for the architectural firm.

IOL involves the creation and transfer of knowledge between different firms with different cultures. Therefore, the architectural manager must recognise this and plan the process in line with the model in Figure 8.10. The factors to consider are:

- the degree of formality of the learning process
- the duration of the knowledge partnership between the allied firms
- the characteristics of each firm involved in the process (business model, structure, size, strengths and weaknesses)
- the different styles and approaches to learning for each firm
- the best learning environment that suits everyone ('the common grounds')
- planning for mutual competitive value for the allied firms.

Based on these factors it is assumed that the architectural manager and the representatives of the allied professional firms will form a temporary steering panel to work collaboratively and deliberately to satisfy the equation at the bottom of Figure 8.10. The main objective of the steering panel is to manage the IOL process to ensure its efficiency and effectiveness. This includes:

- *Purpose:* clarifying the intended outcome of the learning experiment
- *Governance:* agreeing upon the mechanism and people in charge of making decisions
- *Stages:* planning this professional project learning processes into several phases in order to monitor progress and make any necessary adjustments
- *Duration:* constructing a time schedule showing milestones and potential bottlenecks
- *Mutual value:* clearly determining what advantages will be gained by each of the allied professional firms.

8.6 Managing Continuing Professional Development

> *CPD should be beneficial: planned, managed, and carried out in the right way…It can be used to strengthen your business, to pick up lucrative new skills and to acquire new specialisms. It can be what you need it to be, suited to you. It is a true business, professional and career tool.*
>
> RIBA website

After realising the importance of the four levels of learning, the architectural manager should prepare and manage a set of continuing professional development (CPD) programmes to help deliver the required level of learning. CPD is the pragmatic process of tracking, documenting and increasing the knowledge, skills and experience of employees, both formally and informally, as they work for the firm. It is more concerned with the practical learning and the reflection of this learning in professional practices (see Figure 8.11). It can be in the form of training workshops, in-house seminars, conferences, professional events, e-learning, webinars and tutorials, sharing of best practice and ideas within the firm, or a combination of more than one of these formats. The architectural manager is crucial in planning and preparing effective CPD programmes and thus to the development of the firm's staff. It is not uncommon to align the planning of CPD with the annual staff appraisal cycle.

Effective CPD has benefits for both employees and the firm. CPD enables staff to monitor their learning and progression, thus enhancing their confidence and self-esteem. Staff will be able to highlight gaps in their knowledge and skills and then put a plan of action in place to address them. This plan of action is usually discussed with the architectural manager to ensure that the needs of the individual and the needs of the firm are

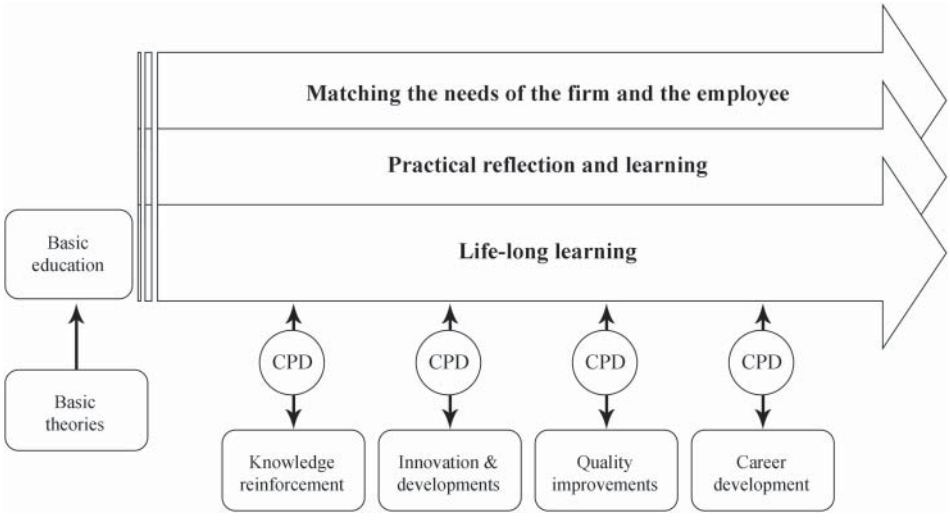


Figure 8.11 The purpose of architectural CPD.

compatible. Investing in CPD will help the firm to cope positively with market changes by constantly updating the skills of its workforce, thus maintaining a competitive advantage. Seen from outside, the image of a firm with a strong commitment to its people can help to attract clients and potential employees.

The architectural manager must audit and then prioritise the skills required in the short and longer term. Then, the learning opportunities can be grouped into one of two modes:

- *Formal training:* This can lead to a qualification and is usually provided by an external specialised training provider in- or outside the firm.
- *Informal training:* This can be provided in-house.

One of the myths of CPD is that it is expensive to deliver. In fact, several tools to deliver effective CPD are available within the firm or are readily available via other organisations via a strategic alliance. Some of the cost-efficient tools by which CPD can be delivered are illustrated in Figure 8.12.

Whether designing a formal or an informal CPD programme, the architectural manager must consider the following issues:

- *Auditing current competences:* Through regular assessment of the practice's staff the architectural manager is able to benchmark the currently available skills and competences against what is required to satisfy the practice's growth needs and plans.
- *Competence prioritising and programme planning:* Based on the first step, the architectural manager can determine which competences are needed and which ones are desired. Based on the firm's growth plans and assigned CPD budget, they can prioritise a list of programmes to be put into action.
- *Implement and evaluate:* Monitoring staff commitments and attitudes during the CPD programme is crucial in achieving the intended outcome. However, it is more valuable to enable staff to reflect on their learning, evaluate the benefits and to turn the newly acquired skill and knowledge into action. This step also involves encouraging staff to share their new experiences with colleagues.

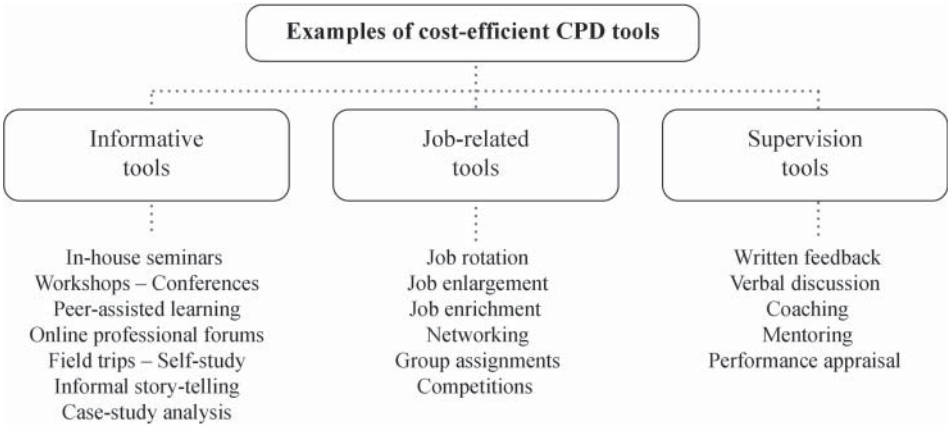


Figure 8.12 Examples of cost-efficient CPD tools.

8.7 Measuring Effectiveness

Measurement is the first step that leads to control and eventually to improvement. If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it.

James Harrington, author and quality guru

Bringing about and maintaining a learning culture can be highly challenging. One aspect that is too often overlooked is the need to measure and celebrate improvements. This requires objective analysis and measurement of the impact of learning initiatives and interventions. It is important to ask whether valuable and relevant knowledge was obtained for the business in a cost-effective way (see Figure 8.13). The answer to this question is not about measuring the short-term retention of knowledge by individuals; rather it is about measuring the long-term ability of the firm to apply this knowledge. Measuring the firm's learning effectiveness is about analysing the time and resources allocated for the training and learning and the results. This can be challenging, because many of the results may take time to become evident and hence their value cannot always be objectively measured in the short term. The architectural manager can observe, judge and compare the improvements that come about and compare this to the amount of investment (finance and time) required for training to measure effectiveness.

The major advantage brought by measuring the effectiveness of learning is revealing the return on investment. More specifically, it tells the firm

- how well the learning opportunities met the needs and objectives of the firm and its employees
- what knowledge and skills were conveyed
- what desirable change has been brought to individual and overall performances
- the major impacts on the firm's business.

Measurement should be conducted at all the different levels of learning – individual, group, organisational, and inter-organisational – so that the effectiveness of learning can

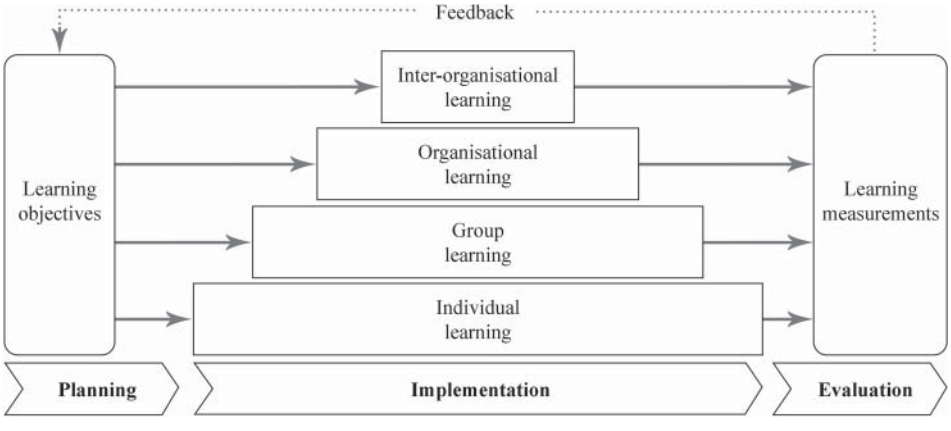


Figure 8.13 Measuring the effectiveness of the learning programmes.

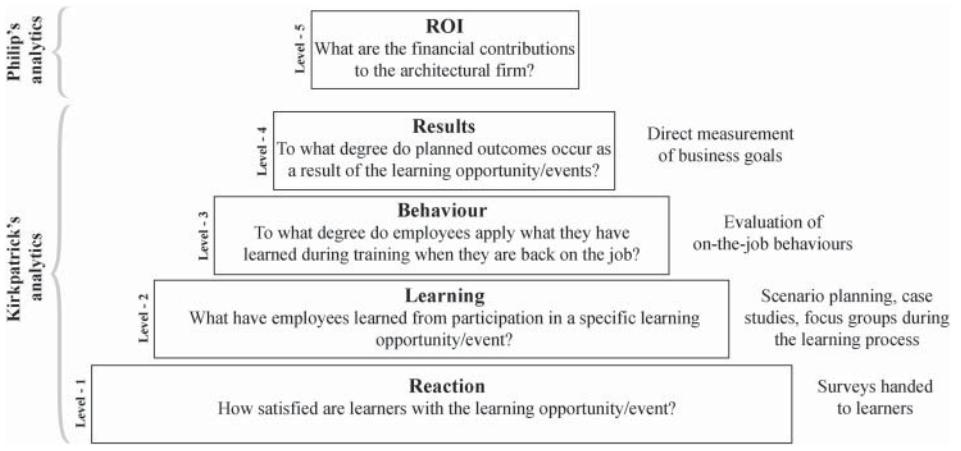


Figure 8.14 A combined Kirkpatrick–Philip model for evaluation of the effectiveness of learning.

be considered for each. The architectural manager can follow a comprehensive set of metrics to assess learning. Data obtained can be benchmarked against stated objectives of the learning process. One of the most popular tools to evaluate learning effectiveness is a combination of Kirkpatrick's 'Four-Level Training and Evaluation' model and Philip's model (see Figure 8.14). This tool can be applied at different learning levels, as follows:

- *Level 1: Reaction:* This level is mainly associated with understanding how the staff view their learning experiences, be it via project learning or more formal training and educational events. This includes understanding their judgements on the content, techniques, tools, instructor and the perceived value. This will help in shaping future learning opportunities.
- *Level 2: Learning:* This level is associated with understanding how much learning occurred and how much staff knowledge was enhanced as a direct result. The architectural manager can measure this by examining the learning objectives that were established before the learning took place.
- *Level 3: Behaviour:* This is a critical level because it shows how the newly acquired knowledge is implemented within daily tasks as something staff fully understand and appreciate as valuable to their work.
- *Level 4: Results:* Unlike the previous three levels, this level is about realising the impact (positive or negative) of the learning process on the architectural firm as a whole. This may take a while to understand given the time involved in applying knowledge to projects and seeing some form of benefit.
- *Level 5: Return on Investment:* The final level of assessment is about comparing the realised gains (which may or may not be directly related to financial return) by the architectural firm as a direct result of the learning experiment in relation to what was invested.

8.8 Measuring the Architectural Manager's Leadership Skills

The quality of a leader is reflected in the standards they set for themselves.
Raymond Albert, businessman and philanthropist

To be successful in converting the architectural firm into a learning organisation requires the full commitment of its owners and leaders. This falls into the remit of the architectural manager as a champion of the enhancement of learning, which is fundamental to the achievement of stated business objectives. It is therefore necessary to consider whether the architectural manager is equipped with the necessary skills and attitude to guide this process. To answer this question, we must first understand the role of the architectural manager in creating and maintaining a learning organisation (see Figure 8.15). First, the architectural manager must design the learning organisation, which involves simple processes to help staff interact and share knowledge. Second, the architectural manager must act as a mentor, a coach, a teacher, and a role model for the staff and key external stakeholders. Third, the architectural manager should act within a long-term framework that has ambition and a view of the future of the business. To excel in practising these roles, the architectural manager must have the necessary leadership skills to influence, direct and channel these different efforts towards one mutual goal. To continue to be effective in the role, the architectural manager must continually assess the required leadership skills for this position and undertake CPD to enhance their skills and capabilities.

Leadership self-assessment for architectural managers will provide essential guidance on what needs to be improved on a personal and professional level. Similarly, seeking anonymous evaluation from others (partners, peers, and employees) will help in identifying gaps between what the architectural manager thinks he or she is delivering and what people experience. Awareness of strengths and weaknesses will raise the credibility of the architectural manager and will help to develop the trust of others, leading to effective leadership.

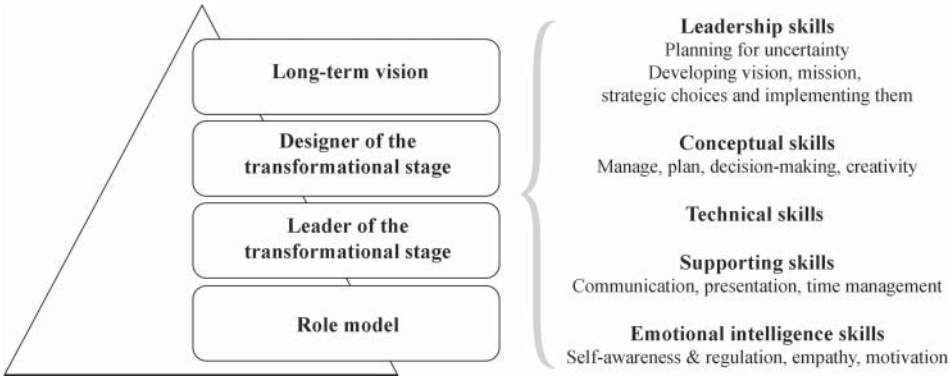


Figure 8.15 The role and required skills of the architectural manager in managing the transformation into a learning firm.

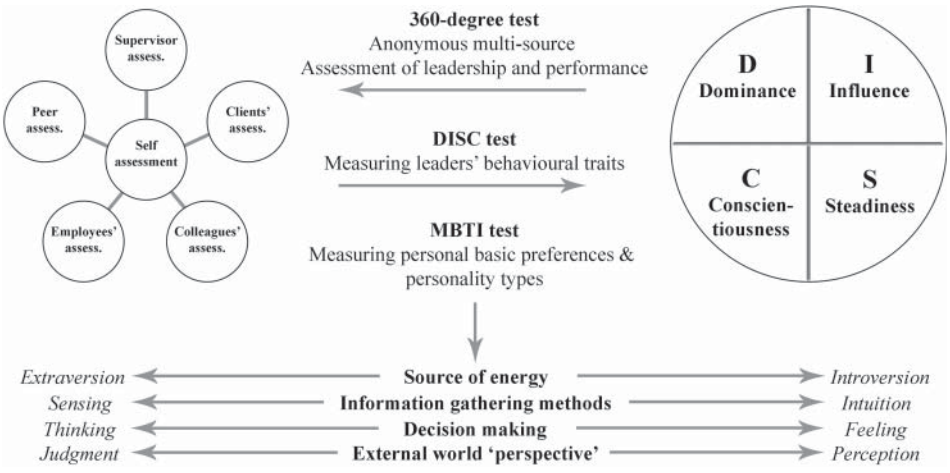


Figure 8.16 Examples of popular tests of leadership and other skills and traits assessments.

Architectural managers can obtain feedback from others regarding their leadership skills through open and direct discussion, anonymous surveys, and 360-degree feedback assessments. Such assessments should be conducted over long time frames, say once a year. Self-evaluation should be a continuous process; and should be objective in order to provide adequate evaluation of performance and behaviour as well as identifying the necessary improvements. There are several tools that aid in leadership self-assessment, such as the Myers-Briggs type indicator test and the DISC assessment, which helps to identify one's most prevalent traits. (The D represents 'dominant' or 'driver'; the I represents 'influencing' or 'inspiring'; the S represents 'steady' or 'stable'; and the C stands for 'correct' or 'conscientious'.) Figure 8.16 shows three important leadership assessment tools that can be used to measure the skills of the architectural manager.

- *360-degree test:* This is an anonymous feedback process and, as the name suggests, it aims to provide holistic evaluation of an employee's performance, especially those employees with leadership roles such as the architectural manager. The architectural manager's supervisor(s), peers, subordinates, and some clients are asked to evaluate performance objectively once a year, through answering a set of ranking and closed questions via a questionnaire. The questionnaire may also include a few open-ended questions including suggestions and areas for improvement. Once the questionnaire has been completed the architectural firm owner(s) will discuss the anonymous feedback with the architectural manager. This will enable the firm's owners and the architectural manager to agree on the strengths and how to foster them as well as points of weaknesses and how to address them. The role of the architectural manager here is twofold. First, he/she should encourage staff to be objective in evaluating their performance and attitudes. And they should be flexible and professional in accepting the feedback results, acting as a role model for others in being keen to improve performance and attitude.
- *DISC test:* This is a very popular test aiming for the user understand their personality and how it demonstrates particularly leadership styles. It is used frequently by candidates for managerial roles that require good interpersonal skills. Taking the

test helps the architectural manager to judge their own personality and leadership traits. This can help to identify areas that would benefit from further training and education.
- *MBTI test:* This is similar to the DISC test, as it helps in identifying personality preferences and leadership patterns. The personality pattern identified can reveal strengths and weaknesses associated with this personality, enabling the architectural manager to avoid the trap of being caught in one leadership pattern.

8.9 Analogical Comparison with Others

> *What can we learn from other industries to make the traditional architectural and construction processes better?…What are you doing to be more efficient? What systems are you implementing to be sure your clients are happy? Are you learning from other industries?*
>
> Mark LePage, architect and founder of EntreArchitect

Architectural firms can utilise a very important, yet often ignored, source of learning, namely analogical comparisons andextracting lessons from other industries. The AEC sector has several distinguishing characteristics, but it also exhibits similarities with other industrial sectors, especially project-based ones such as marketing and bespoke-product industries such as shipbuilding. Some aspects are have similarities with manufacturing and service industries such as retail and healthcare. It is common to see other sectors learn from each other, including from the AEC industry. For example, the words 'architect' and 'architecture' were borrowed from the construction industry by IT specialists who admit that they found it useful to apply these terms with the descriptions assigned to them by architects. In many respects, architects may be better at borrowing detailing language and manufacturing techniques from outside AEC than they are at borrowing managerial tools and techniques. The role of the architectural manager is to encourage an outward-looking culture and encourage the successful adoption (and/or adaption) of proven practices and innovations from elsewhere (see Figure 8.17).

Given that markets for services are constantly changing and evolving, it is essential that the owners and managers of architectural businesses seek out ideas from successful firms in other sectors. If this is done in a systematic and objective manner, rather than simply following the latest managerial fashion, the firm will benefit by:

- having a broader capacity for innovation
- developing technology transfer lessons
- improving knowledge management capabilities
- exploring and adopting state of the art managerial and professional techniques.

In order to utilise analogical comparison as a source of value-added learning, the architectural firm needs to broaden its thinking paradigm, learn from other industries and where appropriate adopt 'best practice', including processes and technological solutions that have been successfully employed by those other industries. The architectural manager should (see Figure 8.18):

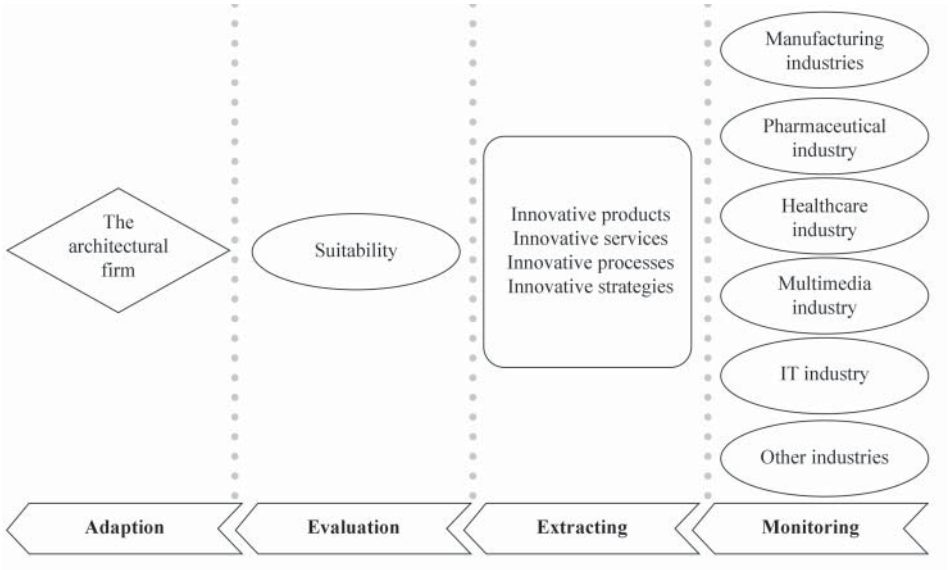


Figure 8.17 The meaning of analogical comparisons and learning from others.

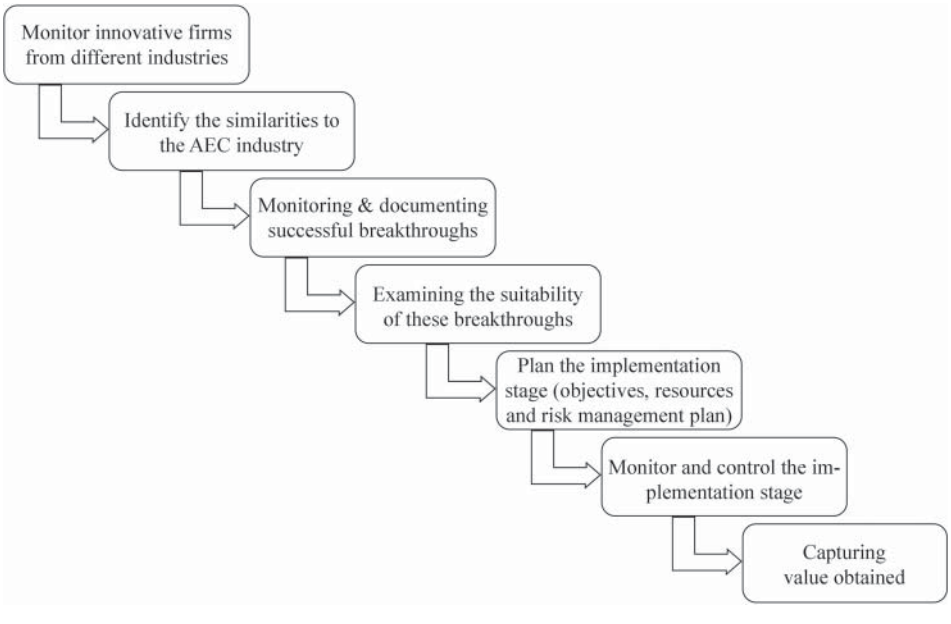


Figure 8.18 A model for pragmatic analogical comparison.

- *Monitor innovative firms from different industries.* In each industry, or sector, there are a number of pioneering firms that are successful in guiding and shaping their business environments according to their innovation pace.
- *Identify similarities with the AEC industry:* This should include problems that are common across both industries. Many industries are project-based and design-intensive, so it is not uncommon to see some similarities in their problems and the methods they use to resolve them. For example, website development companies deal with their clients in a manner similar to the way in which architects deal with theirs. Architectural managers can therefore consider what can be learned from website developers.
- *Monitoring and documenting successful breakthroughs made by innovative practices.* This should include considering if these breakthroughs are applicable to the architectural firm and its projects.
- Apply the breakthrough: This involves planning the implementation stage by identifying objectives, resources and risks, monitoring and controlling the implementation stage and adjusting if necessary, and finally capturing the value obtained as a result of transferring and implementing this breakthrough to the architectural firm.

8.10 Collaborating with Professional Bodies

> *The collaboration between universities and industry is getting increasingly more important…Companies need to understand that this issue will become one of the key challenges of our future. Now is the time for them to integrate it into their HR strategies and profit from a win–win situation.*
>
> Michael Jünger, professor of business consulting and management

Much has been written about the failure of architectural programmes to educate architects for business. We therefore need to ask how architects learn to manage projects and their businesses other than by learning on the job. The professional bodies that oversee architectural education have a role to play, as do the architecture schools. If neither is prepared to address management then architects will need to enrol in additional training and educational programmes. Simply relying on learning from others is not sufficient, especially when the other actors in AEC are educated in business and economics.

The dilemma is that educators believe that architecture students will learn management concepts and functions during their professional lives, while practitioners believe this role must be assigned to the educational institutes. What is really needed is a diversification of the skills of the architecture graduates at master's level prior to completion of their professional education. To do so involves recognising the need to introduce the concept of architectural management to architects and architecture students, and this will demand effective collaboration between educational institutes, professional bodies and firms (see Figure 8.19). The architectural firms' principals, architectural managers, can act as the change agents for better collaboration among these agents.

Collaboration between architectural educators, firms and professional bodies may result in better inclusion of management techniques, resource planning, financial planning, teamwork and effective coordination of the elements of the design and

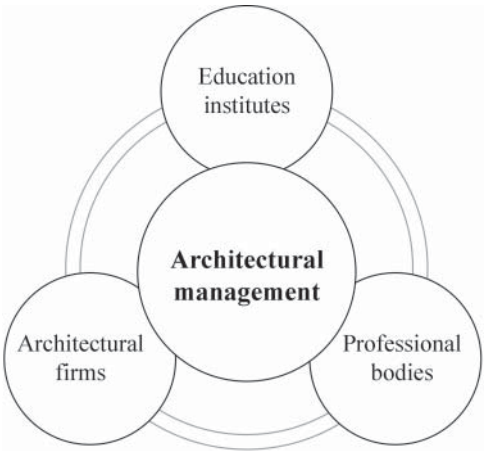


Figure 8.19 The responsibility of advocating the concept of architectural management.

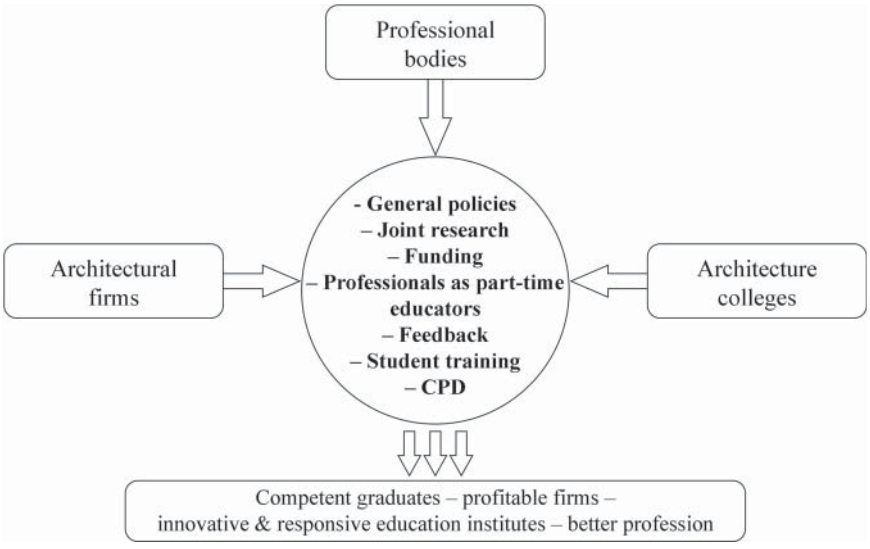


Figure 8.20 The result of effective collaboration between architects, educators, and professional bodies.

administration of contracts. This will give clients more confidence in the architect's ability to manage projects and business aspects, thus helping to (re) establish control of design quality.

To bridge the gap between academia and practice requires flexibility from educational institutions. They must review and develop their programmes in order to respond to changing market demands and competitions. This requires more effective coordination between educators and architectural firms, driven by interventions from professional bodies (see Figure 8.20). The issues for basic discussion are endless, but the essential ones are:

- realising architecture is a business besides being a profession
- curriculum design and structure

- student assessment
- practitioners as part-time instructors
- multidisciplinary collaboration of different AEC departments
- the number of architectural students, both intake and graduating
- life-long learning.

Working solely by itself, the architectural firm has no power to produce change in these areas. However, it can engage with some of them as part of its corporate responsibility programme, as discussed in Chapter 7. For example, the architectural manager can act as a reflector of market trends and demands. This can be done via interaction with local educational institutions, or providing insights via seminars and contributions to educational/industrial liaison committees. This may ultimately influence curriculum design. The list of such opportunities is endless, as it depends on the architectural manager's creativity and willingness to participate in shaping the new generation of architects.

9

Practical Application

This final chapter provides practical guidance for the application of the architectural management framework, in an approach based on office size. It is well known that the size of the office influences the culture and its use of managerial tools and frameworks. As a general observation, the larger the office, the greater the need for effective management. That said, even the smallest of offices will not be profitable if they cannot manage their business affairs. The four scenarios range from the sole practitioner, to the small office, the medium-sized office and finally the large office. Case studies help illustrate what needs to be done and when. These highlight the tasks to be undertaken by the individuals, whether or not they hold the title of 'architectural manager.' We conclude the chapter by challenging readers to take action now that the required tools are to hand.

9.1 The Sole Practitioner

It is very common for architects to work as sole practitioners. This is sometimes out of choice and sometimes the result of redundancy in an economic downturn. Either way, many architects enjoy the freedom of working alone and being the master of their own fortune. They may work alone, or employ (often on an ad-hoc basis) one or two individuals to help, for example with the bookkeeping and tax returns or with producing technical drawings in busy times. They may also form larger enterprises through collaborative ventures, with several small practices coming together to create the expertise necessary for a specific project. These micro-businesses often constitute a large proportion of registered architectural practices in a country.

9.1.1 Scenario

Architect A is a sole practitioner. She has a portfolio of work that includes the design of new houses as well as extensions and adaption of existing domestic buildings. She occasionally works on larger projects – small extensions to schools and commercial premises such as offices – usually partnering with another sole practitioner. These projects tend to be located relatively close to her office. She has built up a good reputation for her work within the local community, with the majority of new commissions coming from word of mouth. As the person who does everything; from securing new work from clients, to

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design and administration of projects, to the administration of the business, she has little time for 'management'. She is 'too busy' doing her job. She does concede that she is too busy to take a strategic view of the business and would welcome some help. She would be positioned at Level 1 on the architectural management pyramid (see Figure 3.3). So how does she make use of the framework to improve her performance?

9.1.2 Applying Architectural Management – Managing Learning

The first step is to identify areas that are in need of improvement. The architectural management framework is useful because the main components help her to focus on specific issues. Looking at the framework she has decided that all aspects of her business could be improved, but she has limited time and resources, so she has to prioritise. In doing so she has concluded that the education component is most important to the long-term development of her business (Chapter 8). She has maintained her CPD since qualifying as an architect, mainly focused on legal and financial aspects of the business. Reflecting on the framework, she has realised that she could manage projects and her business more effectively, but she is aware that she needs to improve her knowledge and skills to do so. As a sole practitioner, her individual learning is closely related to the learning of the firm, but she is keen to grow the business and is also keen to implement processes that capture learning.

Activities

Given her limited resources, she has decided to supplement her existing CPD with additional reading. This will be the primary activity. In addition to reading this handbook she has also identified additional sources that she would like to read.

Tasks

The task is to read and reflect on her learning prior to implementation of any changes. She has decided to buy one book at a time, and has added time to her diary (two hours on a Wednesday afternoon) to read and reflect. Protecting a time slot in her diary each week is one way of managing the learning.

Specifics

Her aim is to identify ways to improve efficiency in the management of projects, thus freeing up time for other activities and improving profitability. The objective is to better understand where efficiencies can be made and identify tools that will help in this regard (see Figure 9.1a). She has also realised that there is a lot of knowledge generated in the projects and has decided to investigate how best to capture this knowledge for the benefit of her business (see Figure 9.1b).

9.1.3 Reflection and Measuring Performance

In this example, the architect will mainly reflect on her experience in isolation, perhaps discussing issues with a life partner or a small network of sole practitioners. Therefore, it is important to have a simple yet systematic mechanism to record the feedback for future reference. An office journal is perfectly adequate for the task, with the task of recording in writing also forming part of the reflective process.

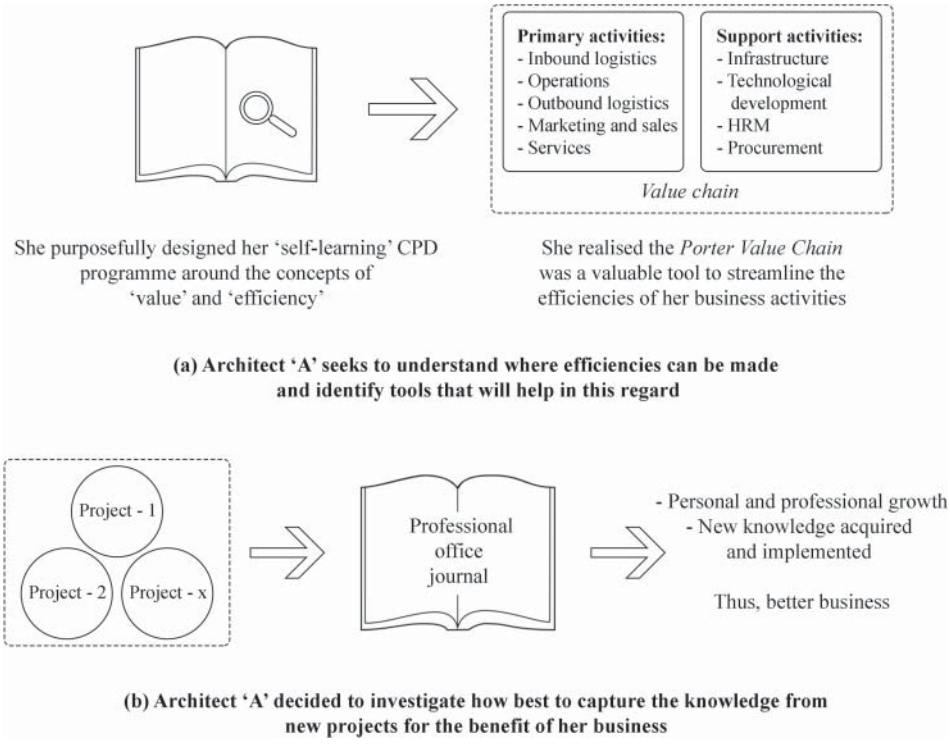

Figure 9.1 Case Study 1: applying the framework by a single-architect practice.

9.2 The Small Office

Small offices are those classified as employing two to five 'design' staff, and they are a common feature of many architectural communities. Similar to sole practitioners, they comprise a large proportion of registered practices in a country. Workload and specialisation varies across this segment of the profession, with some practices specialising in, for example, housing or small commercial projects, while others have a varied portfolio of projects. The scope of projects tends to be small to medium in financial terms and physical size.

9.2.1 Scenario

Architects B and C are principal architects and joint owners of a small architectural office. They employ a project architect and two architectural technologists, along with an administrator. The two owners have split their responsibilities: one spends his time trying to secure new business and promote the practice, in addition to doing the client briefings and the conceptual designs. His business partner 'runs' the office and oversees the projects from conceptual design through to completion. She is supported by a project architect and the technicians. The office administrator deals with day-to-day office enquiries and deals with the financial aspects of the business. The two partners are making a small profit on the resources invested but wish to be more effective in

how they manage their projects and the business. How do the partners make use of the framework?

9.2.2 Applying Architectural Management – Managing Projects

The initial step is the recognition by the firm's owners that they need to improve their processes. Reading the handbook has helped to stimulate thinking about the overall performance of the business and this has reinforced the need to improve profitability through better management of projects. They have positioned themselves toward the bottom of Level 2 of the architectural management pyramid. They are aware of the importance of effective management, but are not overly confident that what they are doing is best practice. Chapter 5 has been particularly useful for them in this regard.

Activities

The partners have decided to use their next project as a vehicle to trial some improvements. They are aware that many delays and frustrations are created by project stakeholders. Initial analysis has revealed that inconsistent work flow has undermined profitability and has also affected the scheduling of other projects due to unexpected delays: this has also affected cash flow. The plan is to better plan the project before it starts, so as to identify interdependencies within design work packages.

Tasks

The first task is to analyse the way that projects are currently managed and identify when delays and bottlenecks occur in the production of work. This will form the benchmark for future improvement. The initial analysis has identified a common delay, caused by the structural engineers being late producing the structural drawings. On average the engineers take a week longer than scheduled. A telephone call to the engineers has resulted in a decision to allow an extra week in the programme, thus eliminating the delay. Extending the project by one week before it starts is not viewed as a problem for the client. That was an easy fix. The other relationships and slight delays are more problematic to identify. Reading has identified a tool that may be useful: the design responsibility matrix.

Specifics

By applying the design responsibility matrix, the practice has been able to identify the interdependencies within the project and better understand who is responsible for specific design packages. This has enabled them to put in place a suitable work schedule. This includes the ambition to talk to stakeholders more frequently with a view to discussing potential challenges before they arise (see Figure 9.2).

9.2.3 Reflection and Measuring Performance

One benefit of a small office is the ability to communicate easily among the staff. Procedures can be kept simple, for example a weekly discussion about the projects, with very little time being consumed by the intricacies of communication that challenge larger firms. This makes the process of change management relatively easy, as long as everyone remembers to discuss and agree prior to implementation. Similarly, reflecting on

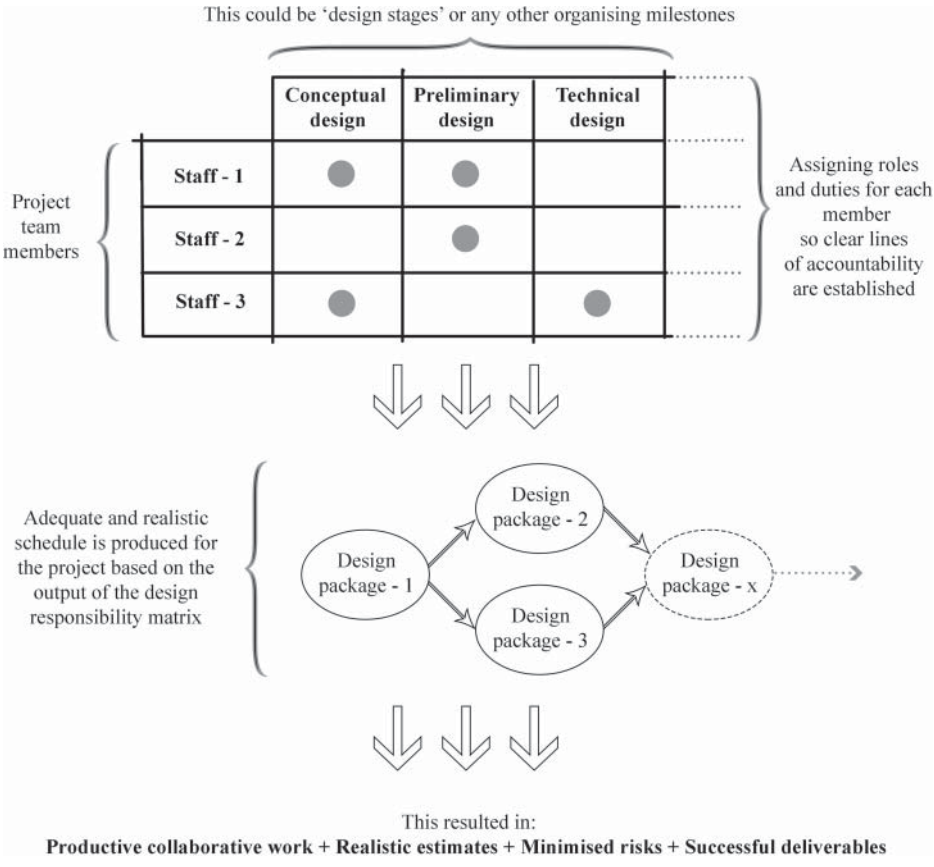

Figure 9.2 Case Study 2: applying the framework in a small architectural practice.

the changes and measuring performance is straightforward, requiring very little effort by those involved.

9.3 The Medium-sized Office

The medium-sized office is usually classified as employing between six and ten design staff. It is common for a senior member of the office to take responsibility for staff and resourcing. Management skills tend to be better developed than in smaller offices. The larger size requires more in the way of formal structures and processes to enable the business to function. The majority of the financial management tends to be assigned to administrators, alongside management of resources.

9.3.1 Scenario

In this scenario the architectural manager role is delegated to a senior member of the office, although she is not an owner of the business. She is supported by another member of the office who acts in a design management capacity, although he does not have

a formal title. The architectural manager, Architect D, is responsible for overseeing the business aspects of the firm. She controls the finances and staffing. Architect E has a design management role, overseeing a number of projects. This office has positioned itself somewhere between Level 2 and Level 3 on the architectural management framework (see Figure 3.3).

9.3.2 Applying Architectural Management – Managing the Business

As the office has expanded to accommodate an ever-increasing workload, the recruitment policy has been to employ architects. Reflecting on the skill sets of the staff, the two architects have come to the conclusion that they now have an unbalanced workforce. They have carried out a simple skills test, and have found that they would benefit from additional technical and managerial skills. The staff has significant design expertise, adequate technical ability but very little managerial expertise. The plan is to seek new staff, to help to balance the firm's collective skills and competences. In addition to staffing, the review of the office has highlighted the need to address projects that fail to make a profit on the resources invested.

Activities

The priority for this firm is to look at the inter-relationship between the project portfolio and the management of the business. Architects D and E have specific job functions, but they have realised that they do not communicate enough, and as such the synergies between the management of projects and the management of the business is not being discussed.

Tasks

The first task is to undertake a review of the historic project portfolio to see which projects have provided the most value to the business. For this office, the term 'value' is interpreted as making a profit, growing the business and improving their reputation. Twenty percent of projects failed to make a profit. One lost money and the remainder broke even. Half of these projects did not add anything to the growth of the business or to improvement of their reputation. When analysing these projects further they could all be put into the 'small' project category, and are complex projects with a comparatively modest fee income. Following the review, the recommendation is that the firm starts to turn down small complex projects unless they are high profile. The remaining projects all made a profit, although they varied somewhat in the achievement of time and quality targets. This has stimulated a desire for more consistency across the project portfolio.

Specifics

The office has initiated a 'project value' checklist. This checklist is applied to all new project leads as a means of managing risk. If the project is perceived to be too risky in terms of generating a profit, not enhancing the firm's profile and/or not growing the business, then it will not be taken on (see Figure 9.3).

9.3.3 Reflection and Measuring Performance

Taking time to stop and review the project portfolio has been fundamental in seeing the link between the performance of projects and the profitability of the business. A simple

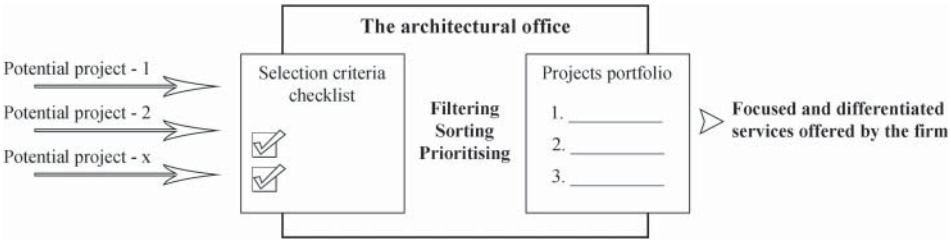

Figure 9.3 Case Study 3: applying the framework by a medium sized architectural practice

review of projects has revealed data from which to make decisions about the type of projects to be taken on by the firm. Coupled with a review of staff skills and competencies the business is now much better positioned to achieve its performance targets.

9.4 The Large Office

Although the largest offices make up the smallest proportion of offices by number, they are responsible for the largest share of the architectural work by financial value. Typically, large offices are multi-disciplinary, employing a wide variety of design and engineering staff. By their very nature, they need to be well managed in order to succeed and cover their large staff costs. They tend to work on very large and complex projects. These offices will employ one or more individuals working as architectural managers (titles may vary).

9.4.1 Scenario

Our fourth scenario relates to a large office employing over 100 staff. Architects F, G and H are employed as an architectural manager, design director and design manager respectively. In this firm the architectural manager is a co-owner and is responsible for making strategic decisions. She reports directly to the board of directors. The design director is responsible for design quality within the office and oversees the project portfolio. The design manager is one of several who report directly to the design director. All three individuals are knowledgeable about architectural management and design management, all possessing significant experience. The office would position itself toward the top of the architectural management pyramid (Level 4). In this office the architectural management framework is used as a mechanism to address and improve performance across the entire business.

9.4.2 Applying Architectural Management – Managing Stakeholders

At a recent business meeting, a decision was taken to review and address inconsistencies in the way in which client briefings were conducted in the firm. In this scenario we explain how each architect uses the framework in relation to their job function.

The architectural manager forms the link between the project portfolio and the business. Improving consistency of briefing is seen as one way of improving communication

with clients and hence reducing unnecessary rework. This will help to address productivity and profitability while also improving communication with important stakeholders. The design director is primarily concerned with ensuring consistency across the entire project portfolio. A consistent approach to briefings by all design managers and project architects is required. The design manager is charged with managing a portfolio of projects, ranging from large housing projects to office developments and retail schemes. She manages several project teams, interacting with clients and project stakeholders. She is aware that the briefing practices within the firm are not entirely consistent between projects.

Activities

The first activity is to discuss how briefings are conducted within the office by the individuals responsible for client interactions. This is first discussed at a staff workshop. A number of issues are identified that can be improved and a number of good practices are also identified that can be shared within the office.

Tasks

All staff responsible for interacting with clients and for managing the briefing process are given a method statement. This document sets out the steps to be taken at every stage in the briefing process to help ensure regular stakeholder interaction.

Specifics

The office has rolled out the method statement for briefing across all projects and the design director has been tasked with overseeing its implementation and feedback. Any adjustments to the document will need to be proposed by the design director and agreed by the architectural manager (see Figure 9.4). In the first instance, feedback and reflection will last for twelve months. At the end of the twelve-month period the architectural manager will hold meetings with staff and stakeholders to discuss the level of satisfaction with the new briefing tool.

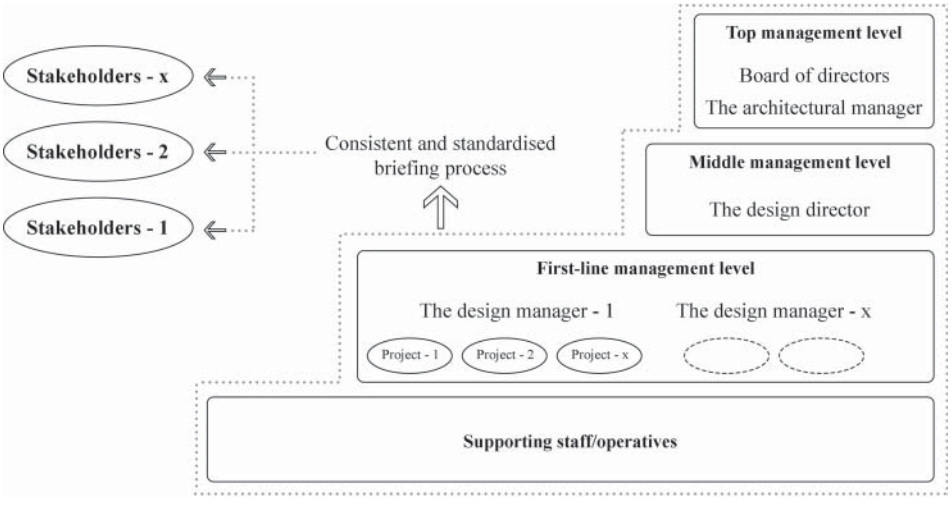

Figure 9.4 Case Study 4: applying the framework by a large architectural practice.

9.4.3 Reflection and Measuring Performance

In this office there are regularly scheduled events to review the performance of the office as a whole and to involve a wide range of staff in feedback and feed-forward activities. All change management initiatives are discussed as a means of reflecting on the positive and not-so-positive aspects. This is seen as being integral to the learning organisation. Individual reflection is encouraged by line managers.

9.5 And Finally…it is Your Turn

To conclude the book we finish by challenging you to take action, whether you own or are employed in an architectural business:

- *Step 1:* Consider where you are positioned on the architectural management pyramid. Be realistic; it is not a public exercise and you are not trying to impress anyone.
- *Step 2:* Consider whether this position is adequate. If not, consider how to improve your position. Otherwise, think about what you need to do to maintain your position given that competitors are constantly improving their services.
- *Step 3:* Identify a small number of issues (activities and tasks) that can be addressed. Prioritise these and agree the most important. Concentrate on one issue at a time – the one that is likely to add the most value for the least investment in resources. Address the easy issues first.
- *Step 4:* Develop a change management plan. Determine the timescale and resources required. Set a target to achieve the plan. Ambitious plans are good, but overly ambitious will usually result in disappointment. Allow adequate time to implement the change and reflect on its success.
- *Step 5:* Implement the change and monitor for the planned period. Do not be afraid to make adjustments if required to ease the process.
- *Step 6:* Analyse the results. Consider why it was successful (or not). Consider how this learning can be fed into other processes. Consider next steps.

Congratulations! You have improved the performance of your business. Celebrate the fact and share your success with clients.

Further Reading

There are a small number of books that are specific to architectural managers, which is supplemented by work into design management. We have provided a concise list of books that we find useful and collectively these works add additional perspectives and richness to many of the issues raised in this book.

Architectural Management

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