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# Construction and Building Research

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Springer

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# Foreword

The 2nd International Conference on Construction and Building Research, held at the Polytechnic University of Valencia's Advanced School of Construction Engineering in November 2012, was set up under the auspices of the Conference of Directors of Building Surveying and Construction Engineering Schools as a tool for exchanging innovative scientific information and technology transfer.

Numerous areas of knowledge converge in the construction industry, necessitating the combination of numerous scientific and technological variables and a multidisciplinary approach to research in the field, and so a very broad perspective is required to establish ongoing relationships between contributions from different areas.

It is tremendously difficult to find any master formula for bringing different studies together and it can only be done in a context of collaboration and multidisciplinary enrichment.

Therefore, in order to publish and disseminate the results, the Organising and Editorial Committee for the 2nd International Conference on Construction and Building Research felt it was extremely important to select some of the studies presented that examine issues in materials and building systems; construction technology; energy and sustainability; construction management; heritage, refurbishment and conservation.

The appeal of this publication lies in the fact that it groups together, from an interdisciplinary perspective, various studies that generate knowledge, promote technological development and are committed to innovation which is fundamental for the industry's future.

I hope that this publication will prove highly useful for construction professionals, researchers, innovators and in short, for people interested in deeper exploration of issues in the complex world of building and construction.

Francisco Javier Medina Ramón  
Director

Escuela Técnica Superior de Ingeniería de Edificación  
Universitat Politècnica de València

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# Part I

## Building Construction Management

Carmen Llinares-Millán

**Abstract** The construction industry is currently undergoing a process of change to adapt to the new market situation. In this scenario of change, management processes must be improved to boost competitiveness. This present chapter examines studies on these processes from a variety of perspectives.

From a strategic approach, the chapter identifies success factors for architectural practices and differences between project management systems.

From a process-centred approach, it looks at management models able to improve quality, reduce production times and minimise costs with examples of their application to building processes, ceramic coatings construction and C&D waste.

Finally, the chapter presents a person-centred approach, with examples of studies focusing on the worker, job promotion systems, experiences in architects' careers and the qualities a project coach should have. Users are also analysed in order to integrate their needs in the design process.



# Stop Designing Architecture, Design Your Practice!

J. Lago-Novás

**Abstract** Contemporary practice has proven that design quality is not sufficient for success. Throughout architecture's history, there has existed the naive perception that best designs came from artists whose practice remained untouched by the imperatives of business. Most architects are entrepreneurs and designers who face business responsibilities without the right training. Architects must learn how to analyze business ideas, identify opportunities and consider marketing strategies at different stages of the design process.

But architects have all been taught similarly; this is design based, with very little or non-existent business education. When architects start their practice, they start straight away designing architecture without being aware that what they are starting is a business and therefore their first design should be their own practice. Getting management skills will help them not only to manage their businesses by understanding all stakeholders, but will help architects to learn how to earn opportunities to design.

The results shown in this article, proves through a ranking system, that a successful practice is well balanced among design excellence and business management awareness.

**Keywords** Management • Practice • Success • Architecture • Business

## 1 Introduction

Most architects start their practices by winning a competition or a commission straight away and without a business plan. This situation makes that 80% of these practices close during the first 12 months. There is no other industry where the owner of the business starts it without having a business plan, without designing the business [1]. But there are various examples of successful practices that have proven that designing the practice as well as designing architecture is a successful business model without compromising any of both sides of the balance.

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There are measurable indicators of success that help to identify successful examples so that we can then analyse what these practices have in common so that we can define a design business model which is successful both for designing architecture and for designing the management processes of the practice.

## *1.1 Definition of success*

In order to understand the analysis and classification of the data and ultimately understand the obtained conclusions, it is absolutely necessary to define what **success** in architectural practice means in this article: those practices that are able to generate and identify opportunities consistently to design architecture.

Without clients there is **no architecture**, and without excellent architectural design there is no possibility to attract the appropriate **clients**. Therefore, both are two faces of the same coin, both with the same importance; it's a true balance between talent and management.

## *1.2 Existing environment*

The environment where architects operate has changed and we need to answer the challenges of this new environment in order to be successful. Change brings opportunities, and the practices that adapt best, will be the ones with more chances to be successful.

In the current economic environment, where the destruction of architecture companies are double of the ones in any other industry [2], is important to underline that there are architecture practices than not only are not going bankrupt, but they are even growing. They are growing thanks to the design of business and organizational models that have allowed them to grow in a sustainable way and be flexible enough to adapt to the changing and difficult scenario. Most of these practices are Anglo-Saxon, in particular, practices from the US, where design management processes were implemented years ago due to the fact that most of these practices started at the same time as the industrial revolution, and therefore they adopted those industrial production processes into the management processes of the architectural practice.

The lack of management education in the architecture schools makes it very difficult for architects to understand that success in architectural practice is a perfect balance between talent and professionalism, and sometimes one or other part of the balance is misunderstood and underestimated depending whom you speak with. These underestimations even make people to think that architects with lots of commissions compromise their architectonic quality or that architecture *artists* will inevitably go bankrupt due to their lack of business management awareness.

This lack of alignment between architectural quality and business management [3] makes that architectural practices with an amazing talent have to close due to

economic circumstances; and practices with great amount of commissions, due to the lack of talent, create uninteresting architecture objects.

## 2 Indicators of Success

There are various indicators that determine the success of an architectural practice. It's important to remember that these indicators are according to the definition of success mentioned at the beginning of this work. Therefore these indicators value: public recognition, recognition within the architecture sector, financial results [4] and operational results, all at the same level and with the same weight.

The indicators are divided in three families according to the following description and named with R and a number that you can then trace in Table 1:

- **A: R&D:** These indicators examine the design quality, innovation and the admiration inside and outside of the architecture industry. The indicators are:
  - Most admired to work in. (R1).
  - Most admired inside the sector. (R2).
  - Most admired outside the sector.(R3).
  - Most innovative. (R4).

These results come from a poll that was made among 200 people over the web, during January and February 2012. 100 were architecture professionals and 100 were “outsiders”.

- **B: Marketing and Communication:** These are selected according to the implementation and success of their communication [5] and design strategies within their business and design plans translated into measureable figures. The indicators are:
  - Number of search results in Google. (R5).
  - Number of visits into their corporate web page. (R6).
  - Ranking at the Google PageRank. (R7).
  - Number of followers in facebook. (R8).
  - Number of followers in LinkedIn. (R9).
  - Number of followers in Twitter. (R10).
  - Number of videos in YouTube. (R11).
  - Number of prints on and off-line. (R12).
  - Number of awards. (R13).
- **C: Finance and HR.:** These describe financial, operational and human resources aspects. The indicators are:
  - Number of built projects. (R14).
  - Number of employees. (R15)
  - Number of non-architects employees (diversity). (R16).
  - Number of countries where they work. (R17).

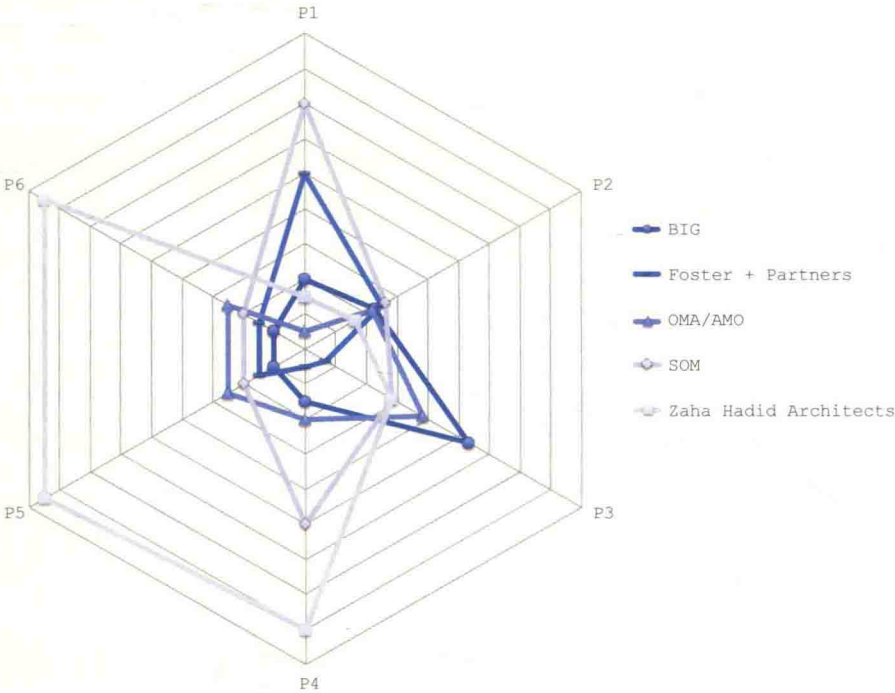


Fig. 1 Profiles according to indicators R1–R19

- Turnover. (R18).
- Profitability per employee: turnover/ number of employees. (R19).

Figure 1 shows the profile of five architecture practices according to the indicators mentioned above and divided according to: P1. Creativity. P2. Client focused. P3. Professionalism. P4. Collaborative. P5. Economically efficient. P6. Global

In Table 1 you can see the individual and global rankings of twenty top international practices according to the indicators of success described previously. R1 to R19 show each individual ranking from 1 to 20 among the offices that are shown in the first column. i. e. Aedas is ranked number 2 in R5, which is “Number of search results in Google”. The last column “Ranking” represents the final ranking as an average of all other 19 rankings.

### 3 Conclusions

To be successful, practices have to be equally admired by their clients and within the sector. To manage to obtain this admiration, only practices that have designed their practices as well as their architecture manage to obtain both admirations. Like this,