

**THE NECESSITY OF ARCHITECTURAL
MANAGEMENT FOR DESIGN ORIENTATED
PROFESSIONAL SERVICE FIRMS**

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Management**

JUNE 2006

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**Date of submission: 02 May 2006
Date of defence examination: 13 June 2006**

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JUNE 2006

FOREWORD

My sincere thanks go to Professor Ms. Nur Esin Altaş, who with her insight and significant help make me complete the thesis under difficult circumstances throughout the past months.

I would also like to thank to Mr. Volkan Binici and Ms. Gönül Şerefoğlu, as proof supporter of all the hard times and for providing so much help during the period. Additionally, I am so much thankful to Mr. Yağmur Topraklı for his guidance and recommendations.

I reserve my last acknowledgement to my family, Neriman, Necmi and Gokcen ERDEM, whom I owe my being.

May, 2006

Alper Gökhan ERDEM

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LIST OF ABBREVIATIONS

AEC-FM	: Architectural Engineering Construction – Facility Management
AIA	: American Institute of Architects
AM	: Architectural Management
AJ	: Architect's Journal
BSI	: British Standards Institution
CIB	: International Council of Building
CPD	: Continuous Professional Development
DOS	: Design Orientated Professional Service Firms
ISO	: International Standard Organizations
IT	: Information Technology
ITU	: Istanbul Technical University
LLP	: Limited Liability Partnership
PM	: Project Management
QA	: Quality Assurance
QC	: Quality Control
QM	: Quality Management
RIBA	: Royal Institute of British Architect
SAAM	: Society of Advancement of Architectural Management
TQM	: Total Quality Management
UK	: United Kingdom
USA	: United States of America
YTU	: Yildiz Technical University

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THE NECESSITY OF 'ARCHITECTURAL MANAGEMENT' FOR DESIGN-ORIENTATED PROFESSIONAL SERVICE FIRMS

SUMMARY

Building production process is a complex problem because of the many different skills required during the different stages of the product's lifecycle, requiring inputs from different areas at varying times. Parallel to this situation, firms associated with building production are constantly facing change. This is particularly took place in an architectural office where both anticipation and response to change will determine the firm's success in the marketplace.

Unfortunately, with the effects of industrial revolution and more mobile population, the building environment and the market enlarged rapidly; and the impacts of this rapid and uncontrolled change can be seen inevitably on all the players of the industry.

Under these circumstances, if we have a quick look at the changing roles of the architects in the building production process during the past two hundred years, we realize that the nature of the demand for the products of the building industry has changed dramatically, so as the role of architect. Architects, being opposite to the way that they lead their own practices, have been facing difficulties in leading the building production process for the past decades, as they have been traditionally doing for centuries. Additionally, we can claim that the change in the building environment and the market also affected the other design professionals, in a similar way that of architects.

It is understood that, according to the authorities of the profession, the reason for the above situation is mainly because of the lack of interest to **management issues** in these design orientated professional service firms (DOS), where design is the first and foremost concern. But, together with the evolving industry, the competitors of the design professionals involving in the building procurement have increased; where most of these individual players are using their management skills as a significant weapon to deal with the design-orientated practices in the market.

As a result of this, the question “*how design organizations can more effectively manage the business of the design process as a service*”, in order to keep their competitive advantage, is the main focus point of the research. To do that, the term architectural management and its necessity for the competitive advantage are addressed through different chapters. The research is mainly based on the UK standards and regulations, and the topic is researched in regards with the relation between DOS firms and the existing regulations within this identified area.

Accordingly, in *Chapter 1*, introduction to the topic, research objectives, the purpose and the content of the study are presented shortly.

In the following *Chapter 2*, the study continues with a description and analysis of the design orientated professional service firms. It is the main intention to be focused on the professionals who are engaged in providing design orientated professional services, such as architects, architectural technicians and building surveyors. However, in order to set out boundaries, architectural practices described as the main base units to observe the necessity and impacts of architectural management. Therefore, throughout the chapter, the structure of architectural practices together with their different organizational types is identified. Finally, the building environment and the existing situation of the building industry are described in regards with the topic; and the necessity of management issues is highlighted as an essential future development for design practices.

In *Chapter 3*, the main aspect of the research, **architectural management** is described. The chapter divided into two parts in general. Besides the definition and introduction to the topic, the relation and contradiction between management and architecture is defined in Part 1 through different perspectives. In Part 2, the manageable aspects for design services are explained and different parts of management issues through a practice life cycle are briefly addressed. The main intention is not to give detailed information or establish a management model, but to highlight the importance of these issues for a successful practice management.

Finally in *Chapter 4*, findings and conclusions of the study are presented; and suggestions for future research are outlined.

TASARIM ODAKLI PROFESYONEL HİZMET FİRMALARI İÇİN MİMARİ YÖNETİM'İN GEREKLİLİĞİ

ÖZET

Yapı-üretim süreci, süreç içerisindeki farklı üretim aşamalarının ihtiyaç duyduğu değişik kabiliyetlerden dolayı oldukça karmaşık bir süreçtir. Değişik alanlardan farklı zamanlarda girdilere ihtiyaç duyar. Bu devrinde paralel olarak, yapı-üretim endüstrisindeki firmalar da sürekli bir değişim gösterirler. Özellikle mimarlık firmaları gibi bu değişimi sezinleme ve cevap vermedeki başarısı ile yapı pazarındaki yerini tanımlayacak işletmelerde bu süreç daha da belirgindir.

Ne yazık ki, endüstri devrimi ve teknolojik gelişimin etkisi ile yapı üretimi ve inşaat pazarı oldukça hızlı genişlemiştir ve bu hızlı ve kontrolsüz genişlemenin kaçınılmaz etkileri sektörün tüm oyuncularında gözlenmektedir.

Bu şartlar altında son iki yüzyıl içindeki mimarların genel yapı-üretim süreci içindeki rol değişimlerine hızlıca bakarsak, yapı ürünü taleplerindeki dramatik değişimin mimarların süreç içindeki rollerine önemli etkileri olduğunu görebiliriz. Mimarlar, ne yazık ki kendi büroları içerisindeki lider konumlarına karşın, son yüzyıllarda bina yapım süreci içindeki geleneksel lider konumlarını kaybetme tehlikesiyle karşı karşıyadırlar. Buna ek olarak, yapı-üretim sürecindeki bu değişimin mimarlar gibi en çok tasarım odaklı profesyonel hizmet firmalarını etkilediğini söylemek mümkündür.

Meslek otoritelerince, tasarım odaklı bu firmalar için sorunun kaynaklandığı esas nokta **yönetsel konulara** olan ilgisizlik ve tasarımın hep ve sürekli tek kaygı noktası olmasıdır. Fakat, gelişen endüstri ile birlikte, yapı-üretim sürecine eklenen rakip oyuncular yönetsel kabiliyetlerini tasarım odaklı hizmet firmalarına karşı bir silah olarak kullanmakta ve böylelikle yapı pazarından daha geniş komisyon elde etmektedirler.

Bunun bir sonucu olarak, “ tasarım firmaları, tasarım hizmeti esaslı işletmelerini, rekabet avantajlarını korumak adına nasıl daha etkin bir şekilde yönetebilirler?” sorusu araştırmanın temel çıkış noktasını oluşturmaktadır. Bu soruya cevap vermek için, mimari yönetimin tanımı ve rekabet üstünlüğünü korumak adına gerekliliği, çalışma içerisindeki farklı bölümlerde ele alınmıştır. Çalışma, Birleşik Krallıklar (UK)

sistem ve standartları çerçevesinde gerçekleştirilmiş olup konu bu tanımlı alan içerisindeki tasarım odaklı profesyonel hizmet firmalarının mevcut regülasyonlarla olan ilişkileri bağlamında araştırılmıştır.

Bu bağlamda, 1. Bölüm'de, giriş, araştırma kriterleri ve konunun amaç ve içeriği kısaca ifade edilmiştir.

Takip eden 2.Bölüm'de, araştırma, tasarım odaklı profesyonel hizmet firmalarının tanımı ve çözümlemesi ile devam etmektedir. Bu noktada amaç, mimarlar, mimari teknisyenler ve keşif-metraj profesyonellerine odaklanmak ve bu grupların hepsini tasarım odaklı profesyonel hizmet firmaları (DOS) çatısı altında incelemektir. Fakat çalışmayı sınırlandırmak adına, mimarlık firmaları temel unsur olarak incelenmiş olup mimari yönetimin etkileri ve gerekliliği bu unsur üzerinden açıklanmıştır. Bu nedenle bölüm içerisinde, mimarlık firmalarının yapısı ve farklı organizasyon tipleri belirtilmiştir. İlerleyen kısımlarda ise yapı üretim çevresinin araştırma konusunun içeriği ile ilgili mevcut koşulları özetlenmiş ve yönetsel unsurların, tasarım firmalarının gelecek organizasyon yapıları için gerekliliğine dikkat çekilmiştir.

Bölüm 3'te, araştırmanın temel hedefi olan **mimari yönetim** tarif edilmiştir. Bölüm genel anlamda iki kısımdan oluşmaktadır. Birinci kısımda, tanımlamanın yani sıra yönetim ve mimarlık kavramalarının çelişen ve ortak noktaları farklı başlıklar altında anlatılmıştır. İkinci kısımda ise, tasarım firmalarındaki yönetsel işlevler açıklanmış ve firmaların organizasyon yapısı içerisindeki yönetilebilir bölümleri ve dikkat edilmesi gereken unsurlar kısaca özetlenmiştir. Amaç, detaylı bir anlatım yada yönetim modeli oluşturmaktansa, genel anlamda mimari yönetimi oluşturan bu bölümlerin başarılı bir ofis yönetimi için önemine okuyucunun dikkatini çekmektir.

Son kısım olan, Bölüm 4'te ise, araştırmanın bulguları ve sonuçları özetlenmiş olup olası gelecek araştırma konuları için önerilerde bulunulmuştur.

1. INTRODUCTION

1.1 The Purpose and Scope of the Study

Buildings are extremely complex products. A complexity has arisen not just from the vast number of different components that are assembled to make the product, but also from the way in which they are procured. As technology has advanced and buildings have become more sophisticated, the number of individual players involved in building procurement has increased. Therefore, design of the building environment is no longer the preserve of the **architect**, but carried out by a variety of different professionals, all taking decisions at different levels, and in many cases competing with each other for the same market share.

The study starts with the result of the above situation, observing that architects find themselves inhabiting in an increasingly aggressive environment, of increasing competition for the work of building design which also face increased criticism from a variety of sources, concerning their ability to offer a valuable service to their clients.

It is understood that, according to the authorities of the profession, the reason for the above situation is mainly because of the lack of interest to **management issues** in the architectural practices, where design is the first and foremost concern. It is not because architects are not suitable for being effective managers, but because of the management that has not come naturally to design-orientated profession.

All design organizations/practices are formalized social structures, which have to manage their available resources, essentially their staff, towards defined goals and delivery of contracted services. Modern architects need to be well equipped with design, technological and managerial skills if they are to survive competition from other more management-orientated, building professionals (Emmitt, 1999).

As a result, the question "*how design organizations can more effectively manage the business of the design process as a service*" is to be addressed.

The study is designed to identify the general process of design-orientated professional services, to put forward an outline of the existing structure and the problematic nature of managing design issues in general and additionally to make some suggestions for the development and improvement of the process together with the use of the concept “**architectural management**”.

The purpose of this study can be explained briefly:

- 1- To identify what is distinctive about design-orientated professional services as organizations.
- 2- To identify the complexity of construction industry and its existing competitive situation
- 3- To address the concept of **architectural management** and its necessity together with the other strategic management issues for design-orientated professional service firms.
- 4- To examine the existing frameworks for analysing such issues, and to show the affects of the **architectural management** consisting of generic strategies available to practices
- 5- To clarify the competitive advantage of management issues for a design-orientated professional service firm.

1.2 Research Intentions

It is not the only intention of the study to make subjective value judgments concerning the quality level of service provision of some architects to their clients. The main intention is to consider and study actual architectural management, as it needs to occur within the organizations that currently offer building design services (design-orientated professional service firms).

Although there is an enormous amount of management literature available to the reader, the literature takes place in the study addresses issues relating to professional practice management for the built environment. The intend is to make a study that addresses topical management issues within a framework familiar to building industry professions that is accessible to both students and practitioners.

1.3 Research Methodology

The research process can be summarized as follows:

Research of the available literature regarding the general aspects of the design-orientated professional service firms & management of the design process for the buildings in particular, to be reviewed and used as a body of knowledge from which to make observations and recommendations in regards to the current management process of the design issues and the necessity of its improvements.

Research of the concept ***architectural management***, its definition, aspects and history are to be identified, in order to address its impacts on leading architectural practices through the competitive construction industry. Research is also based on the examination of manageable aspects in a practice as a general approach, aiming to highlight the importance of these issues on establishing a competitive practice. As a result, detailed research on this particular issue recommended for a possible future study.

It should be noted that, the research is based on a qualitative methodology rather than a quantitative one. The main reason for this is the available literature, which has mainly studied the topic under certain observations and recommendations through the years rather than depending on scientific measurements. Therefore, the research can be described as initial information, defining the aspects of the problem and the possible application areas of architectural management, which can be used as a base in different sort of quantitative future researches.

1.4 Content of the Study

During the study, the term “design orientated professional service firms” (DOS firms) is used to identify the professional groups providing varying degrees of design services to their clients, such as architects, architectural technologists and building surveyors. However, in order to set boundaries to the study, among these design orientated professional service firms, architectural services are the main focus point and they are to be examined as a base to observe the necessity and impacts of the architectural management and to be identified as “architectural practices” throughout the study.

The study is mainly based on the UK standards and regulations, and the observations together with the architectural practice structures are identified

regarding to the above issue. It is believed that, this research is therefore, will provide important literature for the future of the leading practices in Turkey, where currently most of them are providing design services to abroad in conjunction with the UK practices.

The study is briefly presented in 4 chapters for ease of reading. Chapter 1 is the introduction of the study where the purpose, intensions and methodology is identified. In Chapter 2, the intention is clearly to name the *base* in which the architectural management is to be applied. Therefore, chapter contains the definition of the DOS firms, structure and types of the architectural practices in it, and the existing situation of the environment that they are competing with. It highlights the problems of the current system in terms of a competitive disadvantage. Chapter 3 is forming the main target of the research; the architectural management, its necessity and impacts on the practices and the manageable aspects for those practices. Finally in Chapter 4, the findings and conclusions are presented and the evaluation of possible ways of future analysis is identified.

2. DESIGN ORIENTATED PROFESSIONAL SERVICE FIRMS

2.1 Introduction

“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*” (Maister, 1989, 1993).

More specifically the professional service firm can be briefly described as combination of a number of highly skilled individuals who carry out complex work for others, their clients (Emmitt, 1999). According to the leading authority in this field, David Maister (1993), there are two special characteristics of the professional service firm, customisation and client contact. That is why, *good communication between client and the firm* is crucial, not just for the success of a project but also for a long term client relationship. Moreover, “satisfied clients are the most important source of new work, either through further commissions or through their recommendations to others (Kaderlan, 1991).

In today’s competitive market, in order to keep a firm running, professional practitioners are first and foremost concerned with satisfying their clients’ needs. However, by just focusing on this matter, the quality of the product as the client’s satisfaction, most of them are not paying enough attention to the running of their business and leave it as a secondary part of their work.

For the purpose of this study, the research is mainly concerned with the professional service firms that are design orientated. The characteristics and objectives of DOS firm are separated from other professional firms in one major point: they all offer different types of design services to their clients and these firms have a special relation with one industry: *building*. In order to provide the service, DOS firms are mainly consists of “design teams” where the client is inclusive and the level of clients participation is a key variable within the design process.

Architectural firms can be identified as one of the major DOS firms in the building industry for years. The special characteristics can be seen in Figure 2.1. Their main concern is again to provide a service to their clients that most of the time results as

the *finished building* product. However, the quality of their service, as perceived by the client, is based on the overall experience rather than solely on the finished product (Winch and Schneider, 1993). Thus the quality of the service provided during the process that leads to the finished building, the quality of the finished product and the quality of the service provided once the building is in use, are equally important (Emmitt,1999).

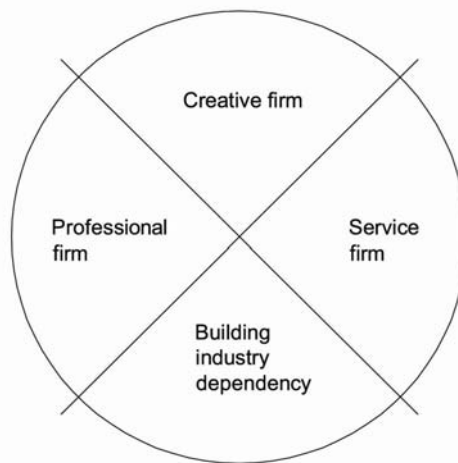


Figure 2.1 The special characteristics of the architectural practice (Emmitt, 1999)

The service can be described with its three important aspects at the point of client's perception (Winch and Schneider, 1993):

- 1- The service is *intangible* – what is purchased is a capacity to produce, rather than a product.
- 2- It is *heterogeneous* in that performance varies from client to client because it is provided by different staff working with different clients and changing over time.
- 3- Production and consumption are inseparable – the service cannot be stored (Parasuaraman, 1985).

As a result of this characteristic, it is clearly identified that the assets of an architectural practice are its people, and their reputation for providing the service promised. As knowledge based organizations, they have the expertise of their staff as assets with which to trade (Winch and Schneider, 1993). This creates significant

problems of `balancing` the relationship between the skills of the people employed, and the service offered (Maister, 1982).

However, architectural firms that are commissioned by clients are primarily concerned with generating and maintaining creativity, an activity that many architects claim they would like to spend more time on in their offices. But as being architects, we can claim that, the design process is only a small part of an architect's job in practice. According to Dr. Stephen Emmitt (1999), much of their time will be spent on issues relating to the construction of the building, legal and financial considerations, the administration of individual jobs and personal time management.

In order to survive in today's competitive building industry; we may note that, as a result of the above situation, architects should be well equipped with managerial skills as well as the design and the technological ones. Perhaps one of the main problems is that, the management discipline has not come naturally to the design orientated profession, but on the other hand all the service they provide should be managed and delivered professionally.

Like many other organizations within the construction industry, the labour market open which architectural practices draw is regulated by a professional institution, which is RIBA (Royal Institute of British Architects) in the UK. This essentially is a process of standardization of skills through professional formation, which means that when client purchase the intangible service, they also know what standards and procedures the service will be supplied.

According to RIBA (1993), the biggest criticism of the architectural profession is that it has an insular culture, is too self-referential, and is too protective; it is a professional culture characterised by segregated education, outdated values and inappropriate role models. If the change is come about, it is more likely to be through the actions of architects in private practice (Lyll, 1980).

Interpreting the above information, we can argue that, in terms of sustainable point of view in an architectural practice, social and economic factors are most of the time far more important than technical issues. For a better thinking, we can ask the following questions:

-What is the main purpose of an architect today, and what should be the philosophy of his practice?

- Which directions does he wish his office to take in terms of client assignments?

-How can design quality be transferred to the finished building without losing any of its characteristics if designers are not involved in the decision making process?

-Is it possible to adopt sustainable principles when others may have different concerns?

- Does the architectural practices really want to rely on other professionals for work, who may well be competing with them?

2.2. Structure of an Architectural Practice

2.2.1 The Practice Culture

Every architectural practice is unique. Its character is drawn from the unique individuals that at the same time make up the practice's workforce. Therefore the organizational structures of the practice become significant, as they are to control and manage its collective talents.

Figure 2.2, provides a simplified view of the firm's culture, manifest in the interaction of the firm's members – directors, professional and support staff – and those positioned outside the firm – clients, consultants and suppliers (Emmitt, 1999).

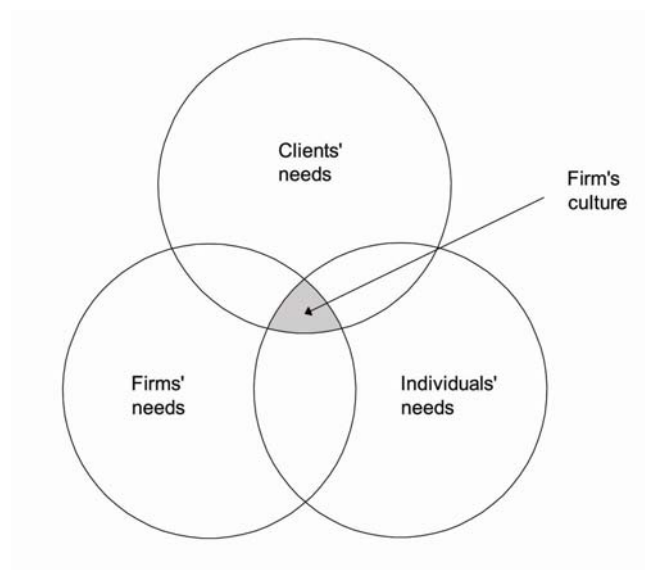


Figure 2.2 The practice culture (Emmitt, 1999)

The culture that exists within the firm is important since some cultures may help to promote the firm's growth while others may work to the firm's detriment (Keeps, 1990). The way in which staff is treated in an *architectural practice* is related to its structure, personality and the managerial ability of the directors where it is especially important that the management structure should be loose enough to allow for creativity but tight enough to deliver a consistent service (Emmitt, 1999).

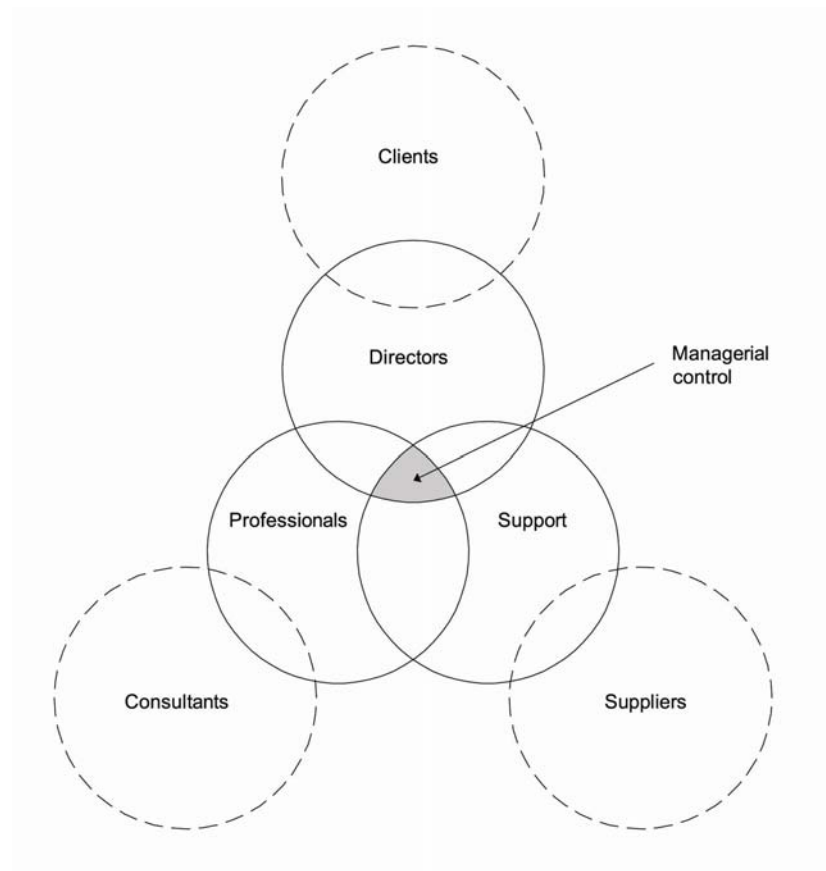


Figure 2.3 Factors contributing to the practice culture (Emmitt, 1999)

1. Client contact with the firm via secretaries/receptionists, etc.
2. Professional's relationship with the firm.
3. Client contact with individual professionals within the firm.

The firm's culture is expressed in Figure 2.3 where the main contributing factors, clients' needs, the firm's needs, and the individual's needs, are shown. The manner in which all three areas interact, or rather the manner in which they communicate

with one another will influence the firm's culture. As such culture is manifest through communication (Emmitt, 1999).

2.2.2 Components of a Practice

Well managed professional service firms have three types of intellectual capital (Caulkin, 1997):

1. *Human Capital*: This comprises the knowledge and talents that reside in the human brain: it walks into the office in the morning and out again in the evening. This asset is not owned by the firm; it is rented (via salaries) and must be managed accordingly.
2. *System Capital*: It is easier to manage than human capital: this is the know-how contained in a firm's processes and documented past projects. The more a firm can incorporate knowledge into their systems, theoretically, the less their reliance on human capital. Well-designed and managed quality management systems are a good example of system capital.
3. *Client Capital*. This describes the value of a firm's relationship with its clients. It is shared knowledge and not owned.

2.2.2.1 Staff

The most important asset of a professional service firm is its staff, more specifically their knowledge and skills. Managing the firm as a profitable business actually means managing individual jobs effectively and profitably which is an essential component of the architectural firm.

The management of staff and the running of the business are very closely linked in DOS firms. An essential requirement is that the management intentions of the directors should be clear and effectively communicated to the employees, for a better understanding hence for sufficient result.

It is equally important to provide a stimulating environment, which will encourage people to work creatively and communicate easily with one another within its managerial framework. However, human beings are much more difficult to control than technologies and tools- thus management of the firm must be concerned with the motivation of its members (Kreps, 1990), its most important asset.

Since the DOS firms with their creative members, constantly evolving and stay competitive; the skills of the staff will inevitably have to change. One possible way is the education of the staff i.e. CPD seminars, or directly through the change in staffing. It is definite that a DOS firm is only as good as the collective efforts of its members and the assembly, motivation and development of this principle asset is crucial to a firm's success in the market place (Emmitt, 1999).

The above is especially true for the knowledge-based firms where the proper selection, training and development of staff are essential if high quality service is to be delivered.

Therefore, the staff selection and constant updating of a firm's members is in a principal function of the firm's directors; it is vital to the development of a firm's culture but often neglected (Coxe, 1980).

2.2.2.2 Client

According to Coxe (1980), the client must become part of firm's organizational structure. Good communication between client and architect is crucial. It is not just for the success of a particular project but also for the long term client relationships. Satisfied clients are the most important source of new work, either through further commissions or through their recommendations to others (Kaderlan, 1991).

The significant aspect in the client-architect relations is the *direct communication* that should be established for a better understanding of the client's requirements for the sake of the process. It is crucial not to allow an intermediary in the form of project manager to come between, who may also be after the business of the architect.

There are different types of clients varies in terms of their experiences in the built industry, which also affect the way they commission their consultants. However, three types of client, in general, have been described by Kaderlan (1991:94):

- 1- *Challenging clients*; who constantly demand a high standard of service,
- 2- *Co-operative clients*; who work with you towards a common goal,
- 3- *Difficult clients*; who offer resistance and criticism and need careful management.

All three characteristics are often exerted by the same client at different times during a project lifecycle. The significant aspect is to manage the situation. Whatever the nature of the client, the architect-client relationship needs to be both nurtured and managed so that both parties benefit from the relationship (Emmitt, 1999).

Management of the client-architect interface involves a number of specific skills (Kaderlan 1991; Maister 1993):

- 1- Listening to client
- 2- Managing client's expectations
- 3- Building client's trust and satisfaction

The better the understanding of the clients' needs, the better the competitive advantage of the firm (Maister, 1993). Additionally, the more the client can be encouraged to become involved in the design process, the easier it is to identify and meet their expectations (Emmitt, 1999).

2.2.3 Outline of Possible Roles of an Architect

The possible roles for an architect in a practice are mainly defined by the contract types and the appointment choices of the client related to this particular contract.

In general, the architects will normally act as a design leader and as such in responsible for coordinating and integrating the work of other design consultants and specialists. In a traditional or conventional appointment, on smaller projects, the architect will combine this role with that of lead consultant and contract administrator. On larger projects, the architect's commission is increasingly being confined to certain *Plan of Work* stages or designated activities (RIBA 2002).

Today, the majority of the contracts in building industry for design services are design and build procurements; where most of them involve an architect. This is a role quite different from that with the traditional commission, in that the architect acts solely as consultant to either an Employer Client or Contractor Client at any one time (RIBA 2002). The degree of involvement with either side will vary depending on particular arrangements whilst the architect has no stated function in connection with the building contract.

Other than these general roles, in which an architect is appointed mostly, there are some other possible roles available for an architect in today's market. Again

depending on the contract type, an architect can also be appointed as a project manager, construction manager or a planning supervisor, all of which seeks managerial and distractive skills beside design issues.

For a long time 'management' to architects had tended to mean office administration, something carried out by an individual with a lower status. It has also been something of a dirty word, in some ways the antithesis of professionalism (Emmitt, 1999). For success in architectural practice in 1990s, this will need to change (Schneider, 1992).

According to Stephen Emmitt (1999), modern architects need to be well occupied with design, technological and managerial skills if they are to survive competition from other more management-orientated building professionals.

The administrative side of an architect's business is as important as his ability to design. There is no point in being an excellent designer if you have no client (Taylor, 1956:2).

Therefore, besides their traditional roles, while designing for the built environment, today architects should be aware of the evolving side of the industry and gain additional skills, mainly managerial, in order to survive in the improving competition.

2.3 Types of Practices

Following, the various types of practices briefly identified regarding their different divisional criteria.

2.3.1 Strategic Division

Most DOS firms have passed through a number of distinctive evolutionary phases over time. According to Kaderlan (1991), this transformation starts from an inception to survival and then to success, often resulting from the firm's growth rather than any specific business strategies. When a firm is first formed, inception covers the stage, either by design or necessity where the main concern is staying in the business. Second, is the survival stage, where the firm has enough work to stay in the business, staff numbers will have expanded and the pressure to be more successful will increase. Third is the success. The firm has proven itself in the marketplace and has grown in size and complexity.

Additional to these evolutionary phases, the distinctive competence offered by the by a professional service firm is its competitive advantage and largely comprises the sum of the skills and abilities of the professional staff. Following the work of Maister (1982, 1987) and the work of Winch and Schneider (1993), it is proposed to observe the management of the design process in DOS firms, which are representative with four distinctive competences as follows (Figure 2.4):

- 1- *Strong Delivery*. These types of practices are delivering design for relatively simple building types at less than average fees, but a relatively high level of profitability through effective organization of the design process.
- 2- *Strong Experience*. These are established practices deploy their experience to meet the client's more demanding requirements. These may be complex or unusual building types, difficulties over planning permission or the ability to value engineer the design. Such practices can charge a premium of average fees, because their contribution to the project overall releases the value for the client.
- 3- *Strong ideas*. A distinctive competence articulated by these types of practices that can charge a premium on fees because of their reputation within the profession for original and exiting ideas and will often be important players in the debates about architectural style. Clients who wish to commission a prestigious building may be architecturally literate themselves, but will usually rely upon peer review of evaluating aesthetic quality. The market for this type of work is limited.
- 4- *Strong Ambition*. This definition is used by newly founded practices with high ambitions and few clients, by charging below average fees due to the lack of reputation, and sometimes subsidizing practice through other activities such as teaching. This strategy is not sustainable in longer term.

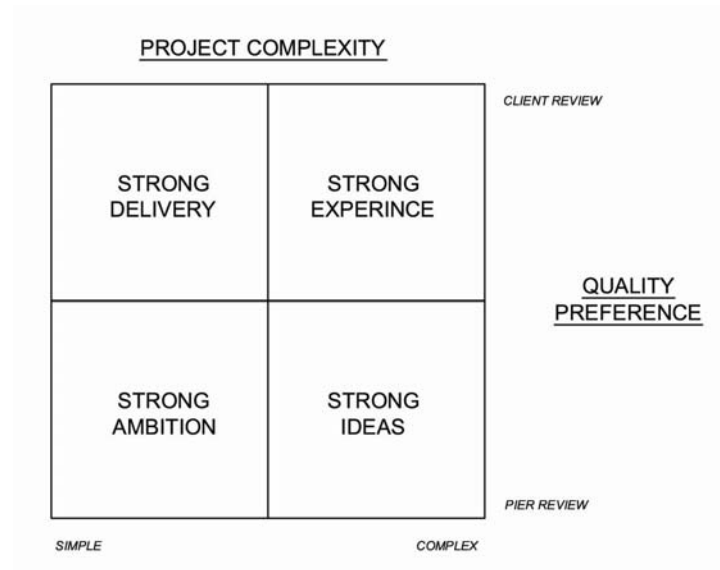


Figure 2.4 The generic types of strategies for the architectural practice (Winch and Schneider, 1993).

Only a few practices within the industry develop the distinctive competence to sustain one of the three main generic strategies, while most of them are earning average fees or slightly below, and are stuck in the middle, with little ability to distinguish them from their competitors.

2.3.2 Organizational Division: Organizational Control

In addition to the generic types of strategies, the type of organisational control, usually reflective of the principal's personality (Coxe 1980), needs to be considered. Kaderlan (1991), drawing on the work of Henry Mintzberg (1989), has highlighted the four fundamental organisational configurations of firms: namely, entrepreneurial, bureaucratic, professional and innovative organisations.

1- *The entrepreneurial* firm is run by a single director and unsurprisingly 70 per cent of all practices are constituted of five professionals or fewer. The organisational structure is very simple and all the decisions are made by the director. Because of its size, the firm is capable of being very flexible and/or adaptable, but its size prevents it from dealing with much complexity.

2- *The bureaucratic* organisation is much organised, highly formalised, described as 'machine-like' and hence disliked by designers. Mention the word 'management' to an architect and an image of a bureaucratic firm comes to mind. It is regarded as stifling creativity, more suited to a stable environment and inflexible.

3- The *professional* organisation comprises a number of professionals, all directors, sharing the same office and staff, but principally working independently of one another, sometimes known as a co-operative partnership agreement. Sensitive management is required if problems of co-ordination are to be avoided. Since the directors all work independently, albeit within a common framework, problems of consistency in the process and the product are inevitable, whilst staff may find it difficult to adapt to different directors' working methods.

4- The *innovative* organisation is based on expertise. It has the most flexible structure, is responsive to change and does not use standard solutions. This is regarded as inefficient and demanding on the members of the firm. Essentially they are set up for single projects and since they are innovative, established or formalised patterns of behaviour are not used.

Again it should be remembered that firms may change over time, and it is not uncommon for the innovative or entrepreneurial firm to become bureaucratic or vice versa (Emmitt, 1999).

2.3.3 Formal Division: General Types of the Organizations in the UK

RIBA's professional conduct and regulations, creates a professional standardization among the practices in the UK, which help clients in the process of appointing an architect. Usually this process is based on the 'horses for courses' principle (Winch and Schneider, 1993). The preliminary selection is likely to be on the client's perception of the practice's market position, which is largely a matter of reputation. The extent of specialization and prior experience with the building type under consideration will also be important. This sort of mental mapping is used when clients select a group of architects to enter a mini market to win the order for a specific project. A key factor is being included in this preliminary process is to have an appropriate profile and perceived distinctive competence (Winch and Schneider, 1993).

According to RIBA published "The Architect in Practice" by David Chappell and Andrew Willis (2000), the general types of the organizations in the UK can be subdivided as follows:

1- *Sole Principle*. The latest figures show that 50% of all practices in the UK are organized in this way. Because a practice is run by a sole principle, of course, does not mean that it is a one person practice. The sole principal may indeed work entirely alone or may employ a dozen staff of various kinds.

2- *Partnership*. The latest statistics suggests that nearly 40% of architectural practices are carried on, in the form of partnership. Partnership is defined by the Partnership Act 1980 as ' the relation which subsists between two or more persons carrying on business in common with a view to profit '. The crucial factor is whether or not the parties share the profits or losses. In general, if they do, then it is a partnership.

3- *Unlimited Liability*. It finds little favour with architects' practices; only about 2% of the firms are set up in this type. The principle advantages are that a director of such a company is free from liability after a period of 12 months has expired from leaving the company and there is no requirement for filing reports with the companies register.

4- *Limited Liability*. It is a company where the liability of the members is limited to the nominal value of the share holding, hence the name. In 1989, limited liability companies formed about 7.5% of all practices. It is likely that this figure is now somewhat greater. The principal difference between a limited company and a partnership is that when the shareholders (members) form a company, they are creating a separate legal entity. If the shareholders are also directors, they are employees of the company. Directors are paid a salary by the company and if the year end shows a profit, a dividend may be declared and shareholders share in the dividend according to the amount of their share holding.

5- *Public Company*. A more recent development has been for some architectural practices to carry on their business as public companies and, indeed, few large practices have already taken this route. It is important of course, that the control of the company remains in the hands of architect.

6- *Limited Partnership*. In a limited partnership, at list one partner should be responsible for all the liabilities of the partnership. In an architectural practice, this partner must be an architect.

7- *Limited Liability Partnership*. A recent development has been promotion by the UK Government of the concept of a limited liability partnership (LLP). In LLP, there will be separate legal entities distinct from the owner and member of LLPs will not be jointly or severally liable in the normal course of business.

8- *Co-operative*. To operate in this way could be said to be making a social statement as much as acting as a business. Control is on the basis of one member equals one vote. Responsibility and rewards are shared.

9- *Developer/Architect/Contractor*. Subject to the provisions of the codes of conduct, an architect can practice in any combination of the above.

All these various types of organizations, are demonstrating that, architectural practices have been pushed into a more management-orientated environment that they had to evaluate their organizational structures. The considerable interest in management from within the architectural profession since 1960s is another significant evidence of this situation (Emmitt, 1999). Therefore, together with the improving structure of the building industry, which will be identified on the following parts, architectural practices have also started to form different types of formations, as introduced above, in order to create market share for themselves; and each of these formations has to be **managed** in different strategies to achieve their individual targets.

2.4 Working Environment of the Architectural Practices

2.4.1 Introduction

The lack of interest in management is difficult to understand, especially when we look at the environment in which the architects work. Building projects are extremely complex processes, requiring the skills of many individuals from diverse backgrounds who need to be brought together and to be organized accordingly. Therefore, a professional judgement and efficient management systems is essential, if a client's goals are to be realised.

The structure and the environment of an industry directly influence the nature of competition between firms in that industry and accordingly the competitive strategies available to them (Porter, 1980). In this section, the environment of the construction and the building industry, its impacts on DOS firms and the market structure together with some possible strategies are briefly stated along with some analytical examples.

2.4.2 Building & Construction Industry / New Players and Their Impacts on DOS firms

Building is a complex problem because of the many different skills required during the different stages of the product's lifecycle, requiring inputs from different areas at varying times. Firms associated with building are continuously facing change. This is particularly so of the architectural office where both anticipation and response to change will determine the firm's success in the marketplace.

There are three separate but overlapping areas of management which are relevant to the building industry. First, we can highlight those concepts potentially relevant to all members of the building industry, such as re-engineering and benchmarking, which are essentially tools to enhance business while the adoption of total quality management and formal partnering have the potential to affect all those involved in building. Second, an area unique to architectural profession, design management, but it is not the exclusive domain, of the architectural firm. Third, those management areas claimed to be the domain of architectural firms' competitors, such as project management, construction management, value management and buildability. These are the areas which architectural firms' competitors have claimed as their domain. These management disciplines are important because they pose both a threat and an opportunity to architectural firms (Emmitt, 1999).

Project management is perhaps one of the most emotive areas for architects to discuss since as profession they have always seen themselves as project managers. Project managers have established themselves as the link between the client and the rest of the team on large projects, making the brief process their domain on medium and even small projects; they have become the guardian of the client's aims and objectives. The independent role has broken the link between client and designer, with instructions passing through an intermediary, a gatekeeper; thus architectural firms have become disengaged.

Construction management, for most architects at least, tends to be associated with the management of the construction project during the contract period. However, the field of construction management continues to grow and the term has come to represent a management field which encompasses value management, constructability, benchmarking, re-engineering, total quality management and partnering (McGeorge and Palmer, 1997).

Facilities management is relatively a new discipline which covers all aspects of property maintenance, space planning and support services to allow buildings to support and enhance business activities. Many of the concepts, such as generic management, communication, risk, value and quality management are common to the architectural management discipline.

Based on a study of 17 value management exercise in the UK, Simister and Green 1997, concluded that for a value management exercise to be successful the project team needs to be committed to participation. Clear objectives need to be set; the participants need authority to implement the outcome of the value management exercise and time is required for collection of all the relevant information. From an architectural firm's perspective, the value management exercise has parallels with the design audit under a quality management system. Who better to carry out the exercise than the architectural firm with project management expertise? (Emmitt, 1999).

Because the architects are both concerned with design and production, they are potentially influenced by many other contributors to the building industry, as specified above, many of whom are simultaneously working with and competing against them. As such the architectural firm cannot isolate itself from the building industry and the adoption of the new management concepts by others in the industry will affect the architectural firm to a certain degree.

As the technology has advanced the buildings have become more sophisticated and the number of individual players involved in the building procurement has increased. Design of the built environment is no longer the preserve of the architect. The only areas seen to be safe havens were 1 planning approval, 2 scheme design and proposals and 3 production information. Interestingly the areas lost all require more management than design input (Emmitt, 1999).

2.4.3 Market Place and Its Status

The business of architecture is being conducted in an increasingly competitive marketplace, but many architectural firms have tended to concentrate on offering design-orientated service, while their competitors have seized the opportunities offered by management innovations such as project management. Their biggest weapon is management, a weapon rarely stocked in architectural firm's arsenal.

Architectural firms are in danger of becoming so marginalised that they can no longer provide the services required by today's clients.

So why are architectural firms losing their market share to other management orientated firms? Quite simply because the majority have made little attempt to defend their position from the attackers by abrogating responsibility for the management aspects of the job to their competitors; and also because the attackers have changed the rules of the game through their strategic innovation.

The competitive nature of the industry and the marketplace for the services is best looked at through the players in the market. Clearly the client is the enabler. The other players can be grouped under the 'design orientated professionals' and 'management orientated' professionals. The design orientated ones, to whom this thesis is addressed, comprise architects, architectural technologists and building surveyors. The management-orientated professionals comprise construction managers, facility managers, project managers, and quantity surveyors. Further competition comes from planners who do not fit easily into either category and also from sub-contractors who design and manufacture.

The effect of economic fluctuation is reflected in the number of staff a firm employs, with firms increasing their size in a boom and decreasing staffing levels in a slump. The most difficult period in many respects is the transitional period, when staffs are being dismissed or employed, because of the problems of reorganisation and the challenge of maintaining a quality service throughout.

But the prevailing economic conditions are not the only concern for professional service firm. Fragmentation, leadership, competition and procurement routes all influence its competitiveness.

Fragmentation has led to the formation and growth of the new professional bodies, associations and societies that are first and foremost concerned with protecting the interests of their members and promotion of independent roles.

What appears to have been lost in the hustle and bustle of this busy marketplace is the fact that the building procurement process was, and still could be, a very simple process. While all the individual players would argue that they and they alone, are essential to the successful delivery of the finished product, none of them have stood back and faced the most difficult question. What have they, the intermediaries, contributed to the quality of the finished product, over and above that achieved by a

simpler procurement route? Further more, can clients really get independent advice and single point responsibility from a design-orientated professional service firm? Is such advice any different to, say, that offered by a contractor led design and build firm? (Emmitt, 1999).

In marketing literature the traditional architectural service would be referred to as a 'bundled' service, in that it offers the client a number of services in one package or bundle. One of the problems with offering a bundled service is that all are offered the same service regardless of their individual needs. Porter (1985), notes that unbundling with an industry is triggered or accelerated by a competitive marketplace, or by an economic downturn. Increased diversity of clients' needs and changing procurement methods have resulted in additional pressures. The chartered surveyors and chartered builders are very good at marketing services as separate packages, which have been 'chipped off' the complete service traditionally provided by architects. Their ability to sell unbundled services such as project management and facilities management, for example, is consistent with the views of Porter (1985) and their success had led to an increased pressure for others, i.e architects, to respond by unbundling their own services (Emmitt, 1999).

With this competitive marketplace it is widely accepted that the architects' role has moved from traditional team leader to one of designer and with it the loss of contact with and influence on the client. This trend is further reinforced by the rapid growth of the procurement routes and hybrid contractual techniques such as novation, with a decline in the use of traditional contracts. In most cases these new procurement routes have further undermined the architect-client relationship, with many architectural firms finding them working as a consultant to new team leaders. (Emmitt, 1999).

2.5 Conclusion

Architectural businesses are undergoing rapid transformation in response to external forces in order to stay competitive in the business. Change has always been present, but it has become more frantic and consequences of inadequate response much greater, if not fatal, for architectural firms.

In management literature, there are number of recurring themes which are seen as drivers for a new business to remain competitive and to compete in rapidly changing environment.

First, and perhaps most importantly, it is the issue of quality. As quality expectations continue to rise, professional service firms are experiencing greater demands from clients for improved service quality.

For the architectural firm, life is tough because it will be judged not just on the quality of its service provision but also on the quality of the finished product, the building.

Second, is the relative performance of the firm, judged against its own criteria and those of its competitors, usually known as benchmarking and closely related to quality issues.

Third, is the issue of responsiveness of the firm to external pressures. More than ever before, architectural firms need to react rapidly to changing market conditions, competitive threats and client demands.

Fourth is the issue of social and environmental responsibility. Concern for the built environment and the interaction of people and buildings has always been of considerable interest and concern to architects.

More specifically, the concept of managing for sustainability has been and will continue to explore within the architectural management literature.

Last but certainly not least, is the issue of new technologies, both advances in materials technologies and information technology.

Clearly there is no single business strategy to suit all situations, but firms must recognise that they need to take a stance and decide which strategy they are going to pursue because they are more likely to fail if they get caught in the middle. For some firms, competitive advantage will be achieved through concentrating primarily on their core skills, design: the design only practices where management and technology are abrogated to others. For others, competitive advantage will be gained through diversity. Whatever strategies are adopted to anticipate and meet market forces, the firm's success will be dependent on the consistency of the service provided to its clients, and are dependent on the skills of its members. The manner in which the firm and individual jobs are managed, are tied up with the firm's culture and the characteristics of its most valuable asset, its members, whose ability

to adapt as firm adapts will be critical to its success. As such, the biggest battle facing the design orientated professional service firm is likely to come from within.

For years, being creative has been the significant advantage for the architectural firms; and for sure it still is. However, the improving industrial conditions force the DOS firms to find additional skills in order to compete with the rest of the players for their market. In another word, quality of conception is not solely enough to secure their place in the market; where they also have to provide the professional service in the required time, cost and quality. To achieve this, they have to know how to manage their creative professions.

3. ARCHITECTURAL MANAGEMENT IN PRACTICE

3.1 Architectural Management

3.1.1 Introduction

Architects of today seem destined to practice their profession in a kind of world that has no parallel in history. It is a world composed of revolutionary advances in technology, of exploding population, of a degree of complexity never dreamed of before now. It is a world of speed, of great leaps ahead in knowledge and know-how.

In all the seeming confusion of the world today, society presents a challenge. A challenge where someone is needed that will take responsibility for the design of human environment. Clients are demanding broader and more complete services for buildings and their environment. The opportunity for services exists. The challenges are directed first to the architect and his group of skilled and creative specialists. The opportunities are his, if he will accept them with the attended responsibilities. If not, society will look elsewhere for the answers, for it will be served (Hunt, 1965).

It is very obvious that, if the architect refuses to accept the role as described here, there are lots of others waiting for the chance. Some of these are already in serious competition with the architect as described in the previous chapter. However, according to Hunt (1965), if the architects are fulfil the great role being offered to them as the creators of better human environment, and then the profession must take its choice. Otherwise it inevitably will retreat to a lesser position. And if the larger role is chosen, it will be mandatory on the profession to prepare itself to perform the required comprehensive services with high skill, or at the very least, with competence.

So how can architecture profession prepare itself, in today's rapidly changing environment, for a position of leadership in the area of design for human environment?

Richard Enion, (1965) in his paper "Office Organization for Successful Comprehensive Architectural Services", mentioned that for comprehensive services, as in DOS firms, to lead to better buildings and environment, architects must so organize their offices, that efficient business practices contribute to – rather than conflict with – the achievement of excellence. There is diminishing market for the services of the architect who ignores changing trends, who fails to acquire the competence to handle new requirements or who remains unresponsive to the need for satisfying the increasingly complex demands of his client's (Daly, 1965).

Mass production, mass consumption, government directives, redevelopment, decentralization and urbanization affect not only the basic design concepts of the architect but his performance as an economic unit of society as well. The spirit of individual architects that created and built most architectural practices several decades ago is now slowly being replaced with the collective spirit of organizations of individual architects. Today, the *practice* of architect is irrevocably complicated by the *business* of architecture. In addition to this essential design functions, the architect must now devote time to cost accounting, cash flow projections, image building and solicitation of new business (Enion, 1965).

Robert Herriot (1977), in his article "Architectural Management" admitted that architects are very good at changing with design or visual fashion. But the real problem is that, they have not changed their concept of the business of Architecture; which has to change eventually.

If we approach to the problem through a clients' perspective, whether they are corporation executives, institutional administrators or government officials, most of the clients are either way business orientated bodies. Such clients expect businesslike associations and reasonable returns on their investments in the architect's professional services. To win their confidence and obtain desirable commissions, the architect must share their concern for the practical considerations in the characteristic of the business world (Daly, 1965).

In other words, today, the architect find himself involved in conflict between his aspirations as an artist and his needs as an astute businessmen. He must somehow strike a balance which will enable him to function as an artist, yet arrive at designs that will be compatible with his clients' needs within today's socio-economic environment. He must then maintain this delicate balance and handle himself in a businesslike manner.

In order to cope successfully with the diversified demands that are commonly placed upon an architect today, he may either obtain specialized assistance from outside consultants or he may enlarge his own firm to include the increasingly comprehensive range of services that so many clients now require. It would appear that the lion's share of such work will go, more and more, to the firms, which are expanding their staffs and services, especially to those firms whose staff have learned how to talk the language of the executive or administrator with confidence born of experience (Daly, 1965).

If a client can see in his architect a man with *managerial ability*, a man with esthetical values who is at home in the business world and conversant with other professional fields, the increased of that client is likely to cause him to give his architect a greater degree of freedom for creative expression in design. So realizing this fact is also beneficial for design flexibility. On the other hand, the architect who expects to prosper in professional practice, without providing the broadened services that might have been called fringe activities, is likely to find his world of design a world of continually contracting horizons (Daly, 1965).

Right this point, the term architectural management, which will be defined in the next topic, comes into the life of architect's practice. In order to achieve the excellence of the design, within the budget, time frame and available resources, the architect must now focus on his practice's organizational structure and the way it should be managed.

However, we should bear in mind; there is no single optimum approach for properly organizing an architectural office. Each organization must be tailor made to meet the needs of each practice. The departmentalized approach of one office may not meet the needs of another office. One office may utilize the 'team' approach while another uses 'project architects'. Moreover, there is no single pat formula for efficiency in business organization any more than there is only one solution to a design problem. Therefore, each solution, whether of a design or a business organizational problem, depends upon the careful integration of the elements of the problem in terms of its effective environment (Enion, 1965).

The main problem for the DOS firms generally occurs in the way that they interpret the priority of their services. In an actual practice, mainly it is so difficult for the principals of any firm to assess their own managerial performance effectively. An architect, who will subject his design to merciless reappraisal, may not always be as

willing to evaluate his organization structure, staff problems and budgeting functions in the same manner (Enion, 1965).

Traditionally, the architect has considered his role to be that of the creator of living and working environments. However, responsive to the demands of changing times and new managerial practices, the architectural profession is now equipped to supplement the familiar basic services with a range of business orientated skills (Daly, 1965). Nevertheless, the architect must develop a working organization which is efficient and profitable so that he can be free to achieve excellence in design.

3.1.2 Definition

Although the field is, in many respects, still in its infancy, the term architectural management has been in use since the 1960s and has been interpreted in a variety of ways since then (Emmitt, 1999). Chartered architects Brunton, Baden Hellard and Boobyer (1964:9) provide an early description:

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.

Over 30 years after Brunton's description, the field is described by Freling (1995) as 'a tool, a sort of ordered way of thinking; and from the view of architect's firm, a way of enlarging the firm's knowledge about the product, process and communication'. It is a continuous thinking about the position of the architect in the market and the tools he needs for his profession and position.

It is certain that, whatever the definition, the architectural management discipline is first and foremost concerned with people and communication (Emmitt, 1999).

Since architecture and management are concerned with communication, the fields are arguably closer than we might at first expect; designers are primarily concerned with communication with visual means and managers primarily through interpersonal communication. Moreover, recently managers are being urged to be more creative and architects better managers, as if to reinforce the coming together of two opposite but attractive words (Emmitt, 1999).

The important point is that, 'management is concerned with creating or identifying and implementing courses of action in uncertain environments, in order to achieve desired ends or goals' (Bradley and Cavanagh, 1994).

However, because our case is the management aspects in the production of architecture, according to (Bradley and Cavanagh, 1994), architecture management therefore can only be concerned with the management of:

- a process whose intended output is architecture (and not merely a building or structure) and/or
- the actions of those whose desired goals is to produce architecture.

Beyond all these definitions and intentions, Prof. Pier Angelo Cetica, in his paper of 'Architectural Management and the Quality of Life' (1994), has approached to the field through a different perspective. For him, architecture is one of the instruments through which we construct *the quality of life*. Therefore, 'Architectural Management' consists of using this instrument to obtain the desired quality of life.

Table 3.1; express the various aspects of the quality of life according to Cetica (1994).

Table 3.1 The various aspects of quality of life (Cetica, 1994).

The static	protective
The functional	conceptual
The technical	economical
The social	ambiental
The personal	Non conceptual

For each one of these aspects of quality of life, architecture is able to dispose of various resources and different methods. Therefore, we shall talk of architecture management in every specific aspect of the quality of life. But first, the precise necessities desired in all those aspects needs to be specified; and only after then the consequent instruments and proceedings to use in a correct architectural management to achieve the necessary operations which answer all demands may be chosen (Cetica, 1994).

One of the most serious attempts to define the field was taken place at the first meeting in November in 1992 in Glasgow of W96, where a proposal for a project defining the field of Architectural Management was made (Prins & Boissevan, 1994). The aim of the project was stated as:

- To define a theoretical framework as a logical frame of research for the positioning of various instruments, methodologies and researches about AM.
- To make an inventory of the available instruments and methodologies.
- To define overlaps coherence and gaps between these instrument and methodologies.
- To set priorities in a strategic proposal for further research and development.
- To stimulate academic research in the field of AM by setting up a frame reference.

Furthermore, two more meetings held in 1993, one in Eindhoven and the other in Antwerp, where as a result, a complex model has been presented (Prins & Boissevan, 1994). The idea summarized in Table 3.2, defining more or less the main field of interest of building management and of AM.

Table 3.2 The field of Building Management & Architectural Management (Prins and Boissevan, 1994).

PHASE	Initiative & design phase	construction phase	Use phase
BUILDING MANAGEMENT TYPE	ARCHITECTURAL MANAGEMENT	CONSTRUCTION MANAGEMENT	FACILITIES MANAGEMENT
SUBJECTS TO BE MANAGED	- <i>quality of the (architectural) design process</i> - quality of the (architectural) product	Quality of the building manufacturing process	Quality of the facilities management process

SPECIFIC BUILDING MANAGEMENT ACTIVITIES	<i>Selecting and transforming planning & design strategies</i> Analysing and evaluating (virtual and actual) building objects	Obtaining and exploiting means	Maintaining and assigning the stock of building services
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According to the figure, at each phase of the lifecycle of a build object a certain type of Building Management prevails, Table 3.3 (Prins & Boissevan, 1994):

Table 3.3 Phases of Building Management Types (Prins & Boissevan, 1994).

Initiative and design phase	<i>Architectural Management</i>
Construction phase	<i>Construction Management</i>
Use phase	<i>Facilities Management</i>

With each type of Building Management, the subjects of quality that have to be managed in each phase are defined:

- Design Process
- (Architectural) product
- Building Manufacturing process
- Facilities Management process

As it was stated in the paper presented in Antwerp, all Building Management activities can be linked to an express in common management activities as (Prins & Boissevan, 1994):

- Organizing,
- Implementing,
- Monitoring,
- Correcting,

The items for these management activities are:

- Labour,
- Time,
- Money,
- Quality

This implies that the field of common management activities in the architectural office, the business of 'running the office' is of a certain interest for the field of Architectural Management. This theoretical framework, tries to clarify possible relations and interactions within Architectural Management. The now random collection of items will then become an accessible field of knowledge as a relevant addition to what can be understood by "Architectural Management" (Prins & Boissevan, 1994).

In the Figure 3.1, a reference model is established by Dr. M. Prins and G.W.O. Boissevain (1994), which is related to daily practice by defining the several phases in the decision process in the lifecycle of a build object.

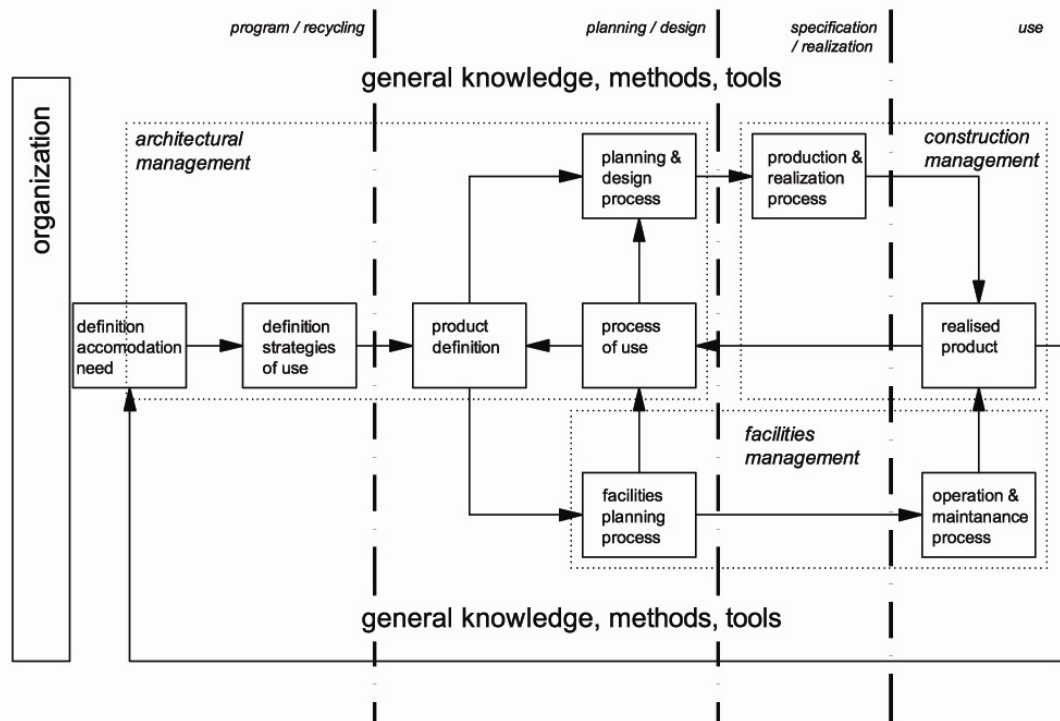


Figure 3.1 Positioning architectural management (Prins & Boissevan, 1994).

In reference model, the basic fields of activities can be found where the AM is consisting of (Prins & Boissevan, 1994):

- The process of *definition of the need of accommodation* of the work process in the organization. The building can be seen as a business tool, as a commodity of organization.
- The process of *definition of the strategies about the proposed and presumed use of the building* providing accommodation to the work process of the organization. The need for accommodation is translated into strategies of use based on future use scenarios.
- The process of *definition of performance of the building as a product* meeting the demands defined in the strategies of use. In this process the need is materialised into a building.
- The process of *planning and design* as start for the production process of the building. According to the defined performance specifications set in the brief the building will be conceptualised.
- The process of *use* of the realised (or soon to be realized) building (how does the building function). These processes are again the input to the design and planning processes and are reference to the defined performance specifications of the building.

As discussed above, architectural management is an important and upcoming part of the building management process. As the case still under investigation by the authorities, there are significant amount of questions regarding to the current positioning of AM within the whole process. Therefore, the above descriptions stands as initial information describing the interest of AM, however, the actual application phases will be briefly explained through the following parts of the research.

3.1.3 History

As with any historical study, one of the most difficult stages is to find a convenient starting point. However, according to Emmitt (1999), the history of architectural profession is well documented (e.g. Kaye 1960; Saint 1983; Powell 1997) in which it is clear that architectural practice was rarely considered as a business until after the

Second World War, and even the practitioners appeared concerned about the conflict of business and professional ethics, demonstrating indifference to management.

An early example, *This Business of Architecture* (Wills, 1941), argued that the profession should shake off the constraints of outdated ideals and adopt business methods in order to become successful. In a sense this marked a change in attitude and approach to architectural practice although it was the publication of RIBA's first study of architectural practice in early 1960s, which set the agenda for developments in the architectural management field – a convenient starting point (Emmitt, 1999).

From the late 1950s the RIBA has started to work towards making architects more efficient, driven partly by an economic boom and partly by growing competition from others in the industry (Emmitt, 1999). A number of publications and initiatives came out of this period of which the most cited, *The Architects and his Office* (1962), found that practices were too small and management skills lacking, blaming architectural education and architects' failure to co-ordinate design and construction (Emmitt, 1999). Through this period, with the profession focused on management case, the first books concerned with the architectural management came on board; *Management Applied to Architectural Practice* (Brunton et al. 1964) and *Architecture: A Profession and a Business* (Lapidus 1967).

From the early 1970s there was a shift from public authorities to the private sector which, combined with increased competition from general contractors offering design-and-build services, further undermined existing roles and relationships. The 1980s saw markets becoming fragile and traditional boundaries in many business sectors being challenged and redefined. Although the competition between architects was becoming fiercer, it was nothing compared with the competition from players outside the profession (Emmitt, 1999).

During this period the University of Nottingham developed postgraduate courses in architectural management at masters and doctoral level, first offered in 1979-80 (Nicholson 1995). Following that, the first conference dedicated to the subject of architectural management was held at the University of Nottingham in 1992 (Emmitt, 1999). A number of topical issues addressed in the conference proceedings; although for the first publication to use the title *Architectural Management* (Nicholson, 1992) it was a little surprising according to Emmitt (1999) that there was

no attempt to define the subject area, nor were there any references back to the earlier work of Brunton *et al.* (1964). The conference led to the formation of International Council of Building (CIB) working group, 'W96 Architectural Management'. Drawn from a wide range of disciplines from different countries, CIB W96 continues to meet twice a yearly, and to publish the proceedings of their conferences via *The International Journal of Architectural Management, Practice and Research* (Emmitt, 1999).

Although the architectural management working group was set up to promote architectural management to practices architects, according to Emmitt (1999), it has failed in this respect since the proceedings are printed in small numbers and are very much a collectors item. However, in the spring of 1996 the *The Journal of Architectural and Planning Research* published a special edition dedicated to 'management and architecture', in which it highlighted the lack of scholarly work in the field, although the contributors were unaware of the small but important contribution of CIB's Architectural Management working group (Emmitt, 1999).

To sum up, regardless with the history, in today's building production environment the challenge for architects is to demonstrate that effective design and response to demand may be sustained simultaneously, demonstrated through the professional management of both their firms and its projects. Emmitt (1999) claims that, architectural management is vital to the competitiveness and market viability of the design-orientated professional service firm and is clearly more than a specialist interest, given the challenge ahead.

3.1.4 Management and Architecture

Management and architecture has always been two words apart from each other, as it is the design which matters for architects. Therefore, through the history, it has been several times experienced that management issues ignored by designers. However, as being briefly stated above, the conditions have changed significantly that now we ought to think about this two words working together.

The often-quoted stereotype is that if a practice is good at design, it will be less adequate at management and delivery, while if the practice is market-orientated, with a good reputation for delivery, it must therefore be less good at design (Emmitt,

1999). Obviously, this is not the case anymore; at least there are ways to balance both issues with a better thinking.

In this part of the research, the reasons for the need of establishing an approach that combines architecture and management together will be briefly explained through different perspectives.

3.1.4.1 Changing Environment

Many have argued that architectural firms in particular have been slow to react to change, unable or unwilling to acknowledge increased opportunities and greater competition for other, management-orientated, within the industry. It would be reasonable to argue that architectural practices have adopted the dictum “less is more“. A little too literally, and have only recently woken up the fact that less service usually translates to less business (Emmitt, 1999).

If we have a quick look at the changing roles of the architects during the past two hundred years, we will realize that the nature of the demand for the products of the building industry has changed dramatically, so as the role of architect.

In the 19th century, the *model* of the architect is an independent, educated, gentleman designer. However, the *role* of him was undefined. Many architects acted as developers and designed, constructed and financed vast areas of new housing in the industrial cities. Men such as Cubitt (1785 – 1861) in London, and Watson Fothergill (1844-1928) in Nottingham, proved that the architect could retain his stature as a designer whilst involving himself in the business of construction. Many fine examples of their work exist to this day (Nicholson, 1992).

In the same century, the formation of the Builder’s Society in 1834 must have further isolated the architects from the rest of the construction industry, so that in 1835 the RIBA was founded. The early RIBA addressed itself the full comforts of protectionism (Nicholson, 1992). Today, being one of the best know architectural bodies throughout the world, RIBA has 11 regional offices in the UK, including 4 more in USA, aiming to promote and advance architecture for its more than 35.000 members.

Together with the help of an established body working for the benefit of architects, helping them to compete with their competitors, the workload of architecture has arisen particularly between the wars. According to Nicholson (1992), British

architects at that time did not have to concern themselves with commercial matters, with finance, organization and management; their profits were assured and their future appeared healthy. Perhaps, this was a breaking point for the future of the profession, where they have missed the chance to make a better predict for the future and got themselves busy within their daily workload.

Unfortunately, with the effects of industrial revolution and more mobile population, the building environment and the market enlarged rapidly. Again, the architects allowed other parts of industry to exploit the opportunity, where most of the housing, council estates and commercial developments proceed without their influence.

In 1964 a further Government committee under the chairmanship of Sir Harold Banwell stated that (Nicholson, 1992):

- As a complexity of construction work increases, the need for a design team as full members is vital.
- Restrictions on the activities of members of the professional institutions need to be re-examined.
- The use of unorthodox methods of contract procedures has advantages which should not be lost to members of the Public Sector through rigid adherence to outmoded procedures.

All this declaration is mainly setting barriers for the future commissions of architects, where the RIBA was the main target.

In the following twenty years, according to Nicholson (1992), the local authorities experimented new techniques and management systems. Moreover, project management was applied to major construction projects where management of works for a fee by management contractor became acceptable. All these new opportunities consequently shifted the role of architect.

The architects began to loose not only their traditional position as leader of the construction team, but to find that they were faced with competition form outside as well as from within their ranks. Building surveyors, construction technicians and many others offered design skills to the public for a low fee. The RIBA could no longer impose its recommended scale of fees and cold win of competition began to erode the vestiges of comfort and security (Nicholson 1992).

Not only there were dramatic changes taking place in the UK, but also all other countries were involved in this changing environment. Architects have started loosing their commission all over the world, and clearly some sort of action has to be taken either by the practices or the architectural bodies within those countries.

The main conclusion of the 1984 conference of Architects in the Commonwealth Countries was that architects were performing management functions which were beyond their basic architectural education or experience. Architectural education was, and still is, design centred with little regard for the management of the design process. Further more, few schools of architecture take seriously the whole subject of 'Architectural Management' (Nicholson 1992).

Together with this declaration, it is understood that the specific management issues for the architectural process are critically important for the future development and for the competitive strength of the practices. Further more, education should be used as the first phase to make this point more obvious and understandable.

Sharma (1983), in his paper 'Architectural Management – An essential environmental need', was briefly pointed out the situation as follows:

'Today, as a major problem in front of us, the underdeveloped countries are under planned and under managed. If public architecture is to be improved, it is management will have to be improved'.

3.1.4.2 Conflict in Management Approaches

Today, our environment is being transformed by technology and social change. This in turn produces dichotomies and conflicts with the old (Bradley and Cavanagh, 1994).

According to Bradley and Cavanagh (1994), the building environment is obliged to respond to:

- A market which is becoming increasingly demand side led
- New market expectations stemming from technological advance
- New social expectations regarding 'soft' values. e.g.: ethics, long term social responsibility, honesty, product performance, etc.

These factors all engendered a sense of need for greater added-value and a climate of increased competition, be it adversarial or collaborative, from both within and

without the industry. This is witnessed by new international markets, new entrants and upstream/downstream integration within the industry (Bradley and Cavanagh, 1994).

Right this point, architectural management which is defined as a tool by Freling (1995) becomes a significant aspect to survive in this increased competition. According to Dr. Stephen Emmitt (1999), architecture should be interpreted widely, where; it is an art, a science, a business and more importantly a professional service that must be managed accordingly.

We shouldn't forget that, good buildings are not created by good architects alone. A number of related disciplines and user and other interest groups have to interact in order that a project may be properly visualized, articulated and executed (Sharma, 1983) which requires considerable managerial skills backed by an adequate supportive organization. Moreover, on account of the complex and interdisciplinary character of architectural work, architectural management, as distinct from architectural designing, has now emerged as a separate discipline (Sharma, 1983).

Nevertheless many architectural designers accept management as an area of understanding and skill of which they need (Bradley and Cavanagh, 1994). Seidel indicated in his survey carried out in 1992 that 79% of principals of UK architectural practices consider that they need training in project management.

However, we should raise a point and ask, is it project management or architectural management that architects need today? And in what points these very close management approaches serving for the same industry differ from each other?

According to Bradley and Cavanagh (1994), architectural management should facilitate the production of architecture and must address the issue of architectural value. In another word, traditional characteristic of architectural management is that, it is demand side oriented towards multiple market segments, pro-active, and design-led. It is obliged to account for the short, medium and long terms; it has onerous legal obligations involving wide professional and contractual responsibilities to the client, users and other professionals. It is a synthetic and creative process (Bradley and Cavanagh, 1994).

On the other hand the belief system of project management differs fundamentally from that of architectural management, although they are both essential managerial

elements within the building process. Main difference can be described as follows according to Bradley and Cavanagh (1994):

- It responds to one predominant market (the client), over shorter time scales and has fewer legal obligations.

Perhaps the difference between the two management systems can be best summed up in the following view, adapted from Stephen Hawking's words at his Lecture in 1980 as Lucasian Professor of Mathematics at Cambridge University (Bradley and Cavanagh, 1994):

'Our attempts at understanding and modelling reality consist of two parts. The old scientific wisdom seeks certain predictions through a particular set of local laws that are obeyed by the various physical quantities (Project Management?). The second and more recent part seeks only possible predictions through fact and observation. It is concerned with relationships or "boundary conditions" that tell us the state of our part of the environment at a certain time and what effects from other environments are likely to be absorbed within it in the future (Architectural Management?).

The second part is relational view of environments and encourages us to handle uncertainty, chaos and abstraction. The designer intuitively welcomes this second part; the project manager does not (Bradley and Cavanagh, 1994).

Another point highlighted by Maister (1993) regarding the above is that 'the principles and techniques applicable to industrial production or mass-consumer markets, based on standardisation, repetitive tasks and products, are inapplicable to the professional firm and may be "dangerously wrong"'.

For many in the profession, management is seen as something that has to be done, rather than something that underpins everything carried out in architectural practice. For others, the ideas associated with architectural management are often viewed as subversive, seen as something different and separate to design, ideals ingrained in the young architect during architectural education (Emmitt, 1999).

For those in practice, the daily challenge of producing good architecture centres around three core areas, namely design, technology and management; three separate but interdependent areas that rely on clear communication (Emmitt, 1999).

Bradley and Cavanagh (1994), suggests that the practice of architectural design has characteristics which clearly differentiate it from other building management process. It should be recognised that the apparent conflicts occurring within the

building process are healthy if well managed. Moreover, management approach founded on project management alone is not an appropriate model for architectural management. Whilst the both subjects come together in and are essential to the success of the building project, the present direction of functional project management is too narrow, short-term and problem specific to be useful to the effective production of architecture.

3.1.4.3 Education of Management

Recent research into the changing nature of the architectural profession highlighted the gulf between what is delivered in architectural education and what is expected from practice. It has concluded that good architectural design continues to be needed everywhere. But the profession must develop the management skills needed to help it seize the opportunities. To do this rapidly it will need considerably more sophisticated education institutions that it can currently rely on. (Symes et al., 1995:184).

Currently, as stated in many cases during the research, architectural practices are facing significant threat of losing the leadership of the design process because of their increasing competitors. According to Cairns (1992), it is the education system itself fails to support the primary role, being biased towards the promotion of the architect as designer and not of manager of a production process. It is only through increased recognition of the importance of education in management techniques and of specialisation and teamwork will the architectural profession be able to justify and earn the right to leadership of the design team.

Obviously it is not an easy task. There are issues with the academic bodies against the idea as design is always the main concern of the architectural education, as well as the nature of the task which comes on board regularly; management / design dilemma. Hawk (1996) summarised the problem below together with highlighting that the architecture and management notions are “worlds apart”. He says most architects have clearly avoided formal training in management for three reasons:

1. Architects argue that management training would be useless since architectural education adequately prepares for all contingencies
2. Architectural educators believe there are too little time available in schools to add management courses

3. Architects frequently see wrong-headed and unethical ideas and issues emerging from management training

On the other hand, educationalists are often found defending their ground while the practitioners constantly complain that architectural students are lacking in the skills required for modern architectural practice. It has been suggested that this has always been the case and that the expectations of practice and those of students differ considerably (Carolin 1992).

The management of the office, its financial planning and resource planning are areas within which the majority of practices are unlikely grant the student access to information. Within the field of architectural management, then, the teaching of entire areas of resource planning, financial planning, man-management etc are either covered in minimum outline only, or are omitted from the teaching process entirely (Cairns, 1992). Cairns (1992) also claims that it is only through full integration of the teaching of design and construction management into the education process that the student and the architect will be able to understand the full architectural process and be able to establish their own strengths, interests and responsibilities within it.

Therefore, we should accept that, besides just being a design-orientated firm, Architectural Management should be integral to architects' education, become part of their culture and training. By this way, students may change the existing situation of architectural practices where most of them are lack of management issues. It is only then the architectural profession, as a whole will be better equipped to compete with other players in the industry.

Education could and should be the leading advocate for architectural management. Students are full of energy and ideas and are a positive benefit to any architectural practice; they should be capable of challenging the established practices and beliefs in management as well as design. Architectural practices would then be in a position to develop in the manner suggested by Strategic Study rather than continuing to perpetuate the familiar (and outdated) modes of practice. It is then and only then, that the architectural profession as a whole will be better equipped to compete with other players in the industry (Emmitt, 1999). Whatever restructuring is needed for architectural education for 21st century, the same to be implemented early as delay is dangerous (Namavati, 1998).

According to Nicholson (1992), John Carter of the AJ, was the first commentators of the new roles of architect saying:

'The new-found (1981) of architects to initiate speculation to direct building or component companies, must be used to broaden and deepen the profession's education base.'

Only 21 per cent of architects interviewed in a recent survey (Symes *et al.* 1995) thought they were adequately trained in project management and a survey of architectural students indicated they wanted more training in this field (Rogers, 1995).

Moreover, Royal Institute of British Architects' publication "Architect's Appointment" (1988), within the first few pages, sets out that the primary responsibilities of architects is not to design but to manage, coordinate the elements of design and administrate the contract. The architect is charged by this document, with overall responsibility for collating the client's requirements within the brief, of interpreting them in his design and of overseeing their implementation during the construction process. He is also required to advise the client on matters relating to contract, costs, programming and a wide range of other matters. It is doubtful, however if many architects are adequately prepared for, or fully understand, the responsibilities which the acceptance of this appointment lays upon them. Unfortunately, the profession has, for a considerable period of time, permitted its members to abdicate responsibility for this role through lack of knowledge, understanding and to a large extent, interest in the management of the architectural process (Cairns, 1992).

According to Herriot (1977), it is very obvious that professional practitioners in all disciplines, their employees and those professionals employed in the public sector urgently needed proper professional training in business matters. They urgently need the type of training that should have a major part in their professional education. It has also currently stated by the leading practices of the UK, through a survey by AJ (2005), education of architecture needs radical reform for the sake of the profession's future, Figure 3.2.

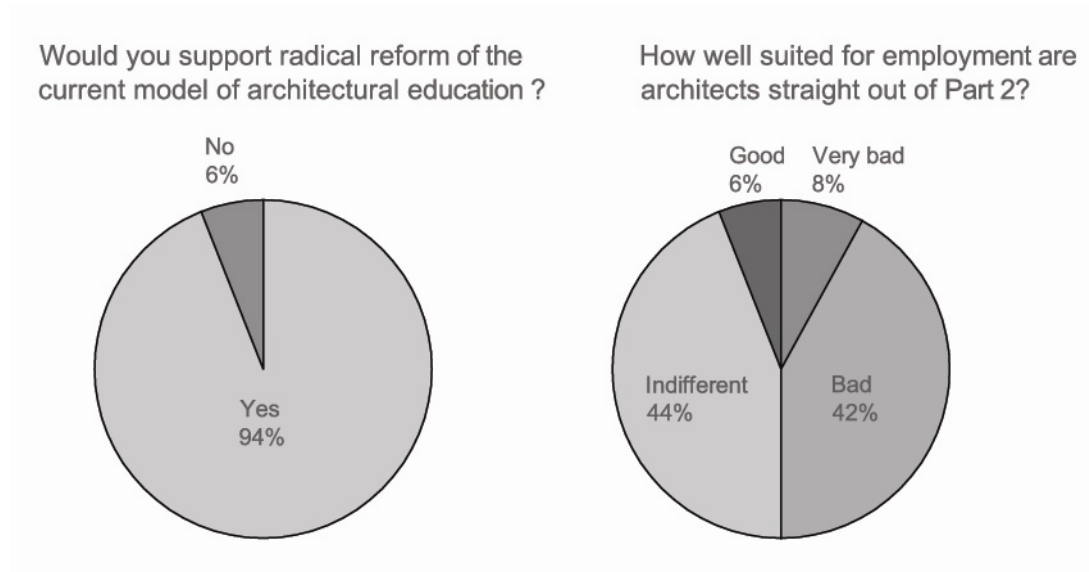


Figure 3.2 Survey demonstrating the thoughts of architectural practices' point of view towards the architectural education over the UK (AJ, 2005).

Cairns (1992) argue that the architectural profession promotes the image of the 'whole person' but fails to promote within itself the understanding of the 'whole process'. According to RIBA, 'the education of architects prepares them to assist clients at all stages of a building project and to co-ordinate all the elements of the design and construction process'. However, the other areas of the architectural process are considered secondary to the composition of the visual elements of design and any form of management teaching is add on to the final year of the architectural course, when the final architectural project stands as the primary area of interest.

To sum up, it might be argued that the knowledge of all areas of architectural design and management cannot be known to the individual. This is undoubtedly true, but the acknowledgement of this truth should not be seen as a sign of weakness; rather it should be seized upon as an opportunity to build strength.

It should be noted that, widening of the horizons of architectural education and recognition of the contribution of purely managerial function to the successful implementation of good design would encourage the evolution of a new breed of architects (Cairns, 1992).

3.2 Management in Practice

3.2.1 Introduction

All these changing environment, evolution of the building industry, new competitive situation together with the involvement of new players, come down to a bottom line for the future of DOS firms; management is essential. This part of the research, aims to clarify what are the manageable aspects of a DOS firm. The intention is to highlight the overall picture rather than explain the aspects and impacts under every management approach, where all can be different research topics alone. We should always bear in mind, every design process is unique so as the design firms. Therefore, there is not any particular solution for an adequate management for every DOS firm, where the objectives and strategies are both determinative and critical.

Some authors claim that the task of managing a design firm is different from managing a business because it operates under “special rules” associated with creative process (Coxe, 1980). Akin (1996) also claimed that, there is a concept of management unique to the architectural design field which is not adequately reflected in the literature addressed to management in other fields and disciplines. In a part this is true. However, it should be recognised that architectural firms have a number of characteristics that set them apart from other types of business organisations, as discussed on the previous chapters. According to Winch and Schneider (1993), architectural firms can be distinguished from other knowledge-based organizations because they provide a service, they are regulated by professional bodies, and they are creative. They are also dependent on one particular industry: building (Gutman, 1988) - a characteristic frequently taken for granted but one that affects their business most (Emmitt, 1999).

In Eric Schneider’s paper “segmenting a diverse profession “(1992:133) he noted that:

“For a long time management to architects has tended to mean office administration -something carried out by an individual with a lower status. It has also been something of a dirty word, in some ways to antithesis of professionalism. For success in architectural practice in 1990s, this will need to change. “

Akin (1996), in his paper ‘preface: management and architecture’, claims that the society, through its institutions, provides the largest context for architectural management. According to him, before we can understand the models and

methods of managing the profession, we must recognize that society delegates certain powers and responsibilities to the segments involved in the building activity.

While there may be theories, traditions and even laws about who is responsible for some or all of the many thousands of decisions involved, it is not at all clear to the players on the field that the rules are being followed or that there are any officials around to point out mistakes or impose penalties. In the face of near chaos, how can the whole process be said to be managed (Akin, 1996).

However, when we look closely at the evolution of the architectural environment in the last 50 years, like every other organization, there has been a continual change. This change led them to grow in both size and approach to their businesses, which mainly creates the need of management in order to both survive and compete. According to RIBA's first detailed study of the profession (1962), 70 percent of the offices were in the very small band (1-5 architects), 15 percent in the small category and the remaining 15 percent in offices with 11 architectural staff or more. So the bottom line is that, since 85 percent of the architectural offices employ 10 architects or fewer, many of the management books addressed to large firms are inappropriate. This may be one of the main reasons, why architects did not pay enough attention for the management of their future businesses, simply because of their size, which now led them to do so. After almost 40 years of RIBA's study, if we now carefully look at the size of architectural practices through a recent research applied by AJ (2005), showing the total fee income of the architectural practices in the UK (table 3.4), we clearly understand that the objectives, structure and the size have changed significantly.

Table 3.4 Total UK Fee Income of the leading architectural practices in the UK (AJ, 2005).

Company	Total UK Fee Income
1 Capita Percy Thomas	£162,500,000
2 RPS Group	£107,250,000
3 Parsons Brinckerhoff	£ 86,000,000
4 BDP International	£ 57,300,000
5 Fosters and Partners	£ 42,546,000

6 HOK	£ 39,600,000
7 TPS Consult	£ 28,790,000
8 Aedas	£ 28,500,000
9 Broadway Malyan	£ 22,700,000
10 NPS Property Consultants	£ 18,400,000
11 PRP Architects	£ 17,496,210
12 Sheppard Robson	£ 16,637,000
13 RMJM	£ 14,024,000
15 Anshen Dyer	£ 13,556,033
16 Nightingale Associates	£ 13,500,000
17 Chapman Taylor	£ 12,300,000
18 Allies and Morrison	£ 11,700,000
18 Richard Rogers Partnership	£ 11,700,000
20 Stride Treglown	£ 10,496,163
21 Kohn Pedersen Fox Associates	£ 10,000,000
22 Benoy	£ 9,800,000
23 Hunter & Partners	£ 9,400,000
24 Hamilton Associates	£ 9,000,000
24 Llewelyn Davies	£ 9,000,000

Therefore, today all DOS firms should be treated as professional service firms, with their set organizational structures, management objectives and business strategies, no matter their first and foremost concern is design. As Coxe (1980) clearly stated, once a firm has its goals set and documented, it is on the way to being managed, since with set goals, the day to day management becomes much clearer.

3.2.2 Managing Human Resources

3.2.2.1 People and Teams

Architecture, the making of buildings, is a team effort requiring the input of a variety of individuals both from inside the firm and outside of it. Therefore, we should accept that one of the most important assets of a professional service firm is its staff; more specifically their knowledge and skills. It is very important right this stage to provide an inspiring environment where people work creatively and communicate easily with each other, together with its managerial framework.

From a practice point of view, staff is an important asset; they count for some 50 to 60 per cent of the cost of a running architectural business (Kaderlan, 1991) and must be deployed effectively to ensure profitability. The individual knowledge, skill and experience of the staff combine to give the firm its special characteristics and culture, and surely they will affect the quality of the service provided (Emmitt, 1999).

Group of people coming together for a specific project or task are set up a team within a practice. Obviously the number of people is generated by the size of the projects and size of the firm. In many small-to-medium size practices, it is mainly under architect's intention to take a project from inception to completion with an additional input coming from people outside the office. But truly it is not the case for the larger practices dealing with bigger size of projects. As a competitive advantage, they have to build up the right combination of team and manage the process through the individuals accordingly. Such teams can be disbanded or relocated when the task is complete. The manager's role (mainly called as design/project manager) in this situation is to primarily to co-ordinate, facilitate and motive his team members.

According to Emmitt (1999), within the firm, groups of individuals can be brought together as self-managing teams with great effectiveness. The self-managing team should comprise a number of people with complementary skills who are committed to a common goal. To be effective they must both possess and develop the right mix of complementary skills (i.e. design, technical and managerial) while at the same time having operational autonomy to be able to constantly evaluate and evolve as they learn from their collective experience. However, it is widely accepted that the teams should have no more than ten members if they are to be effective (Katzenbach and Smith, 1993).

3.2.2.2 Managing Teams

Managing the firm, as a profitable business that is managing individual jobs effectively and profitably - is an essential component of the architectural firm; the management of staff and the running of the business are very closely linked in professional service firms. An essential requirement is that the management intentions of the directors should be clear and effectively communicated to the employees. The objectives of the firm, the range of the services it offers and the purpose of its managerial controls need to be clearly defined, then (and some would argue only then) communicated to all those participating in the firm.

Human beings are much more difficult to control than technologies and tools- thus management of the firm must be concerned with the motivation of its members (Kreps, 1990), its most important asset.

Good managers need to work constantly to transform a group of people, with varying skills and interests, into a focused team and then work hard to sustain the energy and commitment, often in a climate of inadequate resources and tight deadlines (Emmitt, 1999).

3.2.2.3 Staff Turnover

Staff turnover is usually seen as a problem rather than an opportunity by the directors of firms. Primary reason for this is that, a firm is only as strong as its weakest member of staff (Emmitt, 1999). It is unfair to others in the firm to carry ineffective staff, often leading to problems of motivation and always leading to a reduction in firm's competitive potential; they must be dismissed (Sharp, 1991).

Regarding to the changing conditions of the industry, often very sharp and quick in the 21st century, all members of the firm whatever their responsibilities, must accept that firms also have to adapt to this change and should transform themselves over time. Some staff may find that, for a variety of reasons, they no longer fit within the team; some may leave on their own accord and find more suitable employment; others may have to be dismissed.

It is a costly and stressful process and the competitiveness of the firm *will* be affected by staff changes and the process must be managed accordingly (Emmitt, 1999). However, staff turnover can be controlled through good management, motivation, reward, training and good communication between the firm's members.

It should be noted that high staff turnover is a good indicator of a poorly managed firm (Emmitt, 1999).

On the other hand, changes in staff provide an opportunity for firms to redefine roles and take on individuals with knowledge more appropriate to the future direction of the firm. It may prevent the firm from becoming stale and losing its competitive edge (Emmitt, 1999).

Another strategic issue, takes place during the integration of new staff. As well as dismissing the staff, again with the changing condition, practices require different skills to provide their service as efficient as possible. Firms compete for staff, in the same way as they compete for clients and the firm's reputation as a place to work and for the quality of the service provided will affect the type of employee it attracts (Kaderlan, 1991; Maister, 1993).

Staff, that is to be hired within the company, should reply to the future growth of the firm as well as its current needs and aspirations. However, the way of integration is critical. The smooth integration of new employees into the existing system is essential if the firm is to function effectively, a process described as their 'cultural socialisation' (Kreps, 1990; Kaderlan, 1991). Interpersonal communication between new and existing staff is an important tool for introducing new members into the firm's cultural norms – formally through job instructions and informally through the telling of stories and legends (Kreps, 1990).

To sum up, staff as being the most important aspect of an organization's culture, has significant impacts on the future development of the practice. Therefore, all the staff movement within the practice should be managed properly in order the practice to benefit from this constantly changing situation. The management of the process should be simple, open and clear about responsibilities and target orientated to avoid any confusion and disadvantage through the process.

3.2.3 Managing Projects

3.2.3.1 Introduction

Managing projects, in this part of the research, is mainly interpreted through the impacts of the changing procurement systems related to the building industry. Such that, together with the fast evolving building industry, the strong relation between the architect and client, come down to an unsatisfying degree especially when the

project manager come between the two. For a better architecture, in terms of both design and business, client empathy should be maintained through a constant contact with the client. Therefore, the consequences of adopting or ignoring project management become a key issue for future development of an architectural practice.

3.2.3.2 Building Framework and the Term ‘Project Management’

Because of the complexity of the building process, where a lot of different players involve with all their diverse inputs, the manner in which a building is designed and then built is rarely a neat, ordered process. There are many changes to both the design and the program as the individual project moves from conception to a completed building (Emmitt, 1999).

According to *Architect's Job Book* (1995), the conceptual framework for the whole process in terms of an architectural perspective, is clearly defined and divided into separate stages in the RIBA's *Plan of Work*. Briefly, there are 11 stages mentioned in Table 3.5; which are:

Table 3.5 RIBA Stages (Architect's Job Book, 1995).

RIBA STAGES	DESCRIPTION
STAGE A	Appraisal
STAGE B	Strategic Briefing
STAGES C & D	Outline and Detailed Proposals
STAGES E & F	Proposals and Production Information
STAGES G & H	Tender Documentation and Tender Action
STAGES J & K	Mobilization and Construction to Practical Completion
STAGE L	After Completion

Therefore, Hubbard (1995) claimed that, architects are able to navigate this process because they have a conceptual framework in their mind that enables them to understand the process and also to accommodate changes, which are often out of

sequence. On the other hand, the plan of work has been criticized by Broadbent (1988), as it does not allow for feedback loops that would allow new information to be incorporated in the ongoing decision sequences. However, it is still used by almost all practitioners as a basic guide to the projects in the office as well as a fee invoicing tool.

According to Emmitt (1999), gradual moves towards a more environmentally aware society, focused on building activity, require a fundamental reassessment of the plan of the work to encompass the entire life of project. Therefore, the building and the plan of the work need extending (if not redesigning) to encompass the lifecycle concept of both the process and the product. This construct begins with the identification of the need, extends through the design, production, use, reuse and eventual disposal / recycling. It is important to note that at any time after the building is complete the stage of identifying a need to adjust, extend and modify may start again, thus necessitating a 'new' project team; as indicated in the figure 3.3.

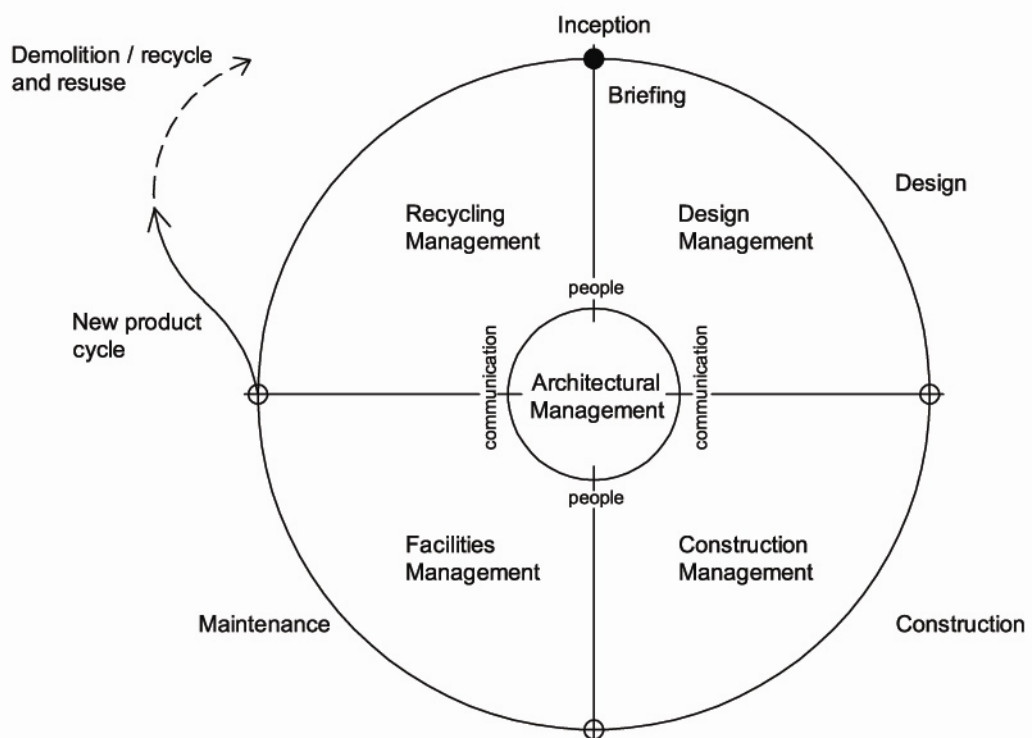


Figure 3.3 The project framework (Emmitt, 1999).

It is designers' responsibility to approach seriously to the lifecycle construct since a lifecycle poorly coordinated, where no one individual or firm has overall responsibility for the lifecycle of either the process or the product, is flawed. The success of communication and coordination is critical at this point. Information is required at all stages; where design is an information-processing activity and it must again be managed accordingly.

The lifecycle concept of the building process defined above starts with the procurement. Through the evolution of the procurement systems, it has seen that the domain of the architect is now under pressure from independent project managers. The increasing complexity of the building industry has led to the need for skilled management of the building process, where the new management disciplines, such as project and construction management has evolved.

According to Emmitt (1999), the situation shouldn't be a threat for the architects, as long as the right strategic decisions taken, where this management discipline can be easily suited into architectural practices. According to him, if the service is offered as a part of firm's portfolio, project management provides an excellent opportunity to deliver high quality buildings within an environmentally responsible framework and also generate additional fee income, plus, maintains the link between the designer and client.

So, we should ask ourselves, what is the term 'Project Management'? What are its main aspects and is critical about it?

It is mainly concerned with the management of time, cost, quality and most importantly the management of people. Although most of its aspects are very familiar to an architect, it is certain that, project management is a separate discipline requires particular skills.

Taylor and Watling (1970), noted that project management is not easy, although they went on to say that it can be made easier by knowing the skills particular for the industry in addition to the methods of project management. Theoretically, the architects are well placed to become a project manager, but misconceptions exist within the architectural profession (Brandenburger, 1995).

The Architect's Job Book (RIBA 1995:30) provides useful clarification:

The role of project manager for which some architects might well have the skills and aptitude, should be seen as separate and distinct from the architect's traditional role. It should not be confused with what many architects think of as simply managing the project.

When we closely look at the common area of profession, the building industry, It is certain that, during the lifespan of the building process, there are always problems with different levels of implications; and in most cases they all call for effective management and adequate communication skills.

Case studies from England (Emmitt, 1995) and Belgium (Douglas, 1995) argue for the correct management of a project to deliver a better service; the background of the individuals, be they architects or project managers, is less important. A comprehensive list of 13 overlapping functions carried out by project managers has been provided by Walker (1996:147-51):

1. Establishment of the client's objectives and priorities.
2. Design of the project organization structure.
3. Identification of the way in which the client is integrated into the project.
4. Advice on the selection and appointment of the contributors to the project and the establishment of their terms of reference.
5. Translation of the client's objectives into a brief for the project team and its transmission.
6. Preparation of the program for the project.
7. Activation of the framework of relationships established for the contributors.
8. Establishment of an appropriate information and communication structure.
9. Convening and chairing meetings of appropriate contributors at all stages.
10. Monitoring and controlling feasibility studies, design and production to ensure that the brief is being satisfied, including adherence to the budget, investment and program plans.
11. Contribution to primary and key decisions and to making operational decisions.
12. Recommendation and control of the implementation of a strategy for disposal or management of the completed project, including commissioning

the building and advising on arrangements for running and maintaining it when completed.

13. Evaluation of the outcome of the project against its objectives and against interim reports including advice on future strategies.

What is clear from Walker's list of functions is that the design manager and project manager, often confused in literature and practice, are clearly different roles, demanding quite different skills and abilities. There are however, overlaps between the project manager and design manager, best accommodated by integrating both disciplines within the same professional service firm (Emmitt, 1999).

3.2.3.3 Project Procurement Systems and the Role of Architect

The procurement of design and construction services is paramount to the successful delivery of the client's goals. Clients need to consider a number of factors before a decision on procurement is to be made, ranging from timing and flexibility to make changes through to risk, responsibility and cost certainty.

According to Emmitt (1999) all firms, regardless of background, will be able to offer a client advice on procurement routes; however, project managers are better occupied to do this than their competitors, primarily because of the experience of programming and financial control. Although financial control and monitoring is important throughout the job, any decisions should be taken with due consideration for a building's design. A cost orientated 'project manager' may be concerned with the project cost and not the implications for the cost of the building in use; therefore a balanced approach is required.

Today, in the building industry, like the other competitors, architectural practices are in a decent competition to get sufficient commissions in order to run their businesses. The initial process they generally phase right at the beginning of this process is the chosen contract type, which in a way defines their area of responsibility. Therefore, delivery systems, which in an other word client's choice of running the project, is significantly important for DOS firms. As the systems evolve through the time, architectural practices should reflect this change into their organizational structures to be in a better/stronger position through the chosen building contract.

The term delivery method refers to the owner's approach to organizing the project team that will manage the entire design and construction process. This selection process is governed to a large extent by risk but also by the owner's desire to find a method that will deliver the project on time, within budget, and in a form that will meet the owner's needs most effectively.

A number of proven strategies can be used to accomplish these ends. The three most common types, defined by (Gould and Joyce, 1999) below, are traditional, design/build, and construction management. Combinations of these strategies may be employed as well.

A-Traditional

In this type of arrangement, the owner first hires a design professional, who then prepares a design, including complete contract documents. With the complete set of documents the owner either conducts a competitive bid or negotiates with a specific contractor. The contractor is then responsible for delivering the completed project, and no matter how the work is done, he remains solely responsible for execution of the work. This delivery mode became popular near the turn of the twentieth century in response to the increasing specialization of the various building professions, and until recently it was the predominant mode of delivery.

B- Design / Build

For the owner, the design/build delivery type provides a single point of contact and responsibility throughout the life of project. The firm that is hired by the owner will perform both design and construction. Entities offering this service may be design/build firms with in-house employees or joint-venture firms that come together contractually to perform a single project. Generally being applicable to complex and bigger size projects, design/build delivery system is currently very common in the building industry.

C- Construction Project Management

In this delivery method the owner hires both a design firm and a construction project management firm early in the preconstruction phase of a project. Which firm is hired first as well as which specific responsibilities each firm will handle varies, depending on the owner's level of involvement as well as the expertise of the designer and the construction professional. This delivery system therefore has a number of variations,

including program management, professional management, construction management and professional construction management.

The evolvement of the delivery systems demonstrates that presence of a project manager in order to control the whole process and establish the direct contact with the client is inevitable. This, in another word eliminates architect's traditional leading position and therefore decreases the importance of an architectural practice within the whole process. However, from the point of architectural practices, in order to secure the leading position in today's world, it becomes more obvious that they have to seriously consider the project management service. This is especially essential for keeping the direct communication with the client for the sake of the design process as well as for a better commission.

3.2.3.4 Integrated versus Independent Project Management Models

It is now more obvious that, with the help of the information provided above, professional project management of client's objectives is necessary to survive in today's competition. However, whether the project manager should be a part of the architectural firm or an independent provider remain as an open question. Today, architectural firms clearly concern about trend of independent project management. Mainly because it creates a barrier between themselves and their clients, moreover, it adds another link to the communication chain.

From an architects point of view, there is nothing particularly new about project management; as he has always managed (administered) his projects before. What is new is that the architect's competitors have been astute enough to realize that the discipline is a route to both increased business and increased control over the building process, and they have marketed their services accordingly (Emmitt, 1999).

Project management has emerged as a distinct, profession that has in turn led to further fragmentation of the building process (Smith and Morris, 1992) an further loss of control of the building process by architectural firms (Pawley,1990).

According to Emmitt (1999), the definition of an architect-led firm is that, it contained project managers and construction managers operating as an integrated team under an architectural management system. This architect-led team had actually started to construct its own designs in an attempt to achieve quality, reduce costs and improve communication, achieved at the expense of the main contractor.

The only three players in this contractual arrangement were the client, the architectural firm and the trade contractors. Communication was improved and it was easier for 'real' participation to take place. Nevertheless, whether the leader is designer or contractor; it is important that the number of links in the product information chain has been reduced and the opportunity for continuous feedback and continuous evaluation of design and production is provided (Emmitt, 1999). It is important to establish a simpler procurement route, which provides an ability of user groups to identify the project coordinator and get their views heard, simply because there are potentially fewer barriers to their messages.

Emmitt (1999) argues that the primary reason for offering project management as a service rather than abrogating responsibility to an independent project manager is briefly because:

The primary aim of project management should be to deliver a quality service and a quality product on time and within budget. The project is a vehicle to deliver a quality building; it should not be a means in itself. There is a danger of placing too much emphasis on project management at the expense of the building. The building is considerably more important than the project since it costs more, lasts considerably longer and has an impact on the environment. The project is merely a means to an end.

Therefore, it seems as an advantage to offer the service indoor, in order not to lose any attention to the product, which may not be well enough established by an independent manager.

To sum up, Emmitt (1999) has arisen three fundamental reasons why architectural practices should resist the encroachment of an independent project manager and adopt it themselves:

1. From a business point of view, the independent Project manager poses a serious threat to architectural firms' workload and fee-earning capacity. Independent project managers, once appointed by a client are in a very strong position since they can 'buy in' design services as and when they are needed. Thus the architect relies on project managers, rather than clients, for his or her commission; which is an unpredictable dependency.

2. From a communication perspective, the project manager acts as a node through which all communication should flow. As such it is without question the most important role in the project team. Empathy between client and designer is essential if the client's intentions are to be transformed into a quality product. Thus

the project manager must be able to interpret the client's wishes and the only person capable of doing this is someone with design training. More importantly, the link between client and architect is broken.

This situation is also briefly summed up by Diana Rowntree (1994 : 76):

The point where the communication gap must not exist is between client and architect. Just as the quality of architecture depends upon the joints between materials and the junctions between panels, so at a more profound level it depends upon a meeting point of minds between client and architect.

3. From a client's perspective, a situation where responsibility rests with only one firm is likely to be attractive (Walker, 1996). Therefore, project management skills need be bought into the firm through the employment qualified and experienced project managers. One approach would be for the design firm to employ educated and experienced project managers, hence buying these essential skills and leaving the designers to do what they do best – design. Recruitment of professionals other than architects may be necessary if a practice wishes to create and maintain its competitive edge (Emmitt, 1995).

On an individual level, the design-orientated professionals who can make the transition to project manager are in very strong position, since they have the all important design skills to underlie their decision-making capabilities. It also follows that the professional design office with an integral project management section will have a certain degree of competitive advantage over its rivals. Project management is a tool that can be used to both retain and attract business by architectural practices. It is only by adopting the project management role that they will be in position to control design standards, material quality and cost control for the benefit of both client and building user (Emmitt, 1999).

3.2.4 Managing Design

3.2.4.1 Design Process and Its Evolution

Design process can be classified under five 'design types' according to Gorb (1990).

- Information Design – short term
- Production Design – short term
- Client identity Design – short/medium term

- Environmental Design – medium/long term
- Psychological/sociological Design – medium to very long term

The architectural designer is required to question and define the problems underlying each of these types, to identify, test and select solutions and to coordinate them into a whole and unified ' design ', all before the concrete idea of the building can be said to exist (Gorb, 1990).

According to Emmitt (1999), the special nature of design and the challenge of managing creative individuals are at the core of architectural management. From the architect's point of view in the practice, management and design are integral parts of his job which have to be considered at the same time, not as separate issues.

At this stage, if we approach the case through an architectural practice point of view, the approach to Managing Design within an architectural practice, be it a Partnership or Company; develop within the age and growth of the organization. Sawczuk (1992) in his paper 'the management of the design process' describes the situation as follows:

In the early years, the founder of the practice has a 'hands on' approach and lives with the project on a day to day basis: often he will maintain direct contact with the client and carry out the drawings and contract administration, Figure 3.4A.

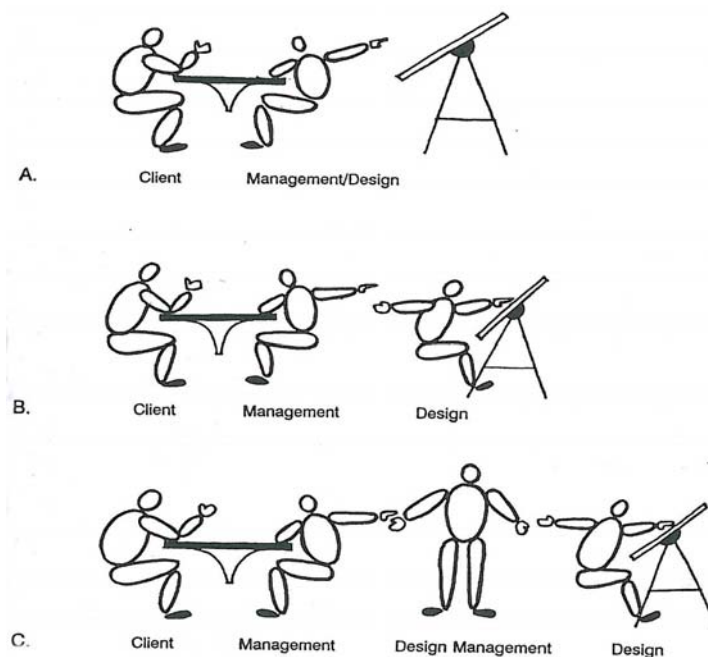


Figure 3.4 The development of design management (Sawczuk, 1992).

As the organization grows and matures, the Founder or his Partners/Directors will not be able to handle each project personally throughout. There becomes a split in workload, with the Partner taking the initial brief and communicating internally to the Project Architect or Technician to put in hand drawings and contract documentation, Figure 3.4B.

With further growth and maturity, the design organization will be handling more and more work therefore the Partner may take on a marketing and sales role, with less and less input into the design process and its management. It is at this stage that a new role develops – that of Design Manager – which becomes the link between the Partners and the drawing office. This role may carry the title of Associate or may not even have a specific title but the role is developed by those within the organization who show managerial skills and can handle organizational problems, Figure 3.4C.

3.2.4.2 Managing the Design Process

Sawczuk (1992) in his paper 'the management of the design process' describes three distinct layers of management throughout the office:

Company Management Addresses corporate matters, resources, finance, policy, design strategy and external influences.

Design Management Tends to supervise the services in an organization and will co-ordinate and control design briefings and design reviews.

Design Projects Responsibility for individual projects and services.

To make these layers of management work, there needs to be a degree of overlap; therefore company management contains some design management which, in turn, contains some project and design skills.

According to Emmitt (1999), as competitive pressures increase, so does the pressure to plan design work efficiently and administer projects competently. Design, like anything else, can be managed. However, because of its unique characteristics it needs to be managed in a particular way if creativity is to be

encouraged rather than stifled. Design, or rather the manner in which it is managed, has significant implications for the competitiveness of an architectural firm; the context in which designers work must be understood before it can be managed effectively.

No matter how complex the project or how big the project team or, indeed, how fast the project will develop, there are four basic ingredients to the management of the design process according to Sawczuk (1992):

<i>Plan</i>	There must be a plan of action. It might follow the RIBA work stages or another in-house approach. Each work stage will also have its own plan of action.
<i>Action</i>	The plan must be in action in accordance with the plan.
<i>Review</i>	At regular intervals during the action process, the action must be reviewed and compared to the original plan.
<i>Feedback</i>	If the action is not going according to plan, there must be feedback to modify the plan to take into account deviations in the action. Also, the action must be put back on course.

This Plan, Action, Review and Feedback process is a continuous process and vital for a successful project, Figure 3.5.

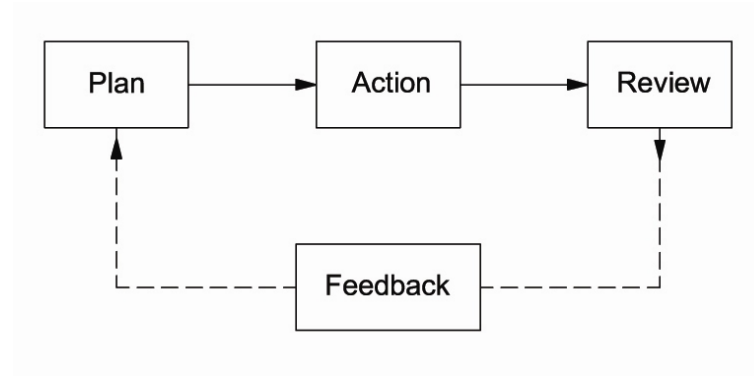


Figure 3.5 Fundamental ingredients to managing the design process (Sawczuk, 1992).

Emmitt (1999) examines the problem through a different perspective in terms of time-creativity aspect. As time progress the creative zone, that is the amount of freedom, narrows. It is at its most diverse at the conceptual stage and at its most restrictive when the project is on site, Figure 3.6. Care is taken in this diagram to show that the design may not be fixed when work starts on site, since problems arise and materials, products and details are often revised as work proceeds. This is not necessarily a problem as long as the right design management is established and the manager of the design process recognises the need for continued monitoring and management at this stage.

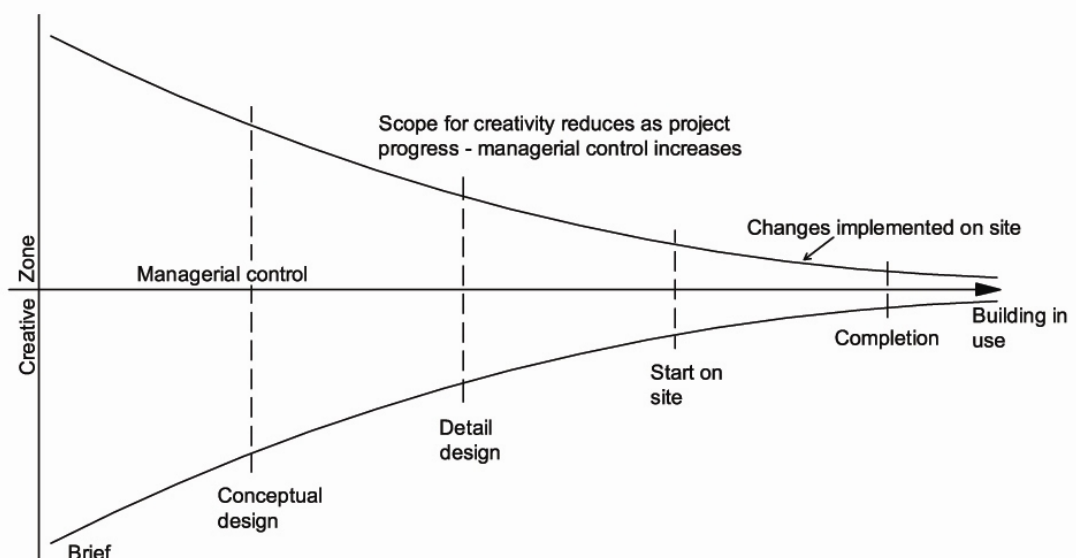


Figure 3.6 Design control (Emmitt, 1999).

3.2.4.3 Manager of the Design Process

A totally balanced Designer, with equal strengths in management and design, is rare and, it could be argued, not ideal because they may be a requirement for star performers in both camps working alongside each other for mutual benefit. This view can be taken to its extreme and 'conveyor belt' design can develop within organizations where individuals are pigeonholed into key stages of the design process, Figure 3.7, Sawczuk (1992).

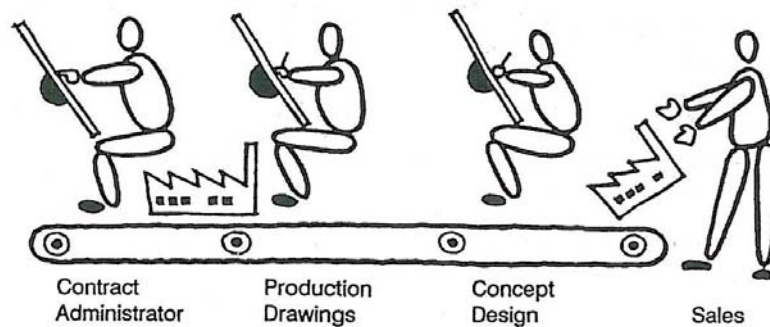


Figure 3.7 Project design with backup facilities. Conveyor belt design (Sawczuk, 1992).

Some organizations, will import a manager who is not a trained designer but is a trained manager; this may have some distinct advantages but the disadvantages may be greater. For success, there needs to be commitment from the top down, with clear thinking and clear policy and company approach. Therefore, how can the non-designer manager be committed to something he does not understand or, indeed, value?

For managers, design is just another resource and needs to be managed to ensure the profitability of the firm. There is clearly a difference in culture between designers and managers. As with business, the difference between good and excellent design is in the detail: in the small but important differences.

Emmitt (1999) explained that, traditionally architects have moved away from the act of doing design to the act of managing design as their careers and status in the firm have advanced, learned through doing rather than through education. It could be argued that it is the architectural firm's inability to manage the design process, and hence the project, which has led to the development and proliferation of independent project managers. There is a need to question an architect's competence in design management and to consider whether a manager would be a

better option. Architects are not taught design management. There is nothing unusual in this, it is not taught to designers either. It is a skill picked up through experience in the workplace. Architects are also trained to take all job decisions themselves – to control their own decision-making process, rather than manage or be managed by others (Coxe 1980).

In conclusion, it is important to emphasise that the success of a project is greatly influenced by its management and the maximization of the team member's talents, together with the managed and co-ordinated input from the client and building contractor.

3.2.5 Managing Quality

3.2.5.1 Means of Quality for an Architectural Practice

The dominance of professionalism means that architecture are frequently torn between satisfying their clients, and satisfying their professional peers in what Blau (1984) has called the 'Daedalean risk' facing architectural practice. On the other hand, Grace (1990) examines that this particular problem revolves around competing notions of *quality* in architectural practice.

According to Winch and Schneider's (1993) model, which is developed from the work of Grace (1990), *quality* can mean three interrelated but distinct things, which are illustrated in Figure 3.8:

1. It can be defined in terms of the level of *specification* on the project – the quality of finishes, the design life, and fitness for purpose
2. It can be defined in terms of the quality of service delivery in terms of programme, budgetary control, and conformance to specification – the quality of *realisation* of project objectives*
3. It can describe the quality of *conception* aesthetic term – elegance of form, spatial articulation, or contribution to the urban culture.

** Powell (1987) attempts a more formal analysis of this process of peer reviewing drawing on the RIBA Annual Awards. Blau (1984) uses a peer review technique to identify the 'heroes and rascals' of architectural thought.

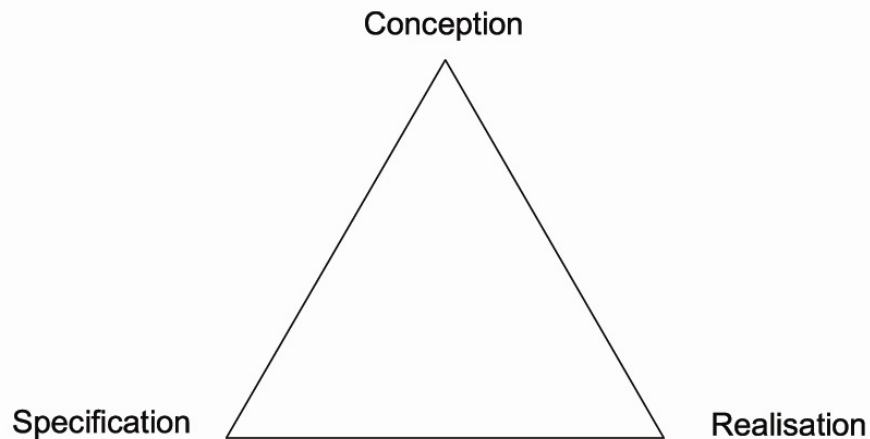


Figure 3.8 Aspects of Quality (Winch and Schneider, 1993).

These definitions of quality differ not only in what they describe, but also who is to assess their level of achievement.

The quality of specification is specific to each particular project and determined by the designer's in response to the client's brief. In most design and build contract, these specification is subject to change regarding to contractor's changing requirements. Therefore, performance on this criterion shouldn't be seen as a possible source of competitive advantage for architectural practices.

However, according to Winch and Schneider's (1993), the other two criteria are much more ambiguous, indeed contentious, and can both be important sources of competitive advantage. The quality of *conception* is subject to peer review by the profession. Very few clients are architecturally literate, and largely rely upon recommendation from the profession in the appraisal of the quality of conception**. On the other hand, the quality of *realisation* is very much subject to review by clients. Only the client can judge whether their objectives have been met in terms of their own criteria for project performance.

** Powell (1987) attempts a more formal analysis of this process of peer reviewing drawing on the RIBA Annual Awards. Blau (1984) uses a peer review technique to identify the 'heroes and rascals' of architectural thought.

It is in this tension between the peer review of conception and the clients' review of realisation that architects' Daedalean Risk lies as they attempt to design for both their clients and their peers (Winch and Schneider's 1993).

3.2.5.2 Quality Management Approach

3.2.5.2.1 Introduction

Architectural firms must give their clients confidence both in the quality of the service they provide and in the quality of the buildings they produce. They must also be able to do this cost effectively in order to stay competitive (Taylor and Hosker, 1992).

Although professionals firms have a duty of care to their clients, the service they offer can be enhanced and improved through the adaptation of quality management (QM) (Emmitt 1999). For example efficient design can be encouraged through quality management systems such as quality assurance (QA) while total commitment to quality is seen as the best way of consistently delighting the customer through quality service and quality products (Macdonald and Piggott, 1990).

Emmitt (1999) highlighted that, a well design quality management system has the potential to make life at work easier and more enjoyable and to allow more time to be spent on delivering exciting buildings.

We should never forget that, design is not linear; involves feedback loops and creative leaps. However, it is a 'process' and as such subject to programme and time constraints. According to Emmitt (1999), most of the architects have convinced themselves that these two are incompatible. But he warns at the same the same that deadlines are imposed by clients and there is a need to manage the project. So the question is, therefore: Can quality assurance be accommodated within the design process without hindering it?

On the other hand, Gray (1994) stated that 'if the design process is to be managed successfully it must be subject to control within the framework of Quality Management'. According to Cox (1980) quality service can be achieved by giving attention to the following;

- consistent standards for handling projects
- a consistent approach to leading (or following) the client

- consistent patterns of quality review
- clear responsibility for the last word

where all these areas should be covered in a well designed and implemented quality management system.

When we look at the history of the quality approach, we see that QM evolved from early work on quality control in the American manufacturing industry but it was the Japanese who took quality management to new heights, inspired by the work of Deming and Juran (Emmitt 1999). From the 1950s they contributed to the Japanese revolution in continuous quality improvement which has culminated in a number of Japanese gurus of total quality management (TQM) such as Kaori Ishikawa and Genichi Taguchi (Macdonald and Piggott, 1990).

QM has an interesting background; it appears to travel well and is a constantly evolving philosophy that demands change. However, quality assurance has been neglected by design firms. According to Coxe (1980) there are three main reasons for this situation:

1. a traditional deference in the learned profession that makes review and constructive criticism of another's work seem demeaning.
2. because of the classic concept, supported by both the education and the registration process of each engineer and architect as a 'whole professional', fully capable of doing everything necessary to execute a project in discipline.
3. partly because of a misunderstanding about what it takes to sustain the creative process.

3.2.5.2.2 Definition

According to Emmitt (1999), despite the considerable volume of literature dealing with the QM, there is often a degree of confusion over the word 'quality', especially within the construction industry. For instance, when people talk or write about quality the term is often used subjectively. Quality work does not mean quality service; similarly, quality service does not necessarily mean quality work (Maister, 1993). Therefore, it is better to understand the definitions of different quality approaches, in terms of achieving the correct goal from the professional design firm point of view.

A- Quality Control

Quality control is managerial tool that ensures work conforms to predetermined performance specifications, a management tool developed and associated with manufacturing rather than with service industries (Emmitt, 1999).

According to Emmitt (1999), the intangible nature of a professional design firm's output makes quality control particularly difficult to achieve and it is not uncommon to find quality control (QC) applied as a checking procedure only to the drawings produced before issue. Such control is often influenced by the personality of the directors and senior staff within the firm rather than by any predetermined set of controls; as such it can be somewhat varied in its implementation and effectiveness.

Therefore, a more appropriate way of providing the quality management within a professional design firm is suitable with applying QA systems.

B- Quality Assurance

Quality assurance is a formally implemented management system that is constantly monitored by an external agency, either the BSI (British Standards Institution) or one of the other UK certification bodies, to check that the firm is conforming to ISO 9000/9001 (formerly BS 5750) (Emmitt 1999).

According to Stebbing (1990) QA is not quality control (although this forms part of a QA system), it is not a massive paper-generating exercise, it is not a major cost area, nor will such a system be a panacea for all ills; instead it is a cost effective aid to getting it right first and every time. Hence it forms an aid to productivity and makes good management sense. More specifically, QA means assurance that the process is managed. It does not assure a quality service (Taylor and Hosker, 1992) nor does it assure either a quality design or a quality building.

From a professional design service point of view, to become certified, the firm must set up and maintain a formal QA system which comprises a series of controls designed to ensure the delivery of a quality service to the their client. Most firms already have the basis of such a system contained in their office manual, although considerable investment in time and money is required if the firm is to achieve and maintain certification. An informal quality system could be based on RIBA's Architect's Job Book (1995), which sets out a series of stages and checklists, where most of the firms are still referring to. But obviously, for a competitive advantage,

DOS firms have to create a specific manual for themselves in which the key actions of QA are defined and responsibilities of the staff indicated clearly.

C- Total Quality Management

In contrast to QA that may only be applicable to certain parts of a firm's activities, total quality management (TQM) encompasses everything the firm does and where the quality of the working environment is seen to be an important influence on the quality of what is produced. It is a people-focused management concept that aims at continual improvement and greater integration with a focus on increased client satisfaction (Emmitt, 1999).

The philosophy of TQM needs to be introduced to everyone in the firm for a desired success; hence it should be extended to include suppliers, contractors and even the client which in many cases may require a cultural change. According to Emmitt (1999), within the architectural firm a change to TQM can be achieved through a combination of leadership through management, the implementation of systems (QA), continuing professional development (CPD) and most importantly, employee involvement through teamwork; such as the Japanese's step-by-step approach referring to *Kaizen*.

3.2.5.3 Competitive Advantage

Surely it is impossible to behave like a creative architect under the burden of such restrictive systems defined above. Therefore, it is commonly accepted that, QA is more applicable for the building component manufacturers and even the builders than that of designers. It is then, not surprising that the majority of professional design firms have been relatively slow to adopt QA systems where the number of architectural practices that has certified QA systems is a very small percentage of the total number of firms (RIBA, 1992-93). As an example, the Netherlands, one of the leading countries with England where architectural practices tend to apply QA system, did not record its first certified architectural firm until 1995 (Emmitt, 1999).

Work carried out by the RIBA (1992-93), highlighted a number of areas in which the architectural firms are weak, many which could be improved by a good quality management system and the adoption TQM ethos.

Although the subject is debated through different conferences worldwide, research has indicated (Bardin, 1993), and has been confirmed by experience of practice, that the proceedings of such meetings are rarely transferred to the people who

would benefit most, the practising architects. Hence, according to Emmitt (1999), architects may also remain unaware of relevant literature relating to this management innovation, information which could help them in their quest for competitive advantage.

At this stage, somehow the adaptation of quality management systems should be applied to the DOS firms, both from inside and outside. Therefore, regarding to the UK practices, RIBA clearly has a significant role to play. They addressed the issue of QA in their publication the *Architects Handbook of Practice Management* (1991) and issued guidance on quality management to practitioners. But obviously this is not enough pressure for the achievement of good QA. Emmitt and Neary (1995) indicated that, the professional institutions have taken a very conservative view in the promotion of management innovations such as QA to the profession, leaving it to practitioners to make their own decision about such issues.

External pressures to adopt have come, and will continue to come, largely through client pressure for better service and better value for money. Large institutions and local authorities have started to request that professionals have a certified QA system before they will be allowed bidding for work from them, but smaller clients have, to date, not made such demands (Emmitt, 1999).

Sharp (1991) believes that the adaptation of QA is worth the investment because of the improvement in efficiency, reduction in waste and generation of new work.

According to Emmitt (1999), if a firm is to achieve competitive advantage through TQM both its customers (clients) and suppliers (consultants) must be involved in the process. The goal is to superplease the client through anticipation of their needs. Once such an approach has been adopted it is important to maintain the momentum through review of the quality business plan and the commitment of all staff to continuous improvement. It is not a quick-fix solution but a long –term business strategy.

The implications of architectural firms are considerable, given a competitive market. Design is essential to the quality of the finished product, the building – but what use is design ability if it is poorly managed? (Emmitt, 1999).

3.2.6 Managing Information

3.2.6.1 Definition

There have been several attempts on explaining information through different disciplines. As a basic one, information is means of communicating with people who do not know one another and who have little personal basis for mutual understanding (Porter and Theodore, 1994).

Another explanation claims that, information is a data in a usable form which allows people to make decisions and take action (Daniels, 1994), where this particular data has a *cost* and information *value*. The cost of researching, analysing, using, storing and transmitting is relatively easy to quantify compared with the value of the information to the user (Emmitt, 1999).

When considering information there are six connected terms often entangled with each other (Otter and Prins, 2000). These are:

- *Data*: abstract, formal, sometimes symbolic entities like elementary facts, letters and binary – numbers.
- *Information*: According to Drucker (1988), when a string of data is endowed with relevance and purpose it becomes information. When data becomes information the problem of- personal and thus objective, meaning and interpretation arises.
- *Communication*: A process of exchange of information between sender and receiver to equalize the information on both sides. Exchange means, information generation and transmission (the senders activity), information receiving interpreting (The receivers activity), and information storage and retrieval (activities which can be done by both sender and receiver) can be distinguished as it's constituent steps.
- *Knowledge*: specific data and information in the human mind related to intelligence, experience, skills and attitude which can be subject of manipulation in terms of navigating, combining, reflection, synthesizing or even redefining the meaning of data strings.
- *Knowledge base*: the total collection of information, which exists within a person, organization or system, is called its knowledge base..

- *Document*: a string (collection) of generated data, which are physically stored in one way or another, made ready for transmission as part of a communication process.

Information is a central decision-making process. The more relevant and complete the information, the better an individual is able to make an informed decision. However, it is rare to have all the relevant information to hand and it necessary to understand the information-seeking process that underlies decision-making (Emmitt, 1999). Christie (1981) has argued that at any given point in the time and individual has five main behavioural options open:

1. To wait
2. To act
3. To generate information
4. To seek information
5. To opt out of situation.

At all of these stages the individual will be exposed to a variety of messages. Many of these will be ignored: that is, the individual will exercise selective exposure (Emmitt, 1999).

To sum up, information can be send/receive in various different format and stages through a process. However, information only has *value*, if it is accurate, timely and properly used by the receiver (Daniels, 1994). More specifically, the value of information depends on the people who are going to use it, the circumstances in which they use it and their perception of its value to them at any particular time (Emmitt, 1999). Thus, the intention of the staff and their awareness has significant aspects on the information value, where again the quality of staff becomes a critical issue for the whole process.

Therefore, the issue of accuracy, timeliness and appropriate use is, and will continue to be, a major challenge for information managers. According to Emmitt (1999):

- Information must be useful and relevant to the intended audience.
- The message should be simple. Information that is complicated is more likely to fail.

3.2.6.2 Changing Environment and Its Impacts on Information Exchanges for DOS firms

As critical as being accurate, information exchange is an essential point of the data flow through the different bodies of a project. At this stage, Information technology (IT) can be described as a tool to store, organise and deliver information quickly from one destination to another. The communication process (the way it is handled) is the key element through the whole project. Especially, when the traditional professional practices are being replaced by multi-disciplinary practices (Bennett and others, 1988), which encourage and ease information transfer between professions; for a successful completion of large multi-disciplinary projects, managing the IT becomes significantly critical, where enormous coordination is being required to ensure all parties are constantly aware of ever-changing status of the project in an attempt to eliminate design errors and limit design changes (Austin and Baldwin, 1996).

According to Otter and Prins (2000), in terms of communication the following activities can be distinguished on information exchange: generation, transmission, receiving, interpreting, storage and retrieval as well as publication.

Today, information technology is ubiquitous and it is integral to processes, internal to the firm, to product design, to delivery of services, and to interorganizational relations (Johnson and Clayton, 1998). It is the lifeblood of the organization, shrinking the effects of time and distance and altering the very nature of work (Allen and Morton, 1994). Electronic mail, groupware, telecommuting and videoconferencing, have become relatively standard technologies to enhance group processes. These technical innovations have made it possible for work teams to communicate anytime, any place, and anywhere. A survey of construction industry presidents found that the principal way computer technology has changed relationships with employees has been through enhanced communication and corporate culture effects (Thomsen, 1996). The top three organizational effects were: allowed business to be done at greater distances, shortened work cycle time, and reduced the need for clerical support staff (Johnson and Clayton, 1998).

According to Johnson and Clayton (1998), as the cost/performance ratio of information technology continues to shrink, information technology is almost certain to become more pervasive and raises at least the possibility of new forms of

delivering design, construction and facility management services. The impact of this on architecture has been described by the AIA's goal statement that "The redefinition of the profession requires a cultural/attitudinal shift that moves from a product-driven through a service driven to a knowledge/technology-driven strategy. The goal is to find new ways to fulfill developing client needs (Johnson and Clayton, 1998).

Information handling (management) between designers to a certain extent is a special character. Designers can be characterized as creative, visionary and spatial as well as abstract thinking people with a high level of technical knowledge and experience. Their key information carriers are sketches, schemes, images and drawings (Otter and Prins, 2000). Therefore the information handling of design process has special features and creates a characterized information environment that has to be managed accordingly.

Research into how architectural firms attempt to manage trade information as it comes into the office (Emmitt, 1997b), found that there were a series of complex managerial controls in place, with managers acting as gates through which information had to pass before it reached to the relevant person in the office. Through a series of structured interviews with the directors of architectural firms, the research concluded that the reason for controlling the information coming into the office was not just associated with controlling information overload, but was a managed process to try to limit the firm's exposure to risk, with gates operating at organizational and individual levels.

Much of the information coming into the office is from an external source, although the office will produce information internally which also needs managing. Therefore, it is worth considering the different types of information required by a professional

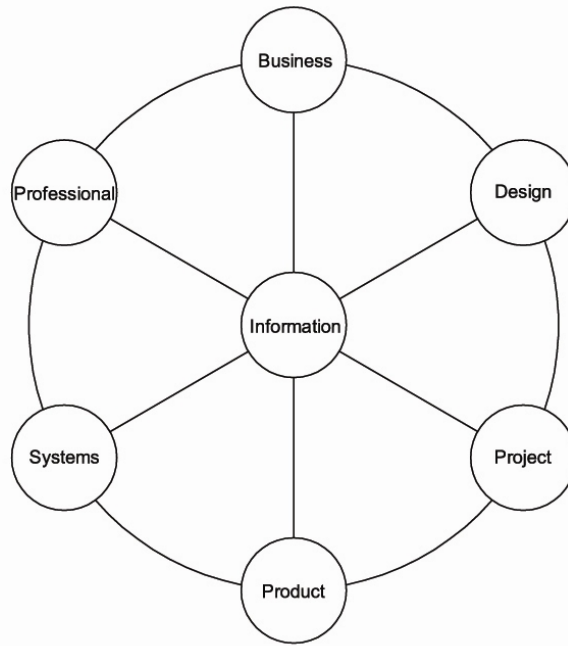


Figure 3.9 Information drivers (Emmitt, 1999).

Table 3.6 Information drivers (Emmitt, 1999).

1. Business information <i>external source:</i> - market segment - competitors - collaborators (consultants, contractors) <i>internal source:</i> - staff records - individual projects - mission statement - equipment and materials	2. Design information <i>external source:</i> - trade literature - professional journals - design typologies - legal regulators <i>internal source:</i> - standard details - design typologies - design guides	3. Project information <i>external source:</i> - client - consultants - contractors - statutory user groups <i>internal source:</i> - design typologies - planning and monitoring
4. Product (user) Information <i>external source:</i> - feedback from buildings - feedback from client <i>internal source:</i> - analysis to assist future jobs	5. System and Management <i>external source:</i> - consultants' man. systems <i>internal source:</i> - office manual - quality management	6. Professional Inst. <i>external source:</i> - code of conduct - professional journals <i>internal source</i> - code of conduct - PII

design firm, see Figure 3.9. Different types of information can be broken down further as shown in Table 3.6, which makes no attempt to be an exhaustive listing (Emmitt, 1999).

The picture that emerges from the research of Johnson and Clayton (1998) is that, information technology is no longer just a tool to incrementally improve 'back-office' productivity. Information technology has become a strategic necessity because it is beginning to alter the basic economics of AEC-FM organizations by:

- enabling employees to become knowledge workers
- improving the collaboration and effectiveness of project teams that are dispersed in space and time
- supporting the transformation of hierarchical companies into flattened 'virtual organizations
- creating new services and markets by facilitating the acquisition and conversion of information into knowledge that creates distinctive value for customers.

3.2.7 Managing Marketing

3.2.7.1 Necessity of Marketing

Hurst (1965) claimed that, in order to turn good product businesses must have a stable economic environment. Establishing a stable economic environment requires a continuity of commissions, and this continuity in turn requires the business to be organized to compete.

Therefore, in the construction industry, the architectural practices have got to acquire commissions; they have got to build, maintain and control an organization to execute these commissions, and finally, they must operate efficiently and at a profit. However, the main subject here is the acquisition of commissions; yet this in turn calls for review of the practice's business development plan – the 'where' and 'how' of selling architectural services (Hurst, 1965).

Obviously for a continuous commission for the survival of an architectural practice, the basic factor is the client's satisfaction, which will bring the further commission into the practice. Morgan, Foreman and Poh (1994) pointed that 'architects must be

aware that rather than talking of markets and marketing, their priority lies in considering and understanding the clients as customers, with their own motivations, characteristics and personalities. If the basic concept of marketing is accepted and understood and architects look to establish an effective means of attracting and retaining clients through customer satisfaction, the next step is to consider the organization of the functional issues, such as marketing research and promotional services'.

Also Emmitt (1999) agrees with the above situation, highlighting that the main purpose of marketing is to bring the firm's services to the attention of *clients*. In architectural circles this activity is often described as 'attracting' or 'getting work'. Marketing comprises strategies for identifying and developing services to match or create market demand; it is a business philosophy based on the orientation of the firm to the wants and needs of its clients. The aim is to achieve client satisfaction and to make profit (RIAS, 1990).

Unfortunately, with the exception of highly regarded work of Weld Coxe (1980; Coxe *et al.* 1987) there are few books that specifically address the issue of marketing, advertising and public relations to architectural firms.

However, the 1980s were labelled the *era of marketing* in most architectural and other professional service groups, as new and innovative methods of designing, pricing, distributing and promoting such services were adopted (Morgan, Foreman and Poh, 1994).

According to Coxe (1980), success in marketing professional services is weighted by the following factors:

- 5 to 10 %, *Where You Sell It*: The choice of market, either by client/service type or geographically, is of major importance only in saturated markets.
- 15 to 30 %, *How You Sell It*: Clients are showing an uncanny ability to differentiate professionalism from hucksterism. How you sell is important when competition gets down to a short list of equally qualified firms, but clients are not buying many design services on salesmanship alone. If what you sell doesn't qualify you for that short list of firms, all the selling in the world won't often win the job.

- 60 to 80 %, *What You Sell*: the professional quality of what you do is clearly the most important factor in the success of a design firm's marketing program. Thus managing of marketing in a design firm involves a great deal more than supervising the job-by-job selling activity.

3.2.7.2 Managing Marketing: Marketing Plan & Strategy

Managing a marketing program is different from doing the marketing. Marketing management involves the marketing plan; marketing staffing and organization; and monitoring marketing performance (Coxe, 1980).

According to Hurst (1965), analysis of the practice organization, its experience and strength is only a part of the job in developing a sales program. The next and equally important step is the analysis of the needs which exists within the community, county and state, or however the practice defines its market area.

Emmitt (1999) on the other hand claims that any firm must *know its business* before any marketing strategy is put in place. More specifically, the firm's culture must have been designed and its aims, both short and long term, agreed, before a promotion strategy can be implemented.

Hurst (1965) pointed that, after defining the appropriate market area, the directors of a practice should examine the experience and background, where they stand in the community and to a degree what types of work are open to them – based on achievements to date and building types planned in their market area. Then it is the time to take a look at how they are currently organized to sell their architectural services; and what type of tools they already have for this process (i.e. brochures, marketing letters, presentations of projects etc.)

So that, with the preparation of above analysis, a practice basically defines 'where they are, how they wish to grow, types of commissions they want, current business development program, strength and weaknesses; where the next step will be planning their marketing management strategy (Hurst, 1965).

With the help of the above information, it is more clear that 'the marketing performance should be measured and must be managed (Maister, 1993)'; and if the marketing is to be managed at all, a design firm must have marketing plan that defines the following components according to Coxe (1980):

- *Market(s)*: What type of clients/projects will the firm pursue? In what geographic territory?
- *Capability*: What services/strengths will the firm offer in these markets? (this is the single most important element of every professional marketing program)
- *Message*: How will the firm distinguish its capabilities from those of its competition, so the prospective client can know the difference? Can the firm articulate its strength and uniqueness?
- *Selling System*: Will the firm rely on its reputation and references for work, or will it aggressively seek new opportunities? What will be the systems for lead finding; courting prospects; presentation of the firm's qualifications; interviews; and eventually closing the sale?
- *Merchandising*: What sales tools, promotion, publicity, or advertising can be useful to the market program?
- *Market Organization and Budget*: Based on the factors above, what roles are required, who will do them, and what will be the budget for time and out-of pocket expense?
- *Marketing Goals*: What results are desired? What yardsticks will be used to measure the progress of marketing plan and to forecast the results?

3.2.7.3 Objectives & Responsibilities of an Effective Marketing Manager

The success or failure of a defined marketing plan is in the hands of those who accept marketing roles in the firm. Their selection, motivation, and support is the job of management (Coxe, 1980).

Therefore, before the set up of any marketing plan or strategy, it is equally important to clearly identify the responsibilities and define the roles of every individual taking place in the marketing management approach for the desired achievement. The basic marketing functions that must be performed by one or several individuals are the followings (Coxe, 1980):

- *Closer*: One who ultimately delivers the professional proposal to the client and wins the contract.

- *Courter*: One who, during the get-acquainted stage, wins the confidence of the client in the firm's ability to do the job.
- *Lead Finder*: One who knocks on doors or otherwise finds the leads to be courted and closed.
- *Coordinator*: One who maintains the firm's selling resources and pulls together the statements of qualification, proposals, interviews, presentations, and so on, whenever they are needed in the selling process.
- *Marketing Manager/Director*: One who is ultimately responsible for seeing that it all happens.

The division of these marketing functions in a design practice is based on the philosophy of the firm, market acceptance, and personal aptitude of the principals.

It should be always recall into mind that the firms that represent increasing competition for architects are business and sales orientated ones (Hurst, 1965). Such firms can advertise, use high pressure, work on speculation, and use every other device known to modern sales promotion. However, as a practical matter, these methods cannot earn the respect and dignity of an architectural firm that sells its service within the contains of the professional ethical code (Hurst, 1965).

However, most cases reported that marketing activities were integrated with a host of other management tasks, and a burden on one or several partners which they tended to relegate below their valuable fee income generation time and priorities (Morgan, Foreman and Poh, 1994).

A research on the matter of effective marketing management approach has been taken by Morgan, Foreman and Poh (1994) among 400 largest architectural services in the UK. Among the other results of the research, attention should be taken to Table 3.8, where the importance of certain tactics in the attended firms' marketing strategy is indicated. The majority of the firms suggested that the brand/image identity, reputation of the firm, technical service excellence, fee level and personal contacts of the staff were 'important'. Surprisingly, few recorded the importance of promotional issues and advertising communications which are obvious vehicles for the implementation of favoured strategies as exhibited in Table 3.7.

Table 3.7 Typology of Marketing Goals * (Morgan, Foreman and Poh, 1994).

Marketing goals	Applicability*									
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
Defending and holding our share of market	79	60	39	29	4	3	5	4	5	4
Increasing our market share	84	64	37	28	7	5	1	1	3	2
Entering a new customer market with our existing services	83	63	43	32	4	3	3	2	-	-
Developing new services for our Existing market	61	49	40	30	17	13	9	7	6	4
Diversifying into new areas Involving both new services and customers	59	44	33	25	14	10	18	14	9	7
* Likert scale of accuracy of representation: 1 true, 2 more true than false, 3 difficult to say, 4 more false than true, 5 false										

* The data reported in this article were generated via a two-wave postal questionnaire which was sent to a sample amounting to the 400 largest architectural service firms in the UK. The return of 133 usable responses was commendable, which produced an aggregate, overall response rate of 33.25 per cent. Every table uses a likert scale of accuracy of representation, where the responses to the answers scaled 1 to 5 in terms of importance level for the answering firms, 1 being prior 5 being not important at all. Every line consists a total of 100% data flow each given on the right hand side of every column.

Table 3.8 Importance of Tactical Elements in Marketing Strategy * (Morgan, Foreman and Poh, 1994).

Tactical element	Importance rating*									
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
Level of fees	57	43	55	41	17	13	1	1	2	2
Technical services excellence	103	76	26	20	3	3	1	1	-	-
Range of services provided	48	36	61	45	21	16	1	1	2	2
Advertising	1	1	14	11	46	35	49	38	20	15
Location and distribution of Firm's offices	9	7	51	39	32	24	24	18	16	12
Professional reputation	120	90	11	8	2	2	-	-	-	-
Utilization of technology	47	35	62	47	19	14	3	2	2	2
Promotion literature	37	28	59	44	29	22	7	5	1	1
Social contacts of staff	24	18	57	43	30	23	18	13	4	3
Image of firm	109	82	23	17	1	1	-	-	-	-
Specialist services for defined segments	53	40	45	34	26	20	7	5	1	1
* Likert scale of accuracy of representation: 1 true, 2 more true than false, 3 difficult to say, 4 more false than true, 5 false										

4. CONCLUSION AND SUGGESTIONS

4.1 Competitive Advantage

Up to this point through the research, many approaches and issues identified that may help the design orientated professional service firms to achieve a degree of competitive advantage over its rivals. The assets and strategies employed by a firm and the way in which different architectural management systems may be implemented were discussed through the chapter. It should be highlighted again that, just as there is no one-business strategy to guarantee competitive advantage, neither is there an ideal method of structuring the firm (Emmitt, 1999). The concept of competitive advantage is well established (Porter, 1985) and has been widely applied, but what gives the DOS firms competitive advantage?

David Maister (1993) has argued that the most successful service firms are distinguished by the skills and the behaviour of the firm's leader, transforming his or her vision into reality through effective leadership and management skills. In architectural literature, it is also common to focus on the skills of the individual architect, listing a raft of quite diverse skills required for practice (e.g. Eggleston, 1955): the architect as 'general practitioner'. This profession combines architecture, technology and management in roughly equal measures. By the very nature of the specialist training, individuals of the profession are not balanced; they will have a particular bias towards design, technology or management (Emmitt, 1999).

Once aware of this bias, it is then possible to look at the composition of the firm. Figure 4.1 (Emmitt, 1999) is used to illustrate the firm's bias based on the individuals employed. Three firms are used, the all architect firm (Firm A), the architect and technologists firm (Firm B), and the multidisciplinary firm (Firm C), all based on five individuals. It is clear from the figure that there is a difference in the bias.

A modern, competitive architectural practice requires professionals with difference skills, all working towards a common goal within an architect-managed office. The successful firms therefore appear to be well designed and well balanced. According to Emmitt (1999), this sample illustrates the point that architectural management is

not just about management systems and slick marketing. It is about getting the culture of the firm, the type of the job, the right clients and the message the firm gives out correct; it is a matter of balance, Figure 4.2.

It should be noted that, the environment awaits a simple, integrated product quality chain, led by a professional with a design pedigree (Wyatt and Emmitt, 1996) and component in architectural management. Therefore, the design firm to achieve competitive advantage should consist of individuals with different but complimentary skills. The firm needs clear direction and effective leadership, but above all it needs the ability to anticipate future markets and the ability to adapt to changing circumstances. Any management systems employed need to be simple and flexible to allow the creative side of the business to flourish within a well organized and competitive framework (Emmitt, 1999).

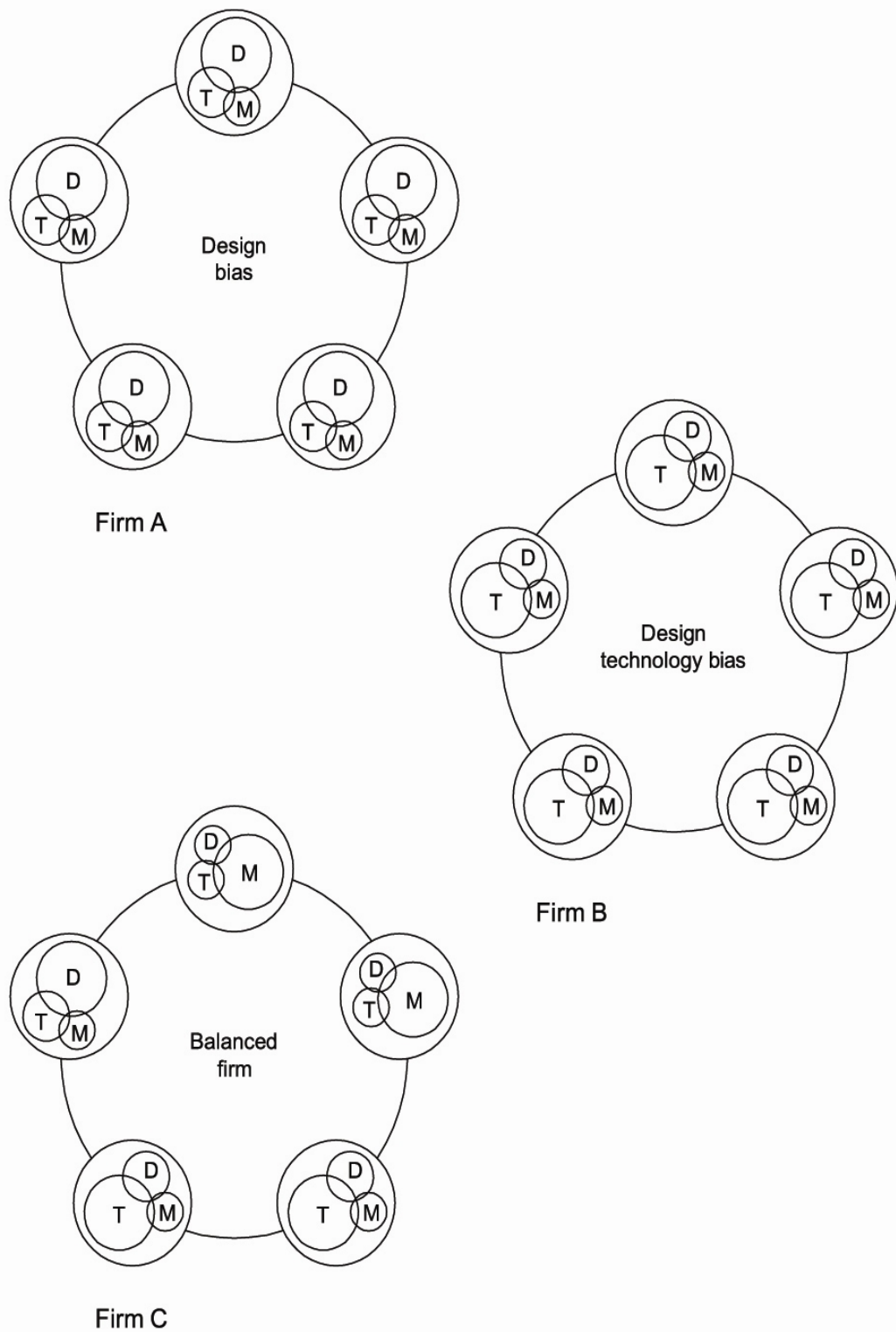


Figure 4.1 A question of balance (Emmitt, 1999).

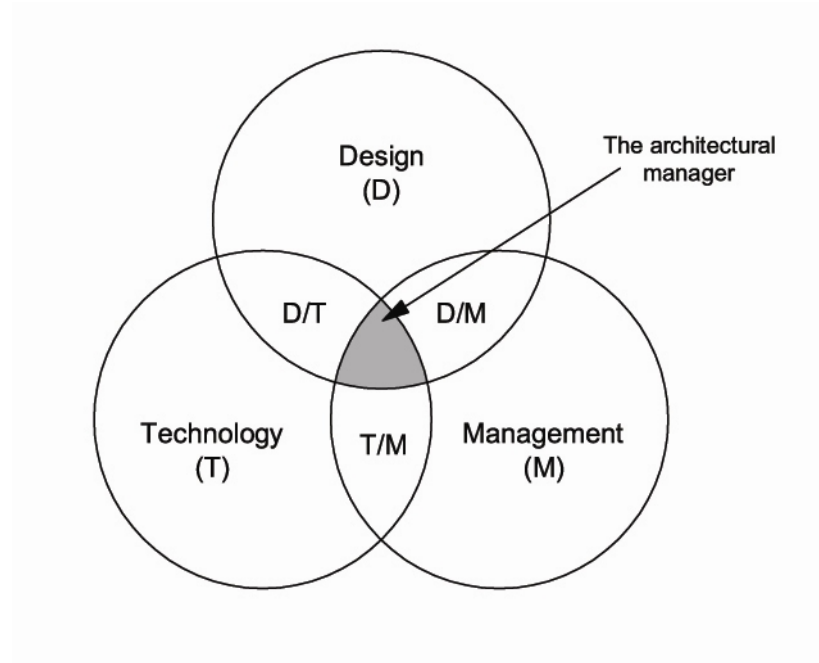


Figure 4.2 The balanced firm (Emmitt, 1999).

4.2 Measuring the Effectiveness of Architectural Management

Architecture / construction project management can be defined as the application of management techniques and systems to effectively design and construction facilities according to plans and specifications. Management effectiveness is typically measured by the duration it takes to complete the project, quality of design, project costs, facility performance and safety.

According to Handa (1994), evaluation of effectiveness must be based on the basis of addressing the concerns and goals of all projects' constituents, such as the owner, the user, all design and construction organizations, workers etc., rather than a single one. At this point we may need to highlight the important aspects of the project process that satisfies all these constituents (Handa, 1994):

1. high quality, low costs, and short duration for project execution by owners
2. high performance and low maintenance costs of facility by users
3. high profits and good professional reputation by all design and construction organization
4. good working conditions and satisfaction by workers

5. compliance to building codes and regulations by public agencies

Regarding to the above, it can be stated that, accurate evaluation of management effectiveness could be performed if valid indicators to level of satisfaction of these goals were used in evaluation. Handa (1994) highlighted two main focusing points in order to achieve an effective measurement for architectural management as follows:

Customer Focus: One of the most important principles incorporated by most emerging methods. According to the International Standard Organization's (ISO) definition of total quality management, customer focus means determining customer requirements and expectations and total commitment to serving the customer.

Quality Focus: It is the second common principle in the whole process. Quality focus is an organization-wide effort to improve effectiveness by making product quality a strategic goal where quality is achieved through integration of effort at all levels of the organization. A look at the characteristics of the architectural project reveals that quality is designed and evaluated for each individual project each time because it is believed that all projects are unique, single-order and single production products. Therefore, there are no clear, uniform evaluation standards in overall design/construction quality as there is in manufactured items; thus architectural projects are evaluated subjectively based on the unique specification for each design. As a result, it is very difficult to establish a data collection system to build an information base that could lead to early identification of defects.

To sum up, Handa (1994) suggests that by incorporating the principles of some of the management methods such as TQM and ISO 9000 standards, the architectural / construction industry can eliminate much of the traditional adversity that exists between building product customers, users, and producers, improve architectural / construction management effectiveness, and adapt to new markets. This can be done only by addressing the proper questions such as what are the needs of customer and user of facility throughout the project lifecycle, how to organize design / construction process to ensure commitment to satisfaction of customer's and user's goals, how to strategically plan, organize and control quality and finally how to achieve worker empowerment.

4.3 Future Organization of the Building Process

In 1990 the CIB Working Commission W82 "Future Studies in Construction" started the international study project "Future Organization of the Building Process" (Bakens, 1992). Through the study, scenarios for the future process organization, which has close impacts on both building and design organizations, was developed based on international confrontation of innovative ideas. The results of the study were also presented at the W82 Symposium "Construction beyond 2000", June 1992 in Espoo, Finland.

According to Bakens (1992), a basic assumption has been made, that the traditional segmented organization of the building process no longer fits in the context of a fast developing building technology. In fact the traditional way of organizing the building process is one of the major hindrances for technological innovation and because of a non efficient use of new technologies the quality of the cost-quality ratios in the building are far from optimal. Also the traditional way of organizing the building process no longer fits in the context of a changing building market, as responsibilities and liabilities are often unclear and clients no longer accept this as a given fact.

As a result of the above study (1992), some of the expected changes that will effect the process organization in building in a more or less general way are is described below:

- Better-integrated process, with more clearly defined division of responsibilities and liabilities combined with a more effective and more explicit method for coordination and with forms of cooperation based on co-makership.
- Information Technology based on networks per project
- Project independent building concepts as a base for innovation and cooperation.
- Integrated systems for quality management in building projects
- Standardized building components, combined with a system flexible production, organization, resulting in very individual and more flexible buildings

- More client and consumer oriented attitude of all professional process participants.

However, there will not be one scenario for future process organization. Next to national and sectoral differences there will be differences in process organization per type of project and per type of client (Bakens, 1992).

All this above information, demonstrating the significance of managerial importance for the businesses related to the building industry. As the future organization of the building process evolves, all sort of organizations creating the industry have to evolve accordingly. For keeping the competitive advantage among the other competitors, DOS firms have to establish their balanced structure and set out their strategies and goals regarding to the market that they are aiming to achieve. Bakens (1992) also claimed that, as a future role of architects, they may be forced more and more to make strategic choices for the future of their practices.

4.4 Evaluation & Conclusion of the Study

As previously stated, this research bears on two important points to be recognized; (1) building industry, one of the major businesses for international trade, has been significantly changing through the last decades and this has serious impacts on design orientated professional service firms; (2) maintaining competitive advantage in this changing environment is an important aspect for the architectural practices together with the other DOS firms and this could only be ameliorated with an analytical thinking about management issues applicable to design services.

Competitive advantage can be achieved and maintained through diversity, but achieving such a model requires a great deal of effort from the firm's directors and employees as well as support and input from their clients. To maintain a competitive design orientated professional service firm, it is essential to be kept updated with both current management thinking and practice, if the architectural practices would like to be in a strong position to face the future. According to Emmitt (1999), this is only through effective application of architectural management techniques and tools that creative design can flourish.

The main aim of the research is to point out the upcoming problem that DOS firms has been and will highly be facing; losing their competitive advantage due to the changing environment and aspects of the building industry. It is not the aim to

specify one particular way of dealing with the problem as this is against to the nature of such practices. As every project has unique character, it is inevitable that every professional service firm establish their own company culture, which in many cases not applicable to the others. Therefore, it should be noted that, although to stay competitive in the industry the effective application of architectural management should take place, stated as a conclusion of the research; whether such a position can be achieved by purely management-orientated approach is questionable. However, the design – orientated professionals must position themselves in responsible place where standards can be maintained and improved and architectural management is a tool that may go some way to achieve this end.

Although the architectural management defined as a tool, an ordered way of thinking, it is very clear that complex management systems with mountains of paper work and form filling exercises, is only a distraction point for the firm's core business: design. In effect unwieldy management systems are not appropriate to most architectural firms. The simpler the system the easier it is to adopt and maintain. Emmitt (1999) also claimed that, the good management is about delegation, responsibility, ownership and vision. It is about common sense and a consistent approach to decision-making and problem-solving within a creative environment.

The culture of the firm, the manner in which it deals with individual jobs, staff and clients, will be unique to that firm and whether the DOS firm primarily comprises architects, architectural technologists or building surveyors in many cases it is not important. The important point is to **design** the firm's culture, a process that demands as much care and skill as any building design; the firm must be capable of learning and adapting to changing circumstances and thus it is **management** structure must also be adaptive (Emmitt, 1999).

Through the research, the term architectural management has been used as a common approach to cover a variety of management tools and techniques employed by architectural practices to achieve their competitive advantage. As a part of this argument, it would be difficult to one individual to call him/herself as an architectural manager, Figure 4.3. Although a number of new titles related to managerial aspects have been introduced through the recent years, the term architectural manager is still on its way to enter to the market.

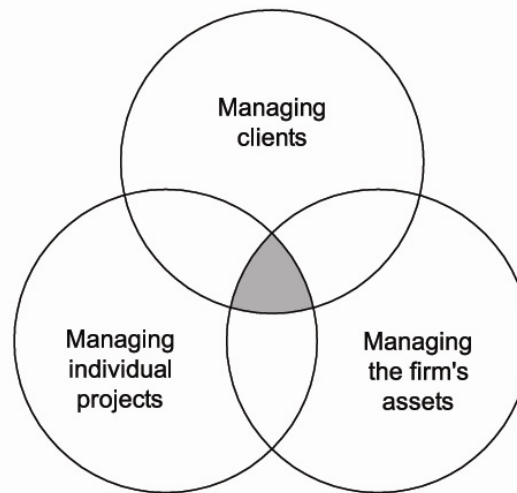


Figure 4.3 Attributes of the architectural manager (Emmitt, 1999).

The concept of an individual being educated and working as an architectural manager needs to be addressed and the Society of the Advancement of Architectural Management (SAAM) has started to do just that (Emmitt, 1999).

To sum up, design-orientated professionals need to be better equipped with business skills, better communication skills and the ability of operate in an evolving market. What is clear is that future change, at least in the short term, is likely to come from some of the architectural firms as they strive for the competitive edge, despite the lack of support from both professional institutions and educational establishments. Whatever the changing issues, a successful business should not only seek to consolidate its position in the market share but should be constantly looking for opportunities to increase its market share and expand in the different areas of the business. The successful DOS firms will be those that are capable of change and able to predict future trends. Architectural management as a tool can be used as a vehicle for the journey ahead. It is more than a special interest but mainly a culture that is essential for the development of an effective business.

4.5 Suggestions for Future Research

Today, the building procurement system is required to form a simpler relationship, from which all different players involved the process could benefit. In order to that, Emmitt (1999) suggest a true realization of TQM combined with a lowering of

corporate and professional barriers as an achievable point which could help to return to less complex relationships and simpler procurement methods.

As a result, future changes will be determined by market forces and the design orientated professional service firms' willingness to take centre stage, together with environmentally responsible approaches to building will be widely adopted.

The research, mainly focused on clarifying the existing situation, and explaining the need of management orientated skills for DOS firms, with the use of *architectural management* as a tool, to keep competitive advantage. In order to see the impacts of the changing environment on many other aspects of today's practices, the research can be used as a starting point and some other suggestions of future research to enlarge the perspective are summarized as follows:

1. Applicability of architectural management techniques to practices:

Management and practice topic was identified in the research. However, the manageable aspects of a practice, as stated before, identified as a general approach to clarify the issues of architectural management for the reader. As a further study, the number of areas can be increased and identified specifically, and the application models of such areas directly into the practice organizational culture can be described in more detail.

2. Case Study & Qualitative Measurement: The research has a qualitative methodology and aiming to identify the term of architectural management and its necessity for the design orientated professional service firms. Throughout the research, it has been observed that, most of the literature related to the topic has a similar approach. Therefore, the lack of quantitative data is clearly experienced. As a future study, additional to this research, qualitative measurements through different size of organizations can be applied with either questionnaire forms or other application models. Moreover, this information can be used as a case study, and through this way a multidisciplinary competitive architectural practice can be observed and interpreted, to see the impacts of management techniques as a competitive advantage more closely.

3. Future possible application models in Turkey: The research is representing a global situation; however, the main observation area was bordered within the UK. For an appropriate result, the environment of the application should be identified clearly. It is not only how the models of management issue applied

affects the competitiveness, but also the institutions, educational bodies and local environment (client, suppliers, local councils, press etc.) are as much significant. Therefore this UK based study, can be widened and additional observations through the Turkish Building Industry can be applied, and the comparison may be interpreted for the sake of future development of Turkish design orientated professional service firms, to find their place within the global market.

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