



Demonstrating Excellence

An Evolution of the Programme of Demonstrations



**CONSTRUCTING
EXCELLENCE**

Innovation ■ Best Practice ■ Productivity



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Demonstrating Excellence

An Evolution of the Programme of Demonstrations

The Rethinking Construction demonstrations programme was originally set up in 1998 (initially as an M4I, the Movement for Innovation programme, then followed by The Housing Forum in 1999 and LGTF, the Local Government Task Force in 2000), following a call in the 'Rethinking Construction' report for demonstration projects representing £500 million in construction costs to lead a movement for radical change in the construction industry.

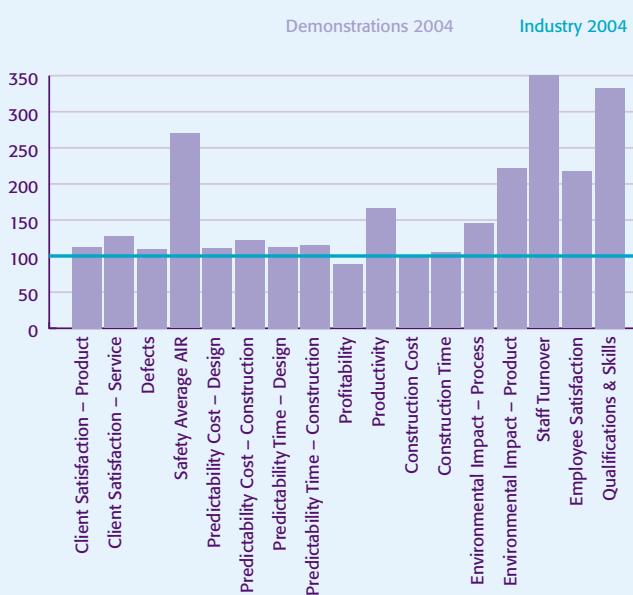
By March 2004, 414 projects representing a total construction value of eight billion pounds had been part of this programme across the whole of the UK and there was a total of 151 active projects. All demonstrations are required to use the industry headline Key Performance Indicators (KPIs) in order to evaluate their progress against the performance of the industry as a whole.

This report provides a synopsis of the evolution of the demonstrations programme. It highlights the successes to date of demonstrating the future for the rest of the industry and, through the eyes of the industry leaders, it provides a glimpse of the future direction for this programme. (A number of progress reports on the demonstrations programme have been published during the five year period, see page 24.)

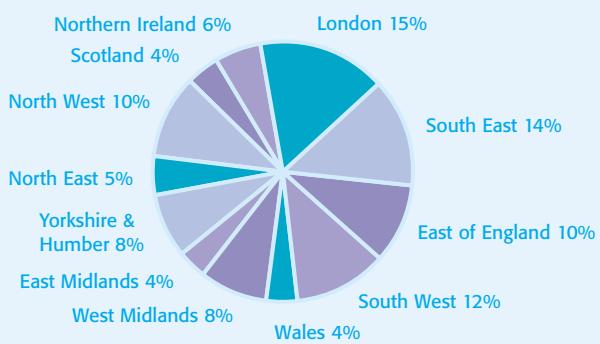
2004 KPI Results

Demonstrations compared to the industry

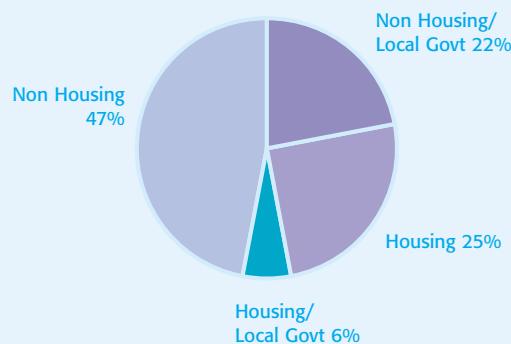
NB Over 100 is a positive score



Distribution of Demonstrations by Region, March 2004



Distribution of Demonstrations by Sector, March 2004



There is nothing in the world that some man cannot make a little worse and sell a little cheaper, and he who considers price only is that man's lawful prey.

John Ruskin, 1819-1900

Introduction

Through the programme of demonstrations, Constructing Excellence is proving that construction projects procured and carried out through integrated techniques achieve:

- Better quality
- Fewer accidents
- Increased productivity
- A staff turnover that is three times better than the industry
- A more qualified and highly satisfied work force
- Completion in less time than the rest of the industry which is still dominated by those using traditional techniques.

In spite of this evidence many construction clients continue to favour the traditional method of segregated teams. This is an inefficient way of working.

Although profitability on demonstrations has remained consistent, there still remains a challenge to the industry to turn competitive advantage into improved profitability. However it is clear from the figures that many organisations are investing in the long-term and also many are involved in the early stages of frame-work agreements, which requires up-front investment.

- Construction, by its very nature is reliant upon teamwork – many different talents and skills coming together to provide a service.
- Traditionally these teams of experts have operated in segregated silos and have only received essential project information shortly before they are required at the 'coal face'.

- Teamwork requires every member to understand their objective and where they fit into the overall strategy.

- Greater collaboration also encourages innovation. The evolution of the demonstration programme has been one of continually increased and developed team integration further down the supply chain and over longer periods of time.

Traditional Construction Procurement

Traditional construction procurement is the process by which the majority of projects have been delivered in the past. The process involves a client approaching a designer to draw up project plans. These plans are then passed to individual consultants, contractors, suppliers and sub-contractors to gain cost separate estimates. The lowest estimates are then usually accepted. This results in the following:

- Minimal integration of the project team; activities are segregated and this makes the process disjointed.
- Solely price-based tendering establishes an adversarial relationship with both client and contractor defending their respective positions, which leads to a neglect of focus on the quality of the end product.
- In turn, this poor communication between the team and defensive protection of respective positions can lead to increased costs and time, and as a result very low client expectations.

In today's construction environment the client who is advised to accept the lowest price tender is being given poor guidance, and often pays more in the end.

Early Collaboration – Design and Build

Design and Build contracts evolved to overcome some of the problems of traditional procurement. This involved collaboration between the construction team along part of the supply chain (for example the architect, cost consultant and contractor). In this scenario, one party (usually the principal contractor) will manage the design and cost consultants on behalf of the client, thus integrating the cost, design and construction processes. Early integration demonstrations saw benefits from the design and build process as follows:

1026	
St Quintin Park Estate, North Kensington	
October 1999 – December 2002	
Team: William Sutton Trust, Durkan Ltd	
Key success factors:	
<ul style="list-style-type: none">■ The construction phase of the project completed 9% sooner than originally predicted■ No reportable accidents	
How they did it:	
<ul style="list-style-type: none">■ A decision was taken to partner with the contractor who had just successfully completed the latest phase of modernisation, Durkan Ltd■ A design and build solution was selected so that all the existing consultants would be employed through the contractor to engineer savings with the exception of the quantity surveyor who was retained as a cost advisor■ The Clerk of Works role was omitted and Durkan carried out a self-certifying role■ The contract was executed under an un-amended JCT Design and Build contract but with no retention held. The zero retention was passed on to sub-contractors and the team reported that this generated some real savings	

- The rejection of lowest price tendering and the recognition of the need to address quality at the tender stage allowed contractors to work with designers at the design stage and were therefore able to contribute their expertise and comment on the practicality of the construction of the design team's design.
- This approach reduced the chance of an adversarial relationship generated by increasing costs and over running timetables, often the result of late design changes.
- Better communication and understanding between client, contractor and consultant improved the quality of the end-product and the clients' satisfaction – the result of the team working towards the same aim rather than defending their own positions.
- In addition the collaboration between designer and contractor at design stage facilitated the work of the Planning Supervisor in co-ordinating the health and safety aspects of design and construction. Design and build demonstrations saw improvements in safety standards.

The first demonstration KPI results in 2000 from Movement for Innovation demonstrations (i.e. non housing) showed that demonstrations were twice as safe as the industry average. This achievement has been maintained.

Project Partnering – A more integrated team

Project partnering is the term given to the relationship of two or more members of the principal team coming together on a single project. This goes beyond design and build by getting more members of the project team together, including client, contractor, sub-contractors and consultants, to work as a team at design stage. Partnering agreements are often entered into with collaborators agreeing to share associated risks as well as the benefits of cost savings. This results in the following:

- Demonstrations of project partnering found that increased collaboration of the supply chain provided more benefits than those resulting from the design and build process
- Improved communication between the team resulted in identifying difficulties earlier than with traditional procurement and in design and build contracts.
- Predictability of both cost and time improved as late design changes became less likely with specialist sub-contractors adding to the expertise of the main contractor at design stage.

The 2001 KPI results showed that in 2000, demonstrations outperformed the industry in:

- predictability in the time and cost of design
- predictability in the time and cost of construction

Tonbridge Police Station, demonstration no. 94, page 5

- Demonstration teams signed up to partnering charters and held regular partnering meetings that helped to solve issues as and when they arose on the project, so reducing the delays and associated costs of problem solving in the past.

Waterside Bridge, demonstration no. 311, page 7

94

Tonbridge Police Station

November 1996 – January 1998

Team: Gallaher, Kent County Constabulary, Kent Property Services, Denne Mechanical, Kingfisher, Swift Roofing Contracts, R&H Decorators, Vortec, Gilbert & Stamper, Denne Building Services, Kent County Council

Key success factors:

- Successfully procured within the £5.7million budget
- Delivered in 62 weeks – 12 weeks fewer than the original programme
- Winner of the 'Built in Quality' award made by Tonbridge and Malling Borough Building Control

How they did it:

- Initial partnering between Kent Property Services and Kent Police for design and procurement
- Main contractor, Wates, selected by the two partners after proposals, interviewing and short-listing
- Sub-contractors Denne Building Services and Gilbert and Stamper (electrical sub-contractor) became the fourth and fifth partners, which enabled much of the commissioning of specialist Police systems to be done during construction

At the time, Bill Wallis of Wates Construction commented that, "partnering is getting a quality job quicker, safer, cheaper and right first time."





- Partnering teams began to benchmark their own performance, for example the client rating the contractor's performance and vice versa; this highlighted any problems in the team early on in the project process.

Longbarrow Allotments, demonstration no. 1034, page 7

- Partnering agreements began to include provision for sharing risk/reward, thus incentivising the team to resolve problems together, therefore moving even further away from the traditional adversarial relationship.

Christchurch School, demonstration no. 165, page 7

- This also encouraged innovation with financial benefits being awarded to the partner who suggested it. Ideas such as using an alternative construction system, e.g. off-site components, or new technology systems came to the drawing board where they may not have otherwise.

GLA Headquarters, demonstration no. 219, page 8

- Likewise, the safety improvements seen from the early design and build projects were enhanced on project partnering demonstrations with the whole team working together and pooling their expertise to make sites safer.
- The combination of expertise and general commitment from the whole team to making the project successful led to an increase in client satisfaction and a better quality product.
- This culture change and team collaboration also extended beyond client satisfaction to the end-user with, for example, tenants on housing projects being involved in the partnering team and in contractor appointments.

- This tenant/end-user involvement also led to a better quality end-product. Some project partnered demonstrations focused on benchmarking this increase in customer satisfaction.

Trowbridge, demonstration no. 1094, page 8

- The growing skills shortage also highlighted the importance of a 'respect for people' focus, particularly in on-site conditions, and an increasing focus on the recruitment and retention of staff.
- The ethos of partnering brought with it the need to embrace fundamental culture change. In some cases individual team members have had to be moved off the project because they were not able to change and commit to the partnering process.
- Whereas the majority of team members on partnering projects have commented that they found work on partnering projects more enjoyable than other projects they had worked on in the past.

In a survey of The Housing Forum demonstrations conducted by the Science and Technology Policy Research Unit at the University of Sussex (2001), when asked 'How did this project differ from other projects you have worked on?' 81% of respondents said that it was 'More Fun'.

Woolgate Exchange, demonstration no. 141, page 8

Waterside Foot and Cycle Bridge, Coleraine, Northern Ireland

November 2000 – December 2001

Team: Department for Regional Development Roads Service, Graham Construction, Doran Consulting, Central Government



311

Key success factor:

- Bridge was completed six weeks ahead of programme

How they did it:

- Project nearly failed at tender stage because of the complex risks in financing and building it
- The project was tendered through the ICE 5th edition contract and initially the client, Department for Regional Development Roads Service, wanted to rescind clause 12 that shifts all risk for conditions that the contractor, Graham Construction, could not reasonably foresee onto the client
- After the contract had been signed, the client, contractor and consultant (Doran Consulting) decided that a partnering ethos was the only way to manage the risks involved on the project, and got the steel work and river works contractors onto the core team
- The partners identified 38 issues and three teams to manage these risks
- Issues were reviewed weekly by the site agent and resident engineer and they monitored how works packages would be affected

Christchurch Junior School Replacement

June 2000 – July 2001

Team: Dorset County Council, Christchurch Junior School, Building Management

165

Key success factors:

- School was on average £85.50 cheaper per square metre than comparable schools
- Was delivered on time and within budget

How they did it:

- A partnering framework delivered through a two stage tendering process with contractor selection based on: quality and price; guaranteed maximum price; incentivisation based around target cost and value engineering
- Sub-contractor appointment was agreed by the whole team
- The team shared offices, email and a single project database



Longbarrow Allotments, Bournemouth

April 2000 – January 2001

1034

Team: Western Challenge Housing Association, Bournemouth Borough Council, Mansell, Trowers and Hammins, McNaughts, Anthony Ward Partnership, PH Warr and Partners, Tenant Group

Key success factor:

- Architect and contractor changed process and team reporting structures, which were highlighted as weaknesses during the appraisal process

How they did it:

- Western Challenge Housing Association wanted to measure their satisfaction as a client and included themselves in the appraisal process
- Key members of the team were asked to self appraise, with agreement from the team on how they had performed, in monthly meetings on a one to ten scale
- Measuring in this way identified poor performers and highlighted areas for improvement on subsequent projects





219

Greater London Authority Headquarters

June 2000 – April 2002

Team: Greater London Authority, Ove Arup, CIT, Mace, Foster and Partners, Warner Land Surveyors

Key success factors:

- The innovative structure is a series of tubular steel columns that change direction at every floor level
- Assembled at the same rate as a conventional rectangular frame
- No cost increases or delays caused by dimensional errors

How they did it:

- Warner Land Surveyors used a high-order 3D spatial instrument system known as Monmos that was originally developed by Japanese instrument maker Sokkia to control geometrical accuracy in supertanker production



1094

Physical & Learning Disabilities Project, Trowbridge

October 2000 – June 2001

Eight-bedroom home for people with physical and learning disabilities.

Team: West Wiltshire Housing Society, Russell Construction, Milbury Care Services

Key success factors:

- Excellent client satisfaction
- Zero defects

How they did it:

- Focus on the end-user
- The partnering team included a representative from Milbury Care Services who were aware of the actual needs of the people who would occupy the home and could therefore advise and give constructive solutions to the team on a number of issues. For example some of the specialist services that were to be provided at high cost were omitted because the occupants would not have used them



141

Woolgate Exchange

July 1998 – July 2000

Team: West London Borough, Scotts of Thrapston, SBFI, Phoenix Interiors, Interior Plc, Gensler International, PMI, Hotchkiss, E Poole

Key success factor:

- A recorded 40% fewer worker inductions than a similar sized project

How they did it:

- The use of portacabins was abandoned for fit-out team offices – after pre-planning the needs of all suppliers, they designed and set up a fully serviced, bespoke office where the consultants and contractors could work as an integrated team
- A canteen, run to high street restaurant standards and office-quality toilet, changing and shower facilities were established in a central location that was accessible to everyone, regardless of their role and status
- Interior design of the offices encouraged an open-door policy, and equality amongst team members

Strategic Partnering Alliances

Strategic Partnering Alliances take project partnering further by involving the same partnering team on a number or series of projects, or for a specified period of time for repeat works (e.g. in the case of a rolling programme of maintenance). This provides a framework for continuous improvement. Strategic Partnering embeds the partnering ethos as the normal working practice rather than a cutting-edge innovation; in fact it is seen as the precursor to achieving such innovation. The characteristics and benefits of this form of partnering are:

- It encourages a "long-term" philosophy and perspective in the industry.
- It increases the benefits already gained by the demonstrators of project partnering.
- Further cost reductions are seen in strategic partnering alliances through the additional investment from value management over a longer period, leading to the increased potential for savings.
- Post occupancy evaluations have also been used to assess the effectiveness of the whole project through the quality of the end-product.
- The benefit of increased innovation from that seen in project partnering has led to the increased use of IT in strategic partnering projects. Teams are using the Internet to access design plans, shared files, databases, etc.
- Long-term partnering arrangements provide a continuity of work that allows organisations to further invest in training, drawing labour from the local community, and in other respect for people issues.

Tanfield School, demonstration no. 246, page 10

- Having the same team and recording lessons learnt from previous projects has led to company policies on, as well as measures to promote, lean construction, health and safety and the reduction of all forms of waste.
- The drive for continuous improvement by the same partnering team has been achieved by the demonstrators largely through an increased use of toolkits such as Design Quality Indicators (DQIs). If these are used from project concept to the eventual use of the product, they highlight what each stakeholder needs from the building and then how effectively the end result has addressed those specific needs.

Mill House, demonstration no. 388, page 11

Portsmouth City Council Gas Central Heating

Partnership, demonstration no. 1116, page 11

- Teams are working as "virtual organisations", sharing offices and facilities which reduces administration costs and increases efficiency.
- Demonstrations of sustainability are focusing on protecting the natural environment and minimising their consumption of energy in embodied construction costs and in costs-in-use thereafter.

Tanfield Comprehensive School

January 2001 – July 2001

Team: Durham County Council, Shepherd Construction, DTA, Ian Carewell Associates

Key success factor:

- Value engineering led to 20% being cut off the target cost and as a result another four classrooms, a staff room and a library were renovated and the heating system was improved.

How they did it:

- In value engineering workshops with key design personnel, the construction partners and specialist trade contractors identified potential savings which led to the following:
 - £15k saved by repairing window surrounds with stainless steel anchors instead of removing and renewing damaged stone
 - £10k saved by use of a two-pack epoxy stone repair technique instead of new sandstone
 - £27k saved by reusing some existing equipment that would achieve the specification over the desired life, such as luminaires, distribution systems and main pipe runs

In the 2003 KPI results, demonstrations achieved over twice the industry average for Environmental Impact on the Product, which measures how satisfied the client was that environmental impacts were taken into account in the finished product; and one and a half times the industry average for Environmental Impact on the Process, which measures how satisfied the client was that the environmental impacts were controlled during the construction phase.

- More recent demonstrators are using master planning to achieve community sustainability by creating environments where people can live and work, thereby generating wealth for the communities regenerated or created.

Imperial Wharf, demonstration no. 1109, page 11

- Large inner city regeneration projects of existing housing stock are a current challenge for local authorities, Arms Length Management Organisations, Large Scale Voluntary Stock Transfers and housing PFI s. Strategic partnering is enabling them to train the local community to regenerate their own communities.

Walsall Housing Group, demonstration no. 1195, page 12

- PFI projects, because of their long-term perspective and the responsibility of the contractor for their maintenance over a 30 year period, provide an ideal opportunity for the industry to benefit from strategic partnerships, once the contractor has been selected by the client.

GW Earthwork and Structures, demonstration no. 1172, page 13, Drumglass School, demonstration no. 150, page 12

Mill House, Surrey Place

June 2002 – November 2003

Team: Geoffrey A Barnett & Associates, Clarke Nicholls Marcel, Snashall Steel Fabrication, Co-ordinated Services Ltd, Alumet Systems Ltd, Business Engineering Group, Howard George Associates, Marchgale

Key success factor:

- Mill House was used as a trailblazing project for the DQI's. A dedicated researcher has used the data from the DQI process, KPIs and other analytical tools to develop a more informed profile of the project team and its output.

How they did it:

- The Focus Group of the Mill House team (the Client, Consultants and Contractor) used a process called Selecting the Team (STT) to procure Specialists to the Project Team. STT is a tender evaluation tool developed by the Business Engineering Group at the University of Southampton. STT identifies the objectives of its user and attempts to find a best fit for those criteria
- Working in collaboration with the CIC it has been suggested to them that the DQI's lend themselves well to the STT process as a quick and simple method of eliciting a client's or core group's opinion of several design issues at the start of the job

Portsmouth City Council Gas Central Heating Partnership ongoing

1116

Team: Portsmouth City Council, United House,

Key success factor:

- Long-term refurbishment contract between United House and Portsmouth City Council provided United House with continuity of work
- Local community members were recruited for permanent work.

How they did it:

- An alliance with a local training provider was set up drawing people from the local community
- Portsmouth City Council provided an empty property for training and United House support the costs of training
- The training approach was also recognised for government support

Two trainees now work full-time for United House.



Imperial Wharf, Fulham, Stage 1

1109

May 2000 – May 2006

Team: St George, Family Housing Association, Acton Housing Association, Ujima Housing Association, William Sutton Trust

Key success factors:

- Approximately 5000 people are estimated to live in Imperial Wharf and the development is creating more than 1000 permanent jobs through the new businesses, offices, leisure, shopping, restaurant, café life and community uses
- The development will make a significant contribution to resolving the skills shortage in the area.

How they did it:

- St George has set up training programmes to meet the future needs of the industry to ensure maximum access to long-term employment
- They are providing a number of subsidised business units and are committed to ensuring that long-term jobs from this mixed use development are delivered beyond the physical construction of the project
- Therefore the social and economic benefits will be maximised and deliver long-term prospects to the local community



Drumglass High School, County Tyrone

October 1997 – August 2000

Team: Building Design Partnership, Mason Solicitors, Southern Education Library Board, H&J Martin, Equity Bank, Martin Facilities Management

Key success factor:

- Completed one year ahead of the other PFI projects launched in 1997
- This project is a showcase for what can be achieved when design drives the result

How they did it:

- Materials, finishes, plant and equipment were value engineered to give optimum low-maintenance – long-life
- Buildings were pre-wired for the next generation of IT facilities to be installed under the Classroom 2000 initiative. Principal teacher Derek Wilson said: "It was design-led. That's why we're a year ahead of the other schools."



Walsall Housing Group - Sustainable Training for Sustainable Communities

Ongoing

Team: Walsall Housing Group, Gavin Purchase Construction, Select Windows, Nationwide Windows, Graham Holmes Astraseal, Wates, Frank Haslam Milan, Superior Plumbing Installations, Octopus Electrical

Key success factors:

- Co-ordinated approach to training and the employment of local people.
- The ability to deliver bespoke training to meet contracting partners' specific needs related to Walsall Housing Group's major works programme and Contractors' wider contractual obligations.

How they did it:

- Walsall Housing Group (WHG) have established partnerships with eight Major Contractors working within the refurbishment programme
- All partners are contracted to ensure they employ local labour and are committed to working with WHG Skills Centre Training Agency to recruit and train local people, including non-traditional entrants to the construction industry
- Contractors all co-ordinate their training and apprentice recruitment requirements through the Agency



Conclusions

Organisations involved in the exemplars of the demonstration programme are taking the lessons learnt through project and process demonstrations and implementing them throughout their entire business to improve its performance, productivity and profitability.

In 2002, the demonstrations programme recognised the incremental learning from projects to themes within whole organisations with the production of the Waterloo Air Management study on Supply Chain Integration – The Why, What and How of partnering the supply chain, Waterloo Air Management, November 2001. Four further detailed case studies of themed changes within organisations have since been produced and are now published alongside this report, as follows:

- Costain, Building Awareness, The Educational Supply Chain
- Lovell, Investing for the Future
- Taylor Woodrow, Supply Chain Partnering, a case study demonstrating the why, what and how of strategic partnering in the supply chain
- Western Challenge, Partnering in Practice, a case study demonstrating the why, what and how of partnering

The organisations actively involved in the demonstrations programme, initially on a project basis and then through pan-organisational change are setting the standard for the rest of the industry to aspire to.

1172

Great Western Earthwork & Structures Partnering Arrangement (GWESPA)

April 2002 – March 2012

Team: Network Rail, Alfred McAlpine, TGP

Key success factors:

- Accident frequency rate of zero
- Target efficiencies over 10%

How they did it:

- Ten year partnering arrangement between Network Rail and Alfred McAlpine
- A dedicated integrated management team was set up comprising staff from both organisations on a 'best person for the job basis'
- There was commitment from both organisations to operate in a totally open book manner, setting up joint systems to share information and best practice
- The avoidance of man marking
- Planned works were undertaken on the basis of target costs with appropriate risk register agreed at design signoff stage (Form B)
- Actual costs were paid, and all pain or gain measured against the target costs are shared on a 50/50 basis
- Annual work banks were instructed from the programme office two years in advance to allow the development of designs
- Performance was measured against benchmarks and KPIs, the success of which determined the value of future work banks

Looking to the Future



The following quotes from industry leaders illustrate their visions for the future:

Constructing Excellence uses the successful demonstration programme as the catalyst for the implementation of innovative processes, strategic business improvement, advanced systems and state of the art technologies. We aim to demonstrate excellence by capturing knowledge that can be used to improve the long-term effectiveness, competitiveness and dynamics of a viable UK construction industry. Our vision is:

To identify best practice demonstration projects focused on the sustainable use of the constructed product over its whole life and in the context of community wealth creation.

Dennis Lenard, Chief Executive, Constructing Excellence

The programme of demonstrations has shown that integrating teams and managing the supply chain effectively can provide excellent results in raising productivity and driving down costs. Whilst frequent customers to the industry become familiar with construction practice and process – ‘one-off’ clients often find it difficult to acclimatise themselves given the sharp learning curve. It is for this reason that we need common pan-industry integration.

Pioneering companies are adopting the integration toolkit developed by the Strategic Forum for Construction and through the Constructing Excellence Demonstration Programme are showing real business benefits.

The demonstration programme will continue to promote integration and advance industry progress accordingly.

Peter Rogers, Chairman, Strategic Forum for Construction



Accelerating Change commits the industry to major improvements, not least on 'People Issues' so that we have an industry that respects its workers and provides decent working conditions. The best Demonstration Projects show the way forward to others. For instance, Skanska (Project 52) changed behaviour and reduced injuries by 50%. They developed a Site Safety Performance System applying the outcomes of some HSE behavioural research. Through an M4I cluster, another major contractor further developed this approach thus widening the application of best practice. This is Constructing Excellence at its best.



Kevin Myers, Chief Executive of Construction, The Health & Safety Executive



The Constructing Excellence Programme of demonstrations is providing evidence of a direct correlation between quality of design, increased performance and more efficient buildings. But this relationship requires significant investment in the workforce.

Two significant challenges that face the public sector are whole-life costing and sustainability. Both of these are challenging to deliver as they inevitably involve additional capital costs to secure long-term benefits and much current funding is based on historical lowest price tenders. This additional cost must be recognised and absorbed into the overall budget build-up if we are to build long-term efficient structures.

The future aspiration of the industry must be to encourage more young people to consider construction as a career. This can only be done if the industry is willing to address its poor image and safety record.

Tim Byles, Chairman, Local Government Task Force

ConstructionSkills is committed to working with Constructing Excellence to further spread this learning process and to develop people with the skills to make this best practice the mainstream of the future.

Peter Lobban, Chief Executive, CITB ConstructionSkills





The Constructing Excellence Demonstration programme has shown that the industry can deliver better. The theory has been put into practice. We have moved on from just having an intuitive feeling that we can deliver better whole-life-value, to the reality of actually having the evidence.

Demonstration projects have shown that the industry can deliver on time, within budget, to quality and with fewer defects, and all of this within a framework of improved health and safety performance. This fits totally with OGC's own Achieving Excellence in Construction Future Strategy agenda – which is delivering the best balance of quality and whole-life cost to meet user requirements.

John Oughton, Chief Executive, Office of Government Commerce

The Demonstration Programme has been a brilliant initiative for bottom-up innovation in the process of construction to provide for the industry's client a better quality of product alongside improved profitability and safe and healthy practice. It has clearly demonstrated that firms or teams engaged in the programme of best practice also do better and are more profitable.

This process needs greater regional emphasis to bring more small and medium-sized contractors and design professionals into the process.

As Chairman of the Construction Research and Innovation Strategy Panel (nCRISP) I see Constructing Excellence driving the immediate needs for business, process and product improvement especially at regional and national level. nCRISP can then work with Constructing Excellence in stimulating medium and long-term opportunities for industry collaborative RD&I and engage in learning from other industries and from overseas practice.

Michael Dickson, Chair, nCRISP



The success of the demonstration programme shows how proud people are of their successes, and how willing they are to share the lessons from these with others. Sadly, too few manufacturers and suppliers initially recognised the important role they had to play in these projects.

How things have changed. The recent publication – Building Success – Lessons from Manufacturers and Suppliers who got it right – highlights ten demonstration projects from across the industry, and there were many more that were only omitted through lack of space. Not long ago we would have struggled to have three examples submitted for inclusion in such a publication. The demonstration concept really does work.

Michael Ankers, Chief Executive, The Construction Products Association

The Demonstrations programme has not only showcased how the construction industry is innovating and improving; it has provided case studies for more companies to learn from best practice in rethinking construction.

Stephen Lidgate, Chairman, The Housing Forum



The construction industry is awakening to the concept of value and how it delivers that value to customers and society. In this awakening it needs to see that value lies in the beneficial use of buildings over their lifetime to facilitate function, performance and sustainable impact on the environment. Better whole-life building value, delivered by more effective processes, are the keys to both the economic success of the country and its quality of life. The built environment sector is over 20% of GDP and provides over 75% of our fixed assets. The industry's contribution will be crucial.

Richard Saxon, Chairman, Be - Collaborating for the Built Environment, Making a difference

To be successful, the construction industry needs to do more than streamline working practice, drive out waste and exploit new technology. The labour intensive construction industry needs to provide a better working environment in order to recruit and retain the right men and women.

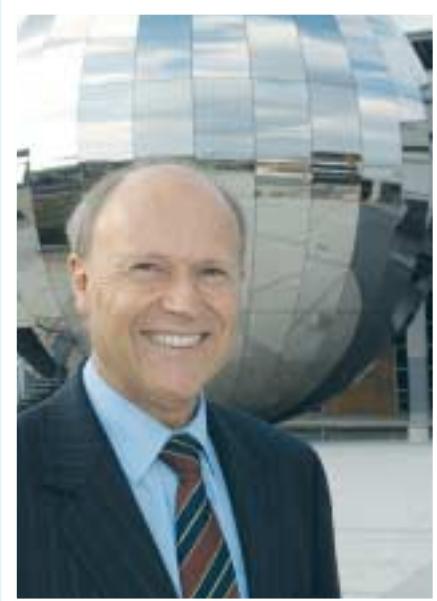
Constructing Excellence, in collaboration with ConstructionSkills and others, is committed to helping the industry bring about positive change. The programme of demonstration projects highlights the benefits of a culture of respect for the workforce. The programme also shows the wide range of skills and competencies needed to deliver successful projects, highlighting the tremendous range of career opportunities in the industry.

The challenge is to promote these opportunities more effectively and to provide a workplace that welcomes diversity. Construction faces strong competition from other sectors in recruiting the most competent. The industry also faces an increasingly diverse, demanding and informed customer base. For example, women represent 45% of the working population in the UK, yet only 3.5% of construction professionals and a mere 1% of crafts and trades are female. By respecting people, regardless of sex, race or religious belief, construction can make a real difference in our changing world.

Sandi Rhys-Jones OBE, RhysJones Consultants



Demonstrating Excellence – The way forward



Key Objective: promoting the exchange of knowledge through demonstrations to increase productivity and generate national wealth

As the Constructing Excellence Board member responsible for Demonstrating Excellence I am pleased to confirm that Demonstrations will remain a key part of the Constructing Excellence agenda.

This report confirms that the demonstrations programme has achieved substantial success over the past five years in providing knowledge on best practice, influencing change, providing feedback to the government and the industry and by encouraging best practice and cutting-edge innovation. I am committed to ensuring that Constructing Excellence will continue to build on this success and expand the programme to reflect changes that are already becoming evident. There will, for example, be more demonstration organisations – examples of culture change and the spread of best practice within organisations.

An emphasis of the demonstrations programme will be illustrating the importance of framework agreements and the need for improved partnerships between the public and private sectors. Also the regional network of demonstrations will continue to be a key focus of the programme to build upon the already thriving exchange of information at a regional level.

Constructing Excellence will also be celebrating the success of its demonstrations through high profile visits to sites and organisations and through showcasing exemplars at exhibitions both nationally and regionally.

The Best Practice Knowledge Board, chaired by myself, will build on the work of the National Strategy Panel and I would like to thank them on behalf of the organisation for their commitment over the past two years culminating in this excellent report.

Steve Hindley
Chairman and Chief Executive, The Midas Group
Chair Best Practice Knowledge Board
April 2004

Appendix 1: Key Events 1994 - 2004

'Constructing the Team', The Latham Report 1994

- The final report of the Government/Industry Review of procurement and contractual arrangements in the UK construction industry.
- Identified limitations and current inefficiencies.
- The report indicated partnering as a way forward to improve efficiency and profitability in the UK Construction Industry and suggested that 30% savings could be achieved through this method of procurement.

Construction (Design and Management) Regulations, 1994

- The CDM Regulations are aimed at improving the overall management and co-ordination of health, safety and welfare throughout all stages of a construction project to reduce the large number of serious and fatal accidents.

CRISP, December 1995

- CRISP was formed as a joint industry and Government panel to implement the Whole Industry Research Strategy (WIRS).
- CRISP was established with two main objectives:
 - To encourage competitiveness through the appropriate use of research and innovation
 - To identify the construction community's research and innovation priorities, and to promote these to the major funders

'Rethinking Construction', 1998

- The report of the Construction Task Force chaired by Sir John Egan advised the Deputy Prime Minister on the opportunities to improve the efficiency and quality of delivery of UK construction, to reinforce the impetus for change and to make the industry more responsive to customer needs.
- Identified five key drivers for change: committed leadership; a focus on the customer; integrated processes and teams; a quality driven agenda; and commitment to people.
- Set out annual targets for the industry to be achieved and proposed the creation of a 'movement for change' that would be driven by industry leaders to inspire the need for change.

Movement for Innovation, 1998

- Formed in November 1998 to implement the recommendations of 'Rethinking Construction'.
- Aimed to lead radical improvement in construction in value for money, profitability, reliability and respect for people, through demonstration of best practice and innovation.
- Established demonstration projects programme seeking to facilitate performance efficiencies, to achieve sustained annual improvements set out in 'Rethinking Construction' as follows:
 - 10% reduction in cost and construction time
 - 20% reduction in defects and accidents
 - 10% increase in productivity and profitability
 - 20% increase in predictability of project performance.

The Drivers, Process and Targets that came out of the Rethinking Construction report, known as the "5-4-7"

Drivers for Change	Improving the Project Process		Targets for Improvement	
Committed Leadership	Product Development	Partnering the Supply Chain	Capital Cost	-10%
Focus on the Customer			Construction Time	-10%
Product Team Integration			Predictability	+20%
Quality driven Agenda	Project Implementation	Production of Components	Defects	-20%
Commitment to People			Accidents	-20%
			Productivity	+10%
			Turnover & Profits	+10%

Construction Best Practice, 1998

- Set up in 1998 to provide support to individuals, companies, organisations and supply chains in the construction industry seeking to improve the way they do business.
- Offered a range of services tailored for users at different stages of knowledge and experience.

KPIs, 1998

- Launched to benchmark the performance of the construction industry based around ten headline indicators.
- First set of demonstration project KPI data published in 2000 charting the performance of the projects throughout 1999, as compared with national industry data.

Achieving Excellence, March 1999

- An initiative launched to improve the performance of central government departments, their executive agencies and non-departmental public bodies as clients of the construction industry.
- Through the initiative central government clients commit to maximise, by continuous improvement, the efficiency, effectiveness and value for money of their procurement of new works, maintenance and refurbishment.

The Housing Forum, 1999

- Formed to become the network for radical change and innovation within the house building sector.
- Aimed to bring together all parties in the house building supply chain that were interested in, or already committed to, improving the performance of the industry.

Local Government Task Force, 2000

- Formed in March 2000 to implement the recommendations of 'Rethinking Construction' within Local Authority clients.

Respect for People, 2000

- In November the report 'A Commitment to People, Our Biggest Asset' was published by the Respect for People working group
- The report identified seven priorities for action:

- Workplace diversity
- Site facilities and the site working environment
- Health
- Safety
- Career development and lifelong learning
- The off-site working environment
- Behavioural issues

- A suite of toolkits was released for trial.

The Clients' Charter, 2000

- July 2000 Deputy Prime Minister challenged the client community to draw up a charter that would set out the minimum standards they expected in construction procurement, their aspirations for the future and a programme of steadily more demanding targets to drive up standards. The Clients' Charter was designed to meet this challenge.
- By signing up to the Charter, construction industry clients make a clear statement of their commitment to improve their own performance.
- In February 2004 the strategic management of the Clients' Charter was passed to Constructing Excellence.

PPC 2000

- The first partnering contract was published in 2000.
- Key features include:
 - Guaranteed maximum price before start on site.
 - Ring fenced profits and overheads.
 - Incentives built in to promote savings and value engineering.
 - A detailed joint problem-solving procedure.

'Modernising Construction' The National Audit Office Report, January 2001

- Report on how the procurement and delivery of construction projects in the UK could be modernised with benefits for the whole construction industry.
- Key recommendations to the industry included making greater use of innovation to improve public sector construction.

Construction Skills Certification Scheme, June 2001

- The aim of the Construction Skills Certification Scheme (CSCS) is to raise standards of both workmanship and health and safety within the construction industry.
- The scheme ensures a consistent standard is applied

across the industry and gives employers and domestic consumers an effective way of identifying skilled and experienced professionals.

- For individuals, the CSCS card brings recognition of professional abilities and skills and is aimed at improving employment prospects.

Rethinking Construction, 2002

- March 2002, the Movement for Innovation, Housing Forum and Local Government Task Force came together as one organisation under the umbrella title, Rethinking Construction, to improve efficiency.
- Demonstrations programme devolved to become more regionally focused.
- National Strategy Panel working group formed to stimulate improvement through tangible change within the construction industry by extending the relationship between Rethinking Construction and industry representatives at all levels in exploiting the lessons arising from the Demonstration Process, and how these can be embedded within the industry.

A guide to project team partnering, April 2002

- The second edition of the Guide published by CIC
- This document is aimed at providing vital guidance for everyone who sees the potential of partnering but is unsure of his or her ground.
- Beyond advice this document also provides a template for multi-party partnering contract.

Design Quality Indicators, 2002

- July 2002, the trailblazing scheme was launched piloting a new method for assessing the design quality of buildings.
- Developed by Construction Industry Council in order to enable all stakeholders involved in the built environment to gain more value from the design of buildings.
- Launched as an online toolkit in October 2003.

Accelerating Change, 2002

- Report launched at the end of the first year of the Strategic Forum for Construction chaired by Peter Rogers of Stanhope Plc.
- It identified a number of strategic targets:
 - By the end of 2004, 20% of construction projects should be undertaken by integrated teams and supply chains.
 - 20% of client activity by value should embrace the principles of the Clients' Charter.
 - By the end of 2007 both figures should rise to 50%.

Respect for People Toolkits, 2002

- Toolkits were formally launched in July 2002.
- The toolkits take the form of checklists and scoring systems as a measuring tool for benchmarking performance and address the following themes:
 - Diversity in the workplace
 - On-site welfare
 - Health

An updated version of the 5-4-7 Targets known as the "5-6-10"

Drivers for Change	Improving the Project Process		Targets for Improvement (Headline KPIs)	
Committed Leadership	Product Development	Partnering the Supply Chain	Client Satisfaction – Product	+10%
Focus on the Customer	Project Implementation	Production of Components	Client Satisfaction – Service	+10%
Product Team Integration			Defects	-20%
Quality driven Agenda	Sustainability	Respect for People	Predictability – Cost	+20%
Commitment to People			Predictability – Time	+20%
			Profitability	+10%
			Productivity	+10%
			Safety	-20%
			Construction Cost	-10%
			Construction Time	-10%

- Site safety
- Career development and lifelong learning
- Worker satisfaction questionnaire
- Work in occupied premises
- Health and safety in procurement and design
- Off-site working environment
- In excess of 8,000 toolkits have been distributed and in addition it is downloadable from the website.

Beacon Council Scheme, 2003

- The Beacon Council Scheme was set up in 1999 to disseminate best practice in service delivery across local government.
- Each year, the government selects themes for the beacon scheme.
- In 2003 Rethinking Construction was selected as one of the themes, there were 27 applicants and six successful councils were awarded Beacon Council status for Rethinking Construction for 2003-2004.
- The Councils are:
 - Barnsley Metropolitan Borough Council
 - Stockton on Tees Borough Council
 - Middlesbrough Borough Council
 - St Helen's Borough Council
 - Norfolk County Council
 - Mid Devon District Council

ODPM Sustainable Communities Plan: building for the future, February 2003

- Launched by the Deputy Prime Minister
- The Plan sets out a long-term programme of action for delivering sustainable communities in both urban and rural areas. It aims to tackle housing supply issues in the South East, low demand in other parts of the country, and the quality of our public spaces.
- The Plan includes not just a significant increase in resources and major reforms of housing and planning, but a new approach to how we build and what we build.
- This £22 billion programme of action aims to focus the attention and co-ordinate the efforts of all levels of Government and stakeholders in bringing about development that meets the economic, social and

environmental needs of future generations as well as succeeding now.

Building on Success, The Future Strategy for Achieving Excellence in Construction, February 2003

- Building on the success of Achieving Excellence the Office of Government Commerce strategy for establishing a continuing programme to embed best practice principles.
- Identified targets to improve the successful delivery of construction projects and to accelerate project progress at the critical procurement stage.

Construction Industry Training Board – Sector Skills Council, September 2003

- CITB Great Britain working in partnership with the Construction Industry Council and CITB Northern Ireland became ConstructionSkills, the Sector Skills Council for construction.
- ConstructionSkills is part of a UK wide network of Sector Skills Councils recognised by and representing the employers' interests.

Strategic Forum Integration Toolkit, December 2003

- Toolkit focuses on the behaviours that need to be adopted, identifies the critical elements that need to be considered and offers some tools and techniques that can engender the appropriate culture in which collaborative working can thrive.

Constructing Excellence, 2003

- Rethinking Construction and Construction Best Practice have merged to form Constructing Excellence aiming to deliver individual, corporate and industry excellence in construction.
- Its vision is for the UK construction industry to realise maximum value to all clients, end-users and stakeholders and exceed their expectation through the consistent delivery of world-class products and services.

Appendix 2: Corresponding Toolkits

Environmental Performance Indicators

www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=113389

Eco Homes

www.bre.co.uk

Sustainability Works

www.bre.co.uk

BRE Environmental Assessment Method (BREAM)

www.bre.co.uk

Sustainable Project Appraisal Routine (SPeAR)

www.bre.co.uk

Design Quality Indicators

www.dqi.org.uk

Strategic Forum Integration Toolkit

www.strategicforum.org.uk/sfctoolkit2/home/home.html

Respect for People Toolkits

www.constructingexcellence.org.uk/resourcecentre/peoplezone/respect.jsp?level=0

Key Performance Indicator Packs

www.constructingexcellence.org.uk/resourcecentre/publications/kpi/packs.jsp

Clients' Charter

www.clientsuccess.org/Home_1.asp

LGTF Toolkit

www.lgtf.org.uk



Appendix 3: Previous Demonstration Reports

Costain, Building Awareness, The Educational Supply Chain, April 2004
www.constructingexcellence.org.uk/bpknowledge/demorgs.jsp?level=0

Lovell, Investing for the Future, April 2004
www.constructingexcellence.org.uk/bpknowledge/demorgs.jsp?level=0

Taylor Woodrow, Supply Chain Partnering, a case study demonstrating the why, what and how of strategic partnering in the supply chain, April 2004
www.constructingexcellence.org.uk/bpknowledge/demorgs.jsp?level=0

Western Challenge, Partnering in Practice, a case study demonstrating the why, what and how of partnering, April 2004
www.constructingexcellence.org.uk/bpknowledge/demorgs.jsp?level=0

Demonstrating Success through Rethinking Construction, Rethinking Construction Demonstrations Report, July 2003
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115898

Demonstrations of Sustainability, May 2003
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=116021

Respect for People Case Studies, October 2002
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115859

The Housing Forum Demonstration Project Report: The Challenges Ahead, February 2002
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=116005

The Why, What and How of partnering the supply chain, Waterloo Air Management, November 2001
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115519

Celebrating Innovation, October 2001
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115378

The Housing Forum Demonstration Project Report: Emerging Issues and Lessons, May 2001
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115432

Delivering Better Business, 2000
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115323

A Vision Shared: The Movement for Innovation Second Anniversary Report, November 2000
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115428

The Housing Forum Demonstration Project Report: Improving through Measurement, October 2000
www.constructingexcellence.org.uk/resourcecentre/publications/document.jsp?documentID=115430

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