Cooperation and Beyond

COOPERATION AND CONTINUOUS IMPROVEMENT - the Key to Successful Construction

by JOHN CARLISLE PARTNERSHIPS

It is important to understand the recent history of construction in Britain in order to put the case for “partnering” into perspective

- The construction industry and its suppliers currently employ 15% of the workforce in Britain; including many who have limited employment skills.

- The construction industry alone accounts for more than <u>50%</u> of fixed capital investment in the UK

In addition, the wealth of engineering and construction talent employed in this industry is enormous. It remains one of the great assets of this country. But, it has been tearing itself apart for nearly twenty years. For example, fewer than 80% of projects are finished to time or budget. Therefore, in 1995, it was estimated that in a typical year there were over a thousand writs issued, claims of £500,000,000 - of which 85% are settled out of court. In addition there is a current trade deficit of £1.8 billion in the import of construction materials and components alone. The strength of the pound has now increased this.

THE NEED FOR CHANGE

In the last twenty years the industry has developed a conflict-ridden culture revolving around competitive tendering (aided and abetted by the last Conservative government) and adversarial working relationships up and down the supply chain.
The result has been catastrophic. There has been an average of a 30% over-run on public works, hundreds of firms have closed, and half a million jobs lost in the five years up to 1996. Investors have seen construction projects as a bad risk; exemplified by the Channel Tunnel, the Jubilee Line and The Welsh rugby stadium.

The following diagram comparing the UK with Japan illustrates the problem.

1996	**Average Profit Margin**	**Cost of Conflict**	**Proportion of GDP**
U.K.	1%	7%	6%
Japan	7%	1%	20%

REASONS

One of the key issues was this preoccupation of clients with competition based on price, and the vast and costly infrastructure built around setting and meeting competitive tender bids. This one-sided view was so myopic that the industry largely missed major new developments in construction which were reducing costs regularly by 20% against benchmarked tender targets and delivering on time or even early.

The construction industry as a whole, busy with its internecine wars, had not picked up on the need for continuous process improvement or the need for cooperation, and so the companies drove themselves relentlessly down until they were no longer competitive as world players; or even the industry as an industrial sector in the UK.

Here are some European comparisons:

1. Engineering services time lost, in comparable projects: Sweden 20%
Germany 32%
Britain 40%

   These are all bad results; but Britain is the worst.

2. Range between best productivity and the average: Sweden
Germany 25%
Britain 43%

BY ADOPTING THE IDEOLOGY OF COMPETITION WE HAVE BECOME LESS COMPETITIVE. Sir John Egan of BAA has seen this quite clearly in construction, where he estimated two years ago that USA companies could do the work at 65% of the cost of British companies. What an indictment of both the industry and Government leadership philosophies of the time! Someone in the industry needs to do some fresh thinking, and it has to start with the client, who for far too long has sacrificed efficiency for the illusion of control.

The good news is: someone has been innovative; but it has not been the client, by and large. Neither has it been the really big construction companies, as was forecast, and which we challenged. Construction companies like Barhale, Morrisons, and Thermal Transfer, who have been working collaboratively for some years have a growing demand for their services. Symons and Llewellyns are also investing in a collaborative culture throughout their companies and their clients, and, like Barhale, are getting real pay-offs up and down their supply chain.

The key to all the above is that these companies are not the giants of the industry. They are the SMEs of the construction industry, who are less bureaucratic and hierarchical, and are therefore are more customer-focused and responsive. The bigger companies like Bovis, Tarmac, Laing, and latterly, Balfour Beatty, are making attempts to become more collaborative; but it is a very painful process, despite the sterling efforts of Sir Michael Latham and Sir John Egan. Some will simply not make it!

What is now needed is clients who will take the collaborative step themselves, recognise the economies of cooperation, and, with their knowledgeable partners, take the risks that will reap the joint benefits. Llewellyns, with their history of customer focus and experience of cooperation, is the ideal partner. But, will the clients and their bankers be prepared to change in the face of the pretty overwhelming evidence? Our experience is that the banker (private or government) still misunderstands the risk/relationship argument, and will try to push risk down the chain, i.e. stick and carrot, instead of trying to get the right relationship which will both help eliminate and mitigate risk.

However, below is a case study, which might begin to persuade them.

The Sainsbury's Case – Partnering in Construction.

Sainsbury's builds about 25 new supermarkets a year using Strategic Partnering, and is operating as a "second generation" partner.

BACKGROUND

In April 1994 Sainsbury's became involved in an intense price war with other Supermarkets. The financial return was too low and the Main Board wanted the costs of stores to be reduced significantly. Sainsbury's went through a downsizing process that it called Genesis. The Property Division reduced from 240 to 80 staff. In parallel to this Sainsbury's hit a new problem when the department of the Environment virtually stopped giving planning permission for out of town stores. Sainsbury's strategy for maintaining its share prices had been to increase the size of the sales area each year, but it had no existing planning approvals and no land bank. The decision was therefore made to extend the size of existing stores. This effectively involved more work per sq. ft. than when it built new stores, and Sainsbury's Property Division now had fewer staff to do it. These factors forced Sainsbury's to outsource more of its work, which in turn meant it needed to work more closely with its suppliers.

REDUCTION OF SUPPLY BASE

Due to these pressures, Sainsbury's decided to reduce its supplier base so it could use partnering with selected companies. The company accepted that it would require new project management skills. It also recognised that if it were to partner more its suppliers would get a greater continuity of work. In selecting partners, Sainsbury's concentrated on its long standing suppliers, as it knew their strengths and weaknesses. The process of reducing its supplier base resulted in the number of architects it used being reduced from 36 to six firms and its list of contractors fell from 32 to just three. The need for new management skills, however, resulted in the introduction of four new construction management firms to provide tough cost and time control systems.

INTERNAL PARTNERING

In line with reducing its supplier base, Sainsbury's realised it had to change the attitude of its own staff by adopting a TQM approach to change the culture. Staff were to be more flexible and out-going. The internal team also began to recognise why it needed to map its processes and to take out waste from the more bureaucratic systems; in other words internal partnering was encouraged.

EARLY PARTNERING

Following all the changes Sainsbury's had less backup internally for its project managers so it needed to be able to trust and partner more with outside contractors. A strategy document was presented to the Main Board based on one project where it had saved £1000,000 by getting the project team to cooperate in a joint search for savings. The document recommended that Sainsbury's changed the way it procured its buildings and partnering was put forward as the answer for the future. One of the reasons was that, although performance was improving at that time, it was variable. A model project was developed to make a 30% reduction in cost. Of the previous ten stores it had built the target costs for individual elements were achieved on about half the projects but only two projects were within overall model costs. The model produced a construction period of 28 weeks. Only two of the previous ten stores had achieved this, so Sainsbury's felt it needed to look for a new way of reliably delivering faster construction timeframes.

A TRIAL PROJECT

Sainsbury's carried out a trial partnering scheme at Ripley with design build contractors, Bowmer & Kirkland. This produced an excellent result by completing in 24 weeks against the 28 weeks target and meeting the model project's 30% cost reduction target. The working relationship between the Sainsbury's Project Manager and the design team novated to Bowmer & Kirkland proved to be successful. As a result the Main Board agreed that partnering was the way forward and Charles Johnston and Alan Saunders of Sainsbury's Property Division were commissioned to implement partnering across all the company's schemes.

CLIMBING THE LEARNING CURVE

Sainsbury's Property Department, instead of adopting an independent approach, collaborated with the Reading Construction Forum in the production of *Trusting The Team*. This breakthrough report which impacted the entire construction industry, became the Property Department's policy document for partnering. By mid 1995 Sainsbury's had reduced its supplier base and could now provide continuity of work for its partners. The company no longer used competitive tendering to select suppliers and it worked with everyone on an open book basis. Sainsbury's had by now built up an extensive knowledge of site management costs on items such as site huts, management personnel, resident engineers and attendance on specialist contractors. It also tended to do work with people it trusted and had worked with before, and was generally confident that it was using 'good' people. This enabled the company to develop short preferred lists of consultants, contractors and specialists and keep project teams together to provide continuity.

THE SAVACENTRE, LEEDS and JOHN CARLISLE PARTNERSHIPS 'involvement

In January 1996 Sainsbury's held its first partnering workshop on the Savacentre project in Leeds using the John Carlisle Partnerships as independent facilitators. The main aim of this project was to reduce costs - time was not of primary importance. The majority of the packages were negotiated and value engineering was used extensively. This resulted in a saving of £750, 000. The team who worked on the project felt that the first Partnering workshop contributed towards the success of the project, in that it brought everyone together early on and encouraged them to be totally open with each other. This instilled trust developed at the workshop was enhanced by the store success.

INTERNAL TRAINING WITHIN SAINSBURY'S

Sainsbury's then began using formal partnering workshops on all projects and has invested significantly in training for its own staff in developing the appropriate partnering attitudes. Due to the success of the Leeds project, Sainsbury's employed the John Carlisle Partnerships to help it get the Partnering message across its own organisation. Workshops were held with Project Managers and Senior Managers. This is still continuing and its successfully bringing internal people on board. Charles Johnston and Alan Saunders are also proactive in preaching the message of Partnering throughout the company.

BENEFITS ACHIEVED

Sainsbury's has reduced costs on mainstream stores by 35% and reduced typical construction timeframes from 42 weeks to 15. Quality levels have also improved. In 1990 the company estimated it was 70% of the way to delivering zero defects at handover; by 1998 this was up to 80%.

Currently Partnering enables Sainsbury's to produce its mainstream superstores efficiently and also to select projects for new initiatives aimed at reducing costs and time. The Ecostore is one example and has been used to develop new technologies and open up a new low cost retail market. The Ecostore was built very cost effectively - 48% less than the base cost model, equivalent to a 32% reduction on the current costs of Sainsbury's normal superstores. Sainsbury's specialists contractors are all encouraged to improve their technologies and are prepared to do so at their own cost because of the benefit of repeat business. IT initiatives to improve the cost management system are also in hand which will allow project teams to access information from other projects. This avoids people 're-inventing the wheel' - developing expensive answers when better or cheaper ones already exist. Sainsbury's staff are setting their own performance goals as part of its Total Quality approach. Tough and steadily improving costs, time and quality targets have been established and new benchmarks are being developed jointly with BAA. Both companies are also looking at sharing feedback and finding common solutions.

The Property Division intends to continue the work on Partnering by extending its Total Quality training programme to its main contractors and consultants.

EXAMPLE

Here is a typical process of radical improvement through cooperation and early involvement (See Figure 1 at the last page)

THE ECOSTORE

EVALUATION

Schal was approached as Construction Management Partners in September 1996 and invited to attend a workshop with other design consultants to discuss ideas for reducing the construction costs of a new concept store - the Ecostore - that was to be designed from scratch with a clean brief. Schal was selected because it knew Sainsbury's business well, was committed to Partnering and had proven value engineering skills. Sainsbury's was concerned about taking a big risk with its image as it was targeting to cut the construction costs dramatically. Therefore a lot of careful up-front thinking and planning was required. Various ideas were floated at the workshop and Schal undertook to develop and cost these ideas for a follow-up workshop. At this point a number of specialist's contractors were involved in the process to aid development of new ideas.

CONCEPTUAL DESIGN

At the follow up workshop the principle of the new Ecostore was accepted and the team was given the task of developing the ideas for presentation to the Sainsbury's Board. Throughout the autumn of 1996 the new concept evolved and was then drawn up and priced. The outline concept was presented to the Board and consequently received approval. The team was then tasked with developing it further with a view to getting approval to build a trail store at Leigh. Part of this process involved the setting up of task forces to look at all aspects of the new concept.

Schal was represented at all the task force meetings and asked to bring together all the findings. During this period many innovations were explored, each resulting in dramatic cost savings. These included the use of a new steel frame, a new floor system to replace the traditional terrazzo tiles, a different cladding system and an entirely new interior. The design was put to Sainsbury's Main Board and the overall concept and budget was approved.

DETAILED DESIGN

A Trial Project

In January 1997 full Board approval was granted for the trial store to be constructed in Leigh. The team then began to further develop the design to fit the site. Early designs were judged too radical and so the budget was increased to ensure that the quality would match Sainsbury's image. In February three proposals were presented to the Board, which were scored in terms of cost, appearance, practicality and buildability. One of these was accepted and a new cost target was agreed. This represented just more than a 30% reduction in costs compared with Sainsbury's latest normal superstore. After further research and development, including construction mock up displays, lighting and checkouts, the scheme was fully endorsed, and work commenced on site in June 1997.

Partnering Workshop

A two-day workshop was designed with John Carlisle Partnerships and set up for the project just before commencement on site. This enabled the design team and contractors to meet, discuss and understand the concept of Partnering within the Sainsbury's framework. The workshop also helped to engender a spirit of openness and trust. The construction phase ran fairly smoothly as all the planning and development had been carried out up-front, and most problems anticipated.

The Partnering Charter

At the workshop the team completed a Partnering Charter. An excerpt follows;

We, as a team are committed within a partnering framework to deliver a quality, new concept supermarket to meet the expectations of all our customers.

We will achieve this goal through teamwork within a trusting and open environment borne out of communication, cooperation and co-ordination.

Our objectives:

- *Improve further relationships*
- *Success of concept*
- *Profitability for all concerned*
- *Complete on time, within budget and safely*
- *Defects free*
- *Right first time*
- *Establish project/partnering benchmark*
- *Continuous improvement*

This provided the relationship benchmark which would govern the cooperative behaviours, and pave the way for continuous improvement and innovation**.**

EXECUTION

There were innovations everywhere; but especially on the floor, cladding and interior builds, where visually and operationally the improvements were profound, and where savings of 40%, 29% and 32% were realised.

The building, although different from traditional Sainsbury's stores, is aesthetically pleasing. With construction time down 16 weeks and costs savings to 30%, the model was surpassed. Other benefits included a reduction in operational costs and a high potential for future work for the entire team and excellent advertisement for the philosophy of cooperation and continuous improvement.

SUMMARY

We hope that the industry and their financiers will find this case study so compelling that their leaders will not be able to ignore the need for cooperation.

John Carlisle

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THE OPPORTUNITY CURVE Figure 1