4.1 Seventy years of clients demands

The first major report reviewing the performance of the UK was written in 1929, since then several reports have been published, complaining about the inefficiency and waste in the construction industry. One of the most important early reports was “Reaching for the Skies” (Alfred Bossom in 1934). Alfred Bossom was involved in the design and construction of skyscrapers; there he could learn that construction could be treated in the same way as other engineering industries and that a good work schedule could reduce the final time of construction and also the total costs.

When he came back to Britain, he realized that the UK’s construction performance was really far away from that one which he had been working on. Then he published “Reaching for the Skies”, where he reported a fragmented industry with not enough concern about planning and design issues, adversarial and inefficient relationships, huge over expenditures, delays and unsatisfied end users. That was not really very different from what Michael Latham would publish 60 years later.

After “Reaching the Skies” and before the Latham report and the Egan report, a lot of reports had been published too; such as the Simon report (1944) or the Barnwell report (1967). But although most of the reports used to point out the same issues about poor performance, we have to look back to the 1980’s and the construction transformation in order to understand “Building Towards 2001” (1989), the Latham report (1994) or the Egan report (1998).

4.2 The Construction transformation in the 1980’s

The disbanding policies together with the freer market that appeared in the 1980’s strongly transform the construction industry into the one we know today. So, to understand the Latham report or the Egan report, we have to look at the changes that were originated during the 1980’s and also the early 1990’s economical crisis, which prompted a strong reaction of the industry.

We will talk further about the implications of the early 1990’s economical crisis in the next chapter, so let’s talk about the influence of the 1980’s policies and its consequences.

The freer markets

- A greater sense of time consciousness prevailed, new clients required projects with more urgency and delays were not as tolerated as in other times.
- Building quality also moved, from fairness and uniformity between projects towards a greater range of quality between one project and another.
- Clients start to be more sceptical of the advice which they received from consultants and the industry and consequently they become more involved and took a more proactive stance.
The privatisation and the disbanding policies

- The role of the government in the procurement of new buildings was weaker day by day. The private sector had to take on this role; which was at first, not an easy task.
- The disbanding policies created minor clients with no experience, who had to take control of the Building procurement. Consequently, there was a need for advice and good guidance.

The changes in the construction site

- Leading contractors started to subcontract most of the work, keeping themselves on the management side. Subcontracting, let the contractors avoid the risk of workload fluctuations, more likely to occur in the new freer market. Furthermore, the contractors could choose from a range of subcontractors and specialist and take advantage of the competition from long list of subcontractors and undertake bigger projects.
- Coordination and control was now more complex, now that the promoters had become so time conscious and the number of firms working on the site was growing. Constructors succeeded in managing the bigger and more complicated supply chain, and as a result, their power was enhanced.
- The new labour division and the new range of needs, meant that new ways of contract such as the design and build (for those clients more interested in transfer risk, and reduce time and cost) and management contracting (for those clients looking for quality and desiring for more control) appeared.

4.3 The early 1990’s crisis

It wouldn’t be fair to say that after the early ninety’s crisis the construction industry started to be concerned about its poor performance. We have seen, all throughout the second half of the century, many reports highlighting the fact that the industry needed to improve. However, we can assert that the economical crisis of the early nineties hit the construction industry hard, and after it, the industry was more highly prone to act against those problems reported in the past decades.

In the 1980’s some reports like “Building Towards 2001” pointed out problems like over budgeting, delays, insufficient research and development, skill shortage amongst other problems. But in those times, the high demand of new dwellings (see graph 4.3.4) shadowed the reality of the construction sector, with a fake growth that was going to burst.
The economic shock of the early nineties can be explained by two main points. Firstly, there was a deep collapse in the price of dwellings, and secondly, the economy struggled due to problems in the exchange rate. As a result, the British economy growth rates fell from a 4% in 1988 to a -2% in 1991 (Source: ONS).
The construction sector suffered deeply due to that crisis, because it was generated by the explosion of a speculation bubble in side one of its principal sub sectors, and because the construction is always very affected by the decrease in demand that an economical crisis can bring out, and was especially so after the privatisation and the market liberalization of the 1980’s.

1988/1990s boom and bust

There was an artificial period of prosperity caused by inappropriately low interest rates. The spiral house prices fed on itself, because of the easily available credit of the moment and the increasing wealth of the private sector that was being generated by the same spiral. This was especially notorious in the price of new offices in London’s docklands, during this time.

Graph 4.3.3 the 1988/1990s boom and bust (source: HMSO)

Exchange rate problems

The overriding priority of controlling inflation during the 1980’s, with the intention of giving stability for investments; led to periodic overevaluation of the exchange rate, which brought about acute problems in external trading and consequently, it damaged the economy.
Now the questions are why the interest rates were so low and why the bubble finally exploded.

First question

During this time, there were a set of reforms which abolished the principal distinctions between banks and building societies, because in past years there had been some collapses of these mutual societies. These reforms must had increased the competition in the banking system and in particular in the mortgage market.

Second question

Families were making much more effort in order to pay their mortgage (see graph 4.3.5). Consequently, the personal debt accumulated by the borrowers grew and together with the unemployment problems, made lenders abandon their risky approach to mortgage lending. Then, when interest rates began to rise, borrowers began to fail to pay on their mortgages, repossessions increased, lenders tightened their belts. Finally, the demand decreased suddenly and the crash arrived.
Graph 4.3.5 Mortgage difficulties of average household income (source: HMSO)

Other political decisions affected the crash too:

- Tax relief on mortgage payments made property more affordable, but when this relief was withdrawn, this became a further cause of the crash.
- Poll Tax replaced Council Rates. Since this tax was not based on the value of property, it made property more affordable. Later, the tax was withdrawn and replaced with a Council Tax, once again increasing the cost of property ownership and contributing the crash.

4.4 Latham’s report

“Constructing the team” was published in July 1994 and was more than well received by the technical press and by the professional bodies. Sir Michael Latham had been appointed by the Department of the Environment in order to make a report about the construction industry. The terms of reference for the report were to consider current procurement, contractual arrangements, and the roles and responsibilities of participants.

After twelve months of work 30 recommendations were directed to the Department of the Environment, the Construction Industry Council and other unspecified organisations. These recommendations were really similar to those written by the Reading report: “Building Towards 2001”. They concluded:

- The encouragement of the government to become a best practice client.
- Preparation of guidance for small clients.
- Registers of approved consultants, main contractors and subcontractors.
- Reduction in the number of tenders to be invited.
• The replacement of existing forms of contract with the New Engineering Contract.
• The reduction in real costs of 30% per year.

UK’s Background

The early 1990’s recession hit the construction industry really hard, more than other industries. The report stressed that the construction output in 1993 was about 39% below its 1990’s peak. It was true that the economic difficulties worsened British performance, but there were inherent problems that were affecting the industry deeply.

The report pointed out that the construction industry was really dependent upon wider economic stability and on the economic government policy. If the flow of work decrease because of economical crisis, expenditure restrictions, fiscal or monetary policies (and that is still very likely in this market), that mean high reductions in the staff, an increase in consultant fee bids, extremely low tender prices, reductions in training and R&D (Research and Development).

Despite the dependence on the work load of the construction industry, the report found other problems inherent to the industry that were affecting to other countries’ industry too. These problems were:

• The fragmentation of the industry and the consequences of the privatisation and the disbanding policies.
• Low use of prefabrication and standardisation.
• High construction costs and low wages.
• Too easy accreditation of firms (no qualifications, no experience and no capital required).
• Skill shortage.
• Insufficient training.
• Bad image of the industry that did not permit to recruit a skilled workforce.
• Only about a 0.1% of GDP was invested in R&D when other industries or other countries were spending 0.2% of its GDP.
• And so on.

Client as a core

The Latham’s report stressed that clients should be the driving force for the improvements, because in fact, they are the core of the processes in construction and their needs must be satisfied by the industry. The disbanding and privatising policies from the previous decade gave individual government procurers more freedom to make their own arrangements, however this also meant that some of such clients, needed advice in its procurement and there was no means of ensuring that new clients were aware of the best current practices.

Therefore, the report recommended the introduction of an agency with the purpose of giving better advice to clients, and teaching them how to obtain value for money.
It also recommended the government to commit itself to be a best practice client and finally, it recommended the clients to promote better design, that do not necessarily involve higher costs, but they would provide value for money and remove waste.

**The importance of the brief**

The client was effectively the driving force, but needed to be taught. The report’s opinion was that clients were not used to spending enough time on the designing and that a good brief was extremely necessary in order to avoid later variations of the project and the subsequent delays and over expenditures.

Consequently, the report advised the clients to make a brief with the objective of perceiving the real needs and considering benefits, risks and financial constraints. In addition, the report highly recommended that a guide to brief should be launched in order to help clients.

**Tender lists**

The length of tender lists was highlighted by the report, as having been a contentious matter for decades. It was true that the public interest must be defended through competition, but the industry should look also at the related tendering costs, because clients were not satisfied and the industry did not get a fair profitability.

There were references to interesting findings in reports like “The New Builder /JT Design Build construction industry survey” (March 1994) showing that even clients where concerned about the consequences of these long tender lists. The survey showed that a 36% of clients agreed that the lists had grown in the precedent years and a 30% showed their disappointment about these excessive tender lists, especially in the public sector.

Therefore, the report claimed to reduce and rationalise tender lists, which should be shrunk and evaluated on quality as well as price.

**A modern contract**

In order to approach the concerns expressed by all the parties involved in the construction process about construction contracts, the report expressed that the NEC (New Engineering Contract) was a promising contract to tackle such problems, but some modifications should be done to it. Summarizing the report’s opinion, a modern contract should include:

- A general duty to trade fairly about payment and related issues.
- Firm duties of teamwork, with shared financial motivation in order to pursue the objectives.
- A wholly interrelated package of documents which define the roles, the risks and the duties of everybody involved, and which is suitable for all types of project and for any procurement route.
Clearly defined work stages, including milestones or other forms of activity schedule
• Prepricing of any variations
• ADR (Alternative Dispute Resolution) systems, which would be independent of contract administration.
• The need for compulsory insurances for new commercial, industrial and retail building works.
• Mandatory trust funds for payments in order to maintain confidence amongst the contractors.

Register of contractors and consultants

The report suggested the idea of creating a register of consultants, contractors and subcontractors for public works, where the firms that wanted to apply should be required to demonstrate some professional skills, availability of resources and adequate professional indemnity insurances.

4.5 Egan’s report

Introduction


Indeed, there was a deep concern because the industry as a whole was under-achieving. It had low profitability, low invests in research and development, low levels of training and so on. Moreover, too many clients were dissatisfied with the present performance of the construction industry. As a result, there was an important need to improve the situation of one of the domestic economy pillars. In fact, it had an output of £58 billion in 1998 (equivalent to a 10% of GDP) and employs around a 1.4 million people.

The profitability was said to be low and unreliable, margins were characteristically very low; consequently, the task force wanted those companies that were satisfying their clients to have better returns.

The scope of improving

• The research and development had fallen in all sectors of the industry in the last twenty years, but in house R&D it had roughly fallen by 80% since 1981. That lack of innovation was damaging the industry’s ability to keep abreast of new processes and technology.

• There was also a decrease in training. The proportion of trainees in the workforce appeared to have declined by half since the 1970’s, and therefore there was a great concern about the skill shortage that was damaging roughly
the industry. Construction sector was also said to lack a proper career to develop supervisory and management grades.

- Almost all the parties involved in the construction industry recognised that fragmentation inhibited performance improvement. On the one hand, there was an atomization problem, 36% of the total construction output was being carried by companies that employed less than 13 workers, and on the other hand, the segregation of all construction participants along the process was acute. This fragmentation had provided flexibility to deal with highly variable workloads during the economical cycles that had affected the industry in the past decades. But this fragmentation and the extensive use of subcontracting had brought about contractual relationships and prevented the opportunity to make teams and work together efficiently.

- Finally, clients were dissatisfied and still equating price with cost. “The British Property Federations 1997 survey” revealed that more than one third of clients were dissatisfied with the industry for not keeping the quoted price and within time, and for the final quality delivered. A later survey by the Design Build Foundation highlighted that clients wanted greater value for their buildings and to reduce running costs. In addition, clients believed that a cost reduction could be achieved by the integration of design and construction activities. However, clients were also at a fault in a way, because they were still selecting designers and constructors practically only due to the lowest price. The industry needed to educate their clients in order to help them to distinguish between best value and lowest price.

**Promising developments**

Although, the problems explained above were inhibiting a better performance in the construction industry, Rethinking Construction initiatives were greatly encouraged by the wide range of promising developments which had emerged from the industry, its clients and its government sponsors.

- There had appeared industries to improve construction performance such as the construction Round Table’s: “Agenda for change”, the construction clients’ forum: “pact with the industry” and the DETR’s: “Construction Best Practice Programme”. All these initiatives mentioned merged and become part of the same organisation: Construction Excellence.

- There had also appeared new components, materials and construction methods, including standardisation, pre-assembly, lean thinking and other new technology as 3D object oriented modelling and global positioning systems.

- Standardisation was pointed out by the task force as one of the issues where there was more scope to improve. The task Force called upon clients and designers to make more use of standardized components that didn’t need
to result in poor and monotonous buildings, but could bring about reductions in manufacturing costs, reductions in tolerance problems, shorter construction times and more efficient R&D of components.

• With the objective of tackling fragmentation, initiatives like partnering, were increasingly being used by the best firms in place of traditional contract-based procurement. Some partnering practice guides as “trusting the team” or “seven pillars of partnering” have demonstrated that in long term partnering construction projects, great savings in cost and time are possible.

• Finally, there has been an increasing use of tools and techniques for improving efficiency, as learned from other industries, such tools are benchmarking, value management, teamworking, TQM amongst other.

Rethinking construction’s ambition for the UK’s Construction

In the report, Sir Egan tried to learn from the dramatic successes of manufacturing and service industry, looking particularly at the car manufacturing industry. He also tried to ignore those voices who claimed that construction was unique because of its size, costs, time, the large amount of people involved, the uniqueness of every project and so on.

Looking at these industries, the Task Force founded five drivers of change to follow in order to improve the UK’s construction performance. These were:

• **Committed leadership**: a totally commitment to drive forward an agenda for improvement, communicating the required cultural and operational changes throughout the whole organisation.

• **A focus on the costumer**: this means that all the construction chain has to find clients needs and try to eliminate those activities that do not add value to the customer. The construction supply chain has to look not only at the above employer in the chain, but also the final client, as well as, to educate small clients to become more discerning about what they really need.

• **Integrate the process and the team around the product**: this means to look at customers needs and work in an integrated production team where the skills of all participants give value to final customers and eliminate waste.

In a partnering or in an integrated project, the supplier’s skills and knowledge can be used at early stages to avoid risks and reduce unnecessary costs. Furthermore, the integration of the project reduces the contractual and confrontational culture that sometimes ends in expensive lawsuits; and finally, allows learning, innovation and the development of skilled and experienced teams.
• **A quality driven agenda:** quality means not only zero defects but also delivery on time and within budget, innovation, removing waste and so on. The Egan’s report wanted to escape the vicious circle; where the client was buying at the lowest price, because he could not see a range of quality in the industry and so the constructor did not give enough importance to the quality, because the client was tendering on the basis of lowest price.

• **Commitment to people:** in order to stop the skill shortage that was menacing the construction industry, the task force recognised its people as its greatest asset and committed to treat them as such with *decent site conditions, fair wages, care of health and safety, commitment to training*…

The Egan’s report claimed for a better care of *health and safety issues*, not only for a better construction employees welfare, but also because it was a way to reduce costs the sick leaves, potential prosecutions or even closure of construction sites.

Another suggestion of the report was to improve the workforce *training, at all levels*. Rethinking Construction’s opinion was that training and quality were inextricably interlinked. The report stated that at top management level there was not a correct balance of technical and leadership skills; at project management level there was a lack of training in integrated projects and in the conception of final delivery; designers needed a better understanding of the clients’ needs, the flexibility of the final product, the project process and the supply chain; supervisors had the poorest record of training and finally there was a need to substitute the specialist craftsman for multi-skilling operatives.

• **Decent and better working conditions** was thought to be a way to reduce the sick leaves and the tough image of the industry. The report pointed out some Tesco’s initiatives such as on site canteens, warehouses, changing rooms and showers, branded overalls with both Tesco and their employee’s name.

• **Fair wages.** Wages have been increased by the companies in the last years with the objective of retaining the workforce and recruit a potential new skilled workforce.

In order to improve the industry, the construction sector needed to measure itself. For this reason, the task force wanted to set some objectives or targets that would be measured by milestones or performance indicators. If improvements were measured in terms of quality, costs and time amongst others, then clients could reward the companies that delivered them.
The targets were:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Improvement per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital costs</td>
<td>Reduce by 10%</td>
</tr>
<tr>
<td>All costs excluding land and finance.</td>
<td></td>
</tr>
<tr>
<td>Construction Time</td>
<td>Reduce by 10%</td>
</tr>
<tr>
<td>Time from client approval to practical completion</td>
<td></td>
</tr>
<tr>
<td>Predictability</td>
<td>Reduce by 20%</td>
</tr>
<tr>
<td>Number of projects completed on time &amp; within budget.</td>
<td></td>
</tr>
<tr>
<td>Defects</td>
<td>Reduce by 20%</td>
</tr>
<tr>
<td>Reduction in number of defects on handover</td>
<td></td>
</tr>
<tr>
<td>Accidents</td>
<td>Reduce by 20%</td>
</tr>
<tr>
<td>Reduction in the number of reportable accidents</td>
<td></td>
</tr>
<tr>
<td>Productivity</td>
<td>Reduce by 10%</td>
</tr>
<tr>
<td>Increase in value added per head</td>
<td></td>
</tr>
<tr>
<td>Turnover and Profits</td>
<td>Reduce by 10%</td>
</tr>
<tr>
<td>Turnover and profits of construction firms</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.5.1 Egan’s targets

A better regulation

The Egan’s report highlighted some matters about regulation constraints that should be considered:

- Regulations were inconsistent across the country, making it more difficult to implement construction speedily and efficiently.
- Significant costs and delays were often incurred by the variability of the regulations and sometimes by the duplication of processes between agencies.
- They industry felt that regulatory regimes should look more at performance standards rather than at detailed prescriptions.
- Finally, they asked for a reduction of tendering, because the competitiveness between the large number of companies benefited no one. Constructors get an inadequate profitability and clients received poor quality. These radical changes meant that there would be fewer but bigger winners.

4.6 UK’s figures

Some of the problems pointed out in the reports can be observed looking the UK’s figures during these last years.

Skill shortage

In the following graph (graph 4.6.1), it can be observed, how manpower decreased after the crash due to the unemployment originated by the companies’ failures. After the crisis, the manpower recovered and programs such as “Respect for
People” helped to do so by offering better conditions sites, fair wages amongst other initiatives that enhanced the workforce welfare.

Another issue that can be observed by looking at graph 4.6.1 is the privatisation and disbanding policies effects. The number of APTC and operatives working for the public authorities decreases progressively since the 1980’s.

Looking at graph 4.6.2, it can be observed how the construction industry had lower wages in comparison with the industry in general. This fact, has changed in the last years, because the construction sector wants to be more attractive to employees. This change is quite notorious, particularly with the construction manual workforce’s wages, which are now even bigger than the ones given by the industry as a whole.
Despite of all these changes, there is still a lot of difference between the wages received in the UK with those received in other European countries such as Spain, Italy or France (see graph 4.6.3). The industry should learn that “if you give nuts, you get monkeys”; therefore, better wages must be paid in order to find a skilled workforce.
**Fragmentation**

All the reports published until now, have been pointing out the fragmentation of the industry as one of the major problems. Fragmentation has two issues. On the one hand, it means that there are too many parties involved in the construction process, consequently there is a lot of waste along the supply chain and the information gets lost all over the process. And on the other hand, it means atomization, most of the total construction output is done by small companies. There are too many firms in the construction industry and few companies with the ability and resources to lead and manage the supply chain. *Graph 4.6.4* shows the UK’s construction industry effort to finish with the fragmentation.

![Graph 4.6.4 Evolution of the UK’s construction output by size of the firms (source: dti)](image_url)

*Graph 4.6.5*, compares the current British construction fragmentation with the Spanish one. It can be observed, that nowadays the UK is going for an industry with larger firms, which are supposed to be more able to manage the supply chain.
Graph 4.6.5 UK and Spain construction structure in 2002 (source: dti & M. de Fomento)

**Over expenses & inefficiencies**

The Latham report: “Trusting the Team”, showed the survey “Strategies for the European Construction Industry: A Programme for Change” (W. S. Atkins) in order to point out that the sector was suffering from over expenditures, waste and inefficiencies. *Graph 4.6.6*, shows how in 1990 UK’s costs were much bigger than its European neighbours’ costs.

Graph 4.6.6 Construction costs at PPP (source: W. S. Atkins’ survey)
Graph 4.6.7, reveals that the Spanish construction sector has cheaper input costs (with the exception of structural steel per tone) in comparison with the UK industry, which is more on the average.

![Graph 4.6.7](image)

**Material supply prices 2002**

Graph 4.6.8 is not very conclusive; the output costs of both countries are quite similar and quite normal in comparison with the rest of the countries in the sample. In addition, it is not possible to find inefficiencies by looking at this graph, because land prices have a big effect in the final output costs.

![Graph 4.6.8](image)

**Example of building costs 2002**

Graph 4.6.8 Examples of building costs 2002 (Source: dti)
Client’s satisfaction

A survey carried out by Dr Bernard Rimmer referenced in the Latham report, compared the performance of the car industry with the construction industry. It is interesting to notice how the construction performance was underachieving client’s expectancy, especially in the commercial and industrial sector. Therefore, if the construction’s client is dissatisfied, then the construction industry has a problem.

![Comparison with the car industry]

Graph 4.6.9 Performance comparison (source: Latham report)

Health and safety

The Health and safety problems are spread all over the world, and for the time being, governments from developed countries are really concerned about them. Difficulties to tackle such problems in the UK, even after the (Construction Design Management) CDM regulations of 1994, can be identified in the graph 4.6.8. It has been only a small a reduction in the number of injuries since 1998, maybe as a result of the introduction of the “Respect for People” programme.
4.7 International construction demands

The demand for radical improvements in the UK’s construction sector is not unique. It is a demand echoed by the construction industries across the developed world. Some examples of this dissatisfaction all over the world are:

- “Construction and Building Sub-committee Report” (USA, 1995).
- “Communication on the competitiveness of the European Construction Industry” (EU, 1997).
- “Construction 21 Report” (Singapore, 1999).

The Spanish demand: “Augmentar la competitivitat de la construcció catalana: una exigència i una reponsabilitat compartida” (October 1999), it is based on the above European communication, but it will be explained later.

The construction sector problematic situation mentioned in the three previous reports is very similar to the one reported by both Latham’s and Egan’s reports. These similarities can be read in the following table:
The construction sector in 1995 turned over 850 billion $, which represented the 13% of the GDP. The quality of the facilities was said to be vital for the competitiveness of the whole industry.

The construction sector in 1999 represented the 9.1% of the GDP. An improvement in the construction industry would boost the competitiveness and productivity of other sectors.

The construction sector represents about the 10% of the GDP. The construction sector is much related with the environment, because of its huge use of raw materials and has big effects on the competitiveness of other industrial sectors, because it delivers its infrastructure, buildings and premises.

<table>
<thead>
<tr>
<th>Fragmentation of the industry.</th>
<th>The use of integrated production systems in the construction process.</th>
<th>A new construction process with an integration of the supply chain and a proper risk management.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough attention to whole life costs.</td>
<td>Bad predictions of the maintenance and other running costs.</td>
<td>Use of a whole life cycle cost criteria.</td>
</tr>
<tr>
<td>Increasing scarcity of skilled labour.</td>
<td>The necessity to become a knowledge industry which compares well with other technologically advanced industries.</td>
<td>More training and R&amp;D.</td>
</tr>
<tr>
<td>Over expenditures and delays.</td>
<td>Inefficiency and waste occurred at all stages of the design and construction process.</td>
<td>Time and cost reduction.</td>
</tr>
<tr>
<td>Adversarial relationships.</td>
<td>Adversarial relationships.</td>
<td>Teamworking and cooperation between all the parties.</td>
</tr>
<tr>
<td>Inadequate involvement of the owner.</td>
<td></td>
<td>The removal of low price selection criteria.</td>
</tr>
<tr>
<td>High number of work illnesses and injuries.</td>
<td>Bad reputation; dirty, dangerous…</td>
<td>An employment conditions improvement.</td>
</tr>
<tr>
<td>Inflexible and non functional projects that do not enable to enhance the productivity of future occupants.</td>
<td>The industry recognised the end users’ and clients’ demands; and also was delivering products with poor functionality.</td>
<td>To improve detailing and technical specifications.</td>
</tr>
</tbody>
</table>

**Table 4.7.1 international construction demands**

### 4.8 Spanish’s background

This section is mainly based on the information compiled from the proposal of the “Gabinet d’Estudis Economics” called “Anàlisi del procés de contractació i de execució d’obres d’edificació a Catalunya” *(October 2000)*, from the questionnaire sent to the “Direcció General de Carreteres del Consell insular de Mallorca’’s” database and from the interview conducted to Ilm. Sr. Gonzalo Aguiar Gonzàlez.

Once analysed these information, it can be concluded that the features that characterise the Spanish construction sector are:
At the whole industry

- The construction sector has a bad reputation; especially for the existence of non qualified firms operating throughout the industry, which benefits from payments delays, such companies have the possibility to undertake projects that are too big to be carried out by them.
- An abuse of subcontracting that does not permit to understand properly the requirements of the clients and makes it difficult the management and integration of the supply chain.
- Adversarial attitudes throughout the industry that diminishes the productivity and the quality offered. Part of this adversarial attitude is caused mainly by the low and unreliable contractor’s profits.
- The industry must accept that experience, seize and resources are important considerations to take into account when undertaking a project.
- The industry is unsatisfied by the public authorities’ selection system. The industry demands that both the criteria chosen for the selection process and the subsequent results should be published. Moreover, technical issues should be valued more.
- The industry also wants to remove these abnormally low tenders and its catastrophic results.
- There exists an acute skill shortage and the industry can not attract new workforce.
- The industry should understand better clients’ needs and improve the quality service.
- There exists segregation between the design and the construction
- A lack of trust in long term relationships.
- The new L.O.E enables to clarify responsibilities and enhance quality.
By parties

<table>
<thead>
<tr>
<th>Contractors</th>
<th>Consultants</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>A pessimistic opinion of the current situation of the construction sector.</td>
<td>They have a slightly more optimistic opinion of the current situation of the construction sector.</td>
<td>Both private and public clients have an optimistic view of the construction sector.</td>
</tr>
<tr>
<td>Strongly affected by the adversarial attitudes inside the sector.</td>
<td>The industry agrees that consultants should detail more the projects, although they disagree at this point.</td>
<td>They would like to have more information about the firms that work in the sector.</td>
</tr>
<tr>
<td>They affirm that their benefits are low and unreliable.</td>
<td>In order to tackle the skill shortage they think that new specific professionals’ qualifications need to be launched.</td>
<td>They agree that the industry should deliver better quality products and a better after sale service, but they do not agree as much in the necessity of a bigger range of products or the possibility to choose final details.</td>
</tr>
<tr>
<td>They demand the government to stabilize the demand.</td>
<td>They think that there is an abuse of subcontracting.</td>
<td>They think that segregation between design and construction should be removed.</td>
</tr>
<tr>
<td>They believe that long life learning is the most suitable solution to tackle the skill shortage.</td>
<td></td>
<td>They admit that the regulation is sometimes inflexible and brings out delays and over expenses.</td>
</tr>
<tr>
<td>The industry thinks that they should study better the projects they bid.</td>
<td></td>
<td>The public authorities are satisfied with the bidding system.</td>
</tr>
<tr>
<td>They support the use of subcontracting as a basic tool to overcome the inconsistent workload.</td>
<td></td>
<td>They accept they should valuate more technical issues, but they disagree to valuate them more than economical issues.</td>
</tr>
</tbody>
</table>

Table 4.8.1 Spanish parties’ stance