

Messages and actions from Accelerating Change – for manufacturers

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Accelerating Change – what does it mean for you?

Setting an agenda for change

When the Strategic Forum was established in 2001 to bring together a number of rethinking construction initiatives it set out in *Accelerating Change* a new vision for the production of the built environment:

Our vision is for the UK construction industry to realise maximum value for all clients, end users and stakeholders and exceed their expectations through the consistent delivery of world class products and services. In order to achieve this the UK construction industry must:

- add value for its customers, whether occasional or experienced, large or small;
- exploit the economic and social value of good design to improve both the functionality and enjoyment for its end users of the environments it creates (for example, hospitals where patients recover more quickly, schools and work places which are more productive and more enjoyable to work in, and housing which raises the spirits and enhances the sense of self worth).

Accelerating Change endorsed the earlier report of the Construction Task Force *Rethinking Construction*, including its series of recommendations captured in the widely-publicised 5-4-7 diagram (figure 1). The diagram summarises the radical changes in the processes through which the industry delivers its projects that were called for in *Rethinking Construction*. The report drew inspiration from developments in other sectors, particularly the automotive industry, where innovation had driven up quality and reduced production costs. It also drew on international comparisons. It identified that the industry as a whole was underachieving, that it invests too little in capital, research & development, and training, and that it was leaving too many of its clients dissatisfied with its overall performance. *Rethinking Construction* recommended the creation of an integrated project process for the industry linking greater use of standard components and pre-assembly with improved project management and closer long-term relationships within the supply side. The five drivers for change included better leadership, greater focus on customers’ needs and the delivery of quality by all members of the team, together with committed leadership and greater respect for all those responsible for creating value in the construction process. Finally, target setting and regular measurement were identified as means to drive up standards of performance, efficiency, and safety.

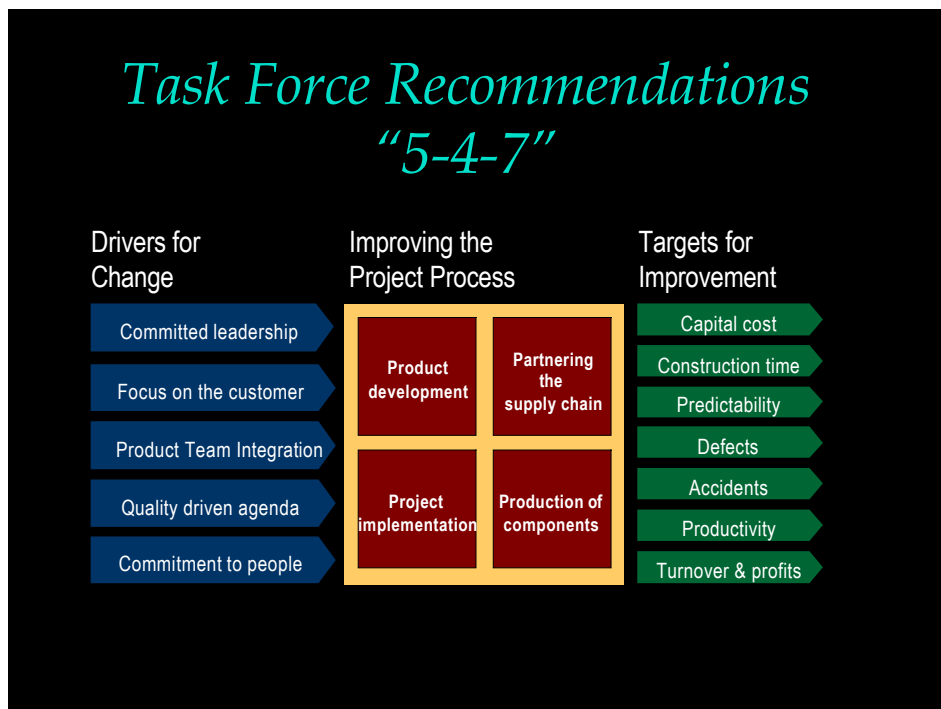


Figure 1 The 5-4-7 diagram from Rethinking Construction

Accelerating Change calls for radical improvements in the construction industry and proposes a series of headline targets to help the industry improve its performance. It calls on all those who work within the industry to provide a better service and better delivered projects.

Benefiting from the new ways of working: improving training, competence and reputation

Construction is changing. By initiating a wide variety of improvement initiatives that affect everyone in the industry, it is becoming increasingly professional, adopting new ways of working and improving its image. Manufacturers, just as much as other players, need to participate in the change process. Through your working practices and the adoption of the new ways of working, you can help the industry move towards a culture of continuous improvement based on regular performance measurement. You can contribute by participating in construction teams made up of those who honour recognized working rule agreements, who have excellent health and safety records, and who train their workforce.

The Strategic Forum's third, fourth and fifth headline targets relate to training and competence:

- *By 2006, 300,000 qualified people recruited and retained in the industry.*
- *By 2007, a 50% increase in applications to built environment higher and further education courses.*
- *By 2010, a fully trained, qualified and competent workforce on all projects.*

Working together, the Construction Products Association and CITB have developed a Manufacturer Training Programme. This was piloted with manufacturers of single ply roofing, fire protection and resin flooring, and was subsequently extended to those responsible for relocatable partitioning, suspended ceilings, applied waterproof membranes, joint sealant application, drilling and sawing equipment manufacturers and suppliers, and façade maintenance and stone cleaning..

Being aware of the client's business needs

For a successful outcome, it is vital that all those involved in the process – right through the supply chain to manufacturers and suppliers – have a clear understanding of the end user's business needs and the functionality required from the finished product. *Accelerating Change* makes a strong case for the early involvement of manufacturers as part of the integrated team that will be responsible for delivery of the project. The whole team needs to be clear about the client's requirements; without clarity at the outset there are likely to be changes throughout the delivery process resulting in waste, duplication, poor design and dissatisfaction for everyone involved. As a minimum, the project should meet the needs and requirements of the end user, and the creation of value should be a focused objective of integrated teams.

Being aware of the implications of the Clients' Charter

The Clients' Charter was developed by a group of leading clients of the industry, and it sets out a series of general principles whose adoption can assist both clients and the supply side to work effectively together.

At their simplest, these principles call for clients to:

- Be clear about what is wanted from a project.
- Understand the connection between cost and quality.
- Recognise and define risk.
- Commit to eliminating waste.
- Promote co-operation and non-adversarial attitudes including early involvement of the whole supply chain where appropriate.
- Select team members on the basis of their competence and measured performance, and who will ensure fair treatment of members of the supply chain.

In return, clients may expect the supply side to:

- Inform them of the options for meeting their needs.
- Shorten and competently manage the design and construction supply chain.
- Keep them informed of project progress, including delays and cost over-runs.
- Design projects that can be built on time and to a quality that meets the client's needs.
- Help to find solutions to problems that are fair to all parties.
- Solve interface problems in the supply side.

The Strategic Forum's second Headline Target is for 20% of construction projects by value to be procured by clients who embrace the principles of the Clients' Charter by the end of 2004, rising to 50% by 2007.

Delivering consistent quality and value in the finished product

The objectives of Rethinking Construction are to achieve radical improvements in the design quality, sustainability and customer satisfaction of UK construction. Clients want construction projects that embody good whole life value and performance, functionality and flexibility, and that are delivered within budget, on time and defect free. Excellence in product design can help to enhance the built environment and improve our quality of life. Manufacturers and suppliers should be able to demonstrate how their products and processes contribute to the achievement of consistent design quality.

Participating fully in integrated delivery teams

A key recommendation of *Accelerating Change* is that all those involved in the delivery process unite together as an integrated team in which all participants add value by focusing on common objectives and processes, and the on creation of maximum value based around the client's vision for the project. *Accelerating Change* recognises particularly the benefit from early input by product manufacturers and suppliers to project design, and the potential for considerable savings through the identification of standard products and detailed design solutions that are practical to implement and reliable in operation.

Accelerating Change recommends long term relationships based on clear measurement of performance, and continuous improvements in quality and efficiency. *Partnering* is the process of working together as a team to improve performance through agreeing mutual objectives, devising a way to resolve any disputes, collaborating to achieve continuous improvement, and sharing risks and rewards equitably. *Strategic partnering* involves the integrated supply team and the client organisation working together on a series of construction projects in which knowledge and expertise can be transferred from one project to the next. *Project partnering* on one-off projects can still offer many of the benefits.

Accelerating Change emphasizes that integrated teams should be characterised by mutual trust and openness and should devise means for managing risks and sharing rewards in ways which are equitable to all parties. It calls for payment practices to be reformed to facilitate and enhance collaborative working, and it recognises that lengthy payment periods and delays in payments severely damage construction businesses, especially small and medium sized firms. In a relationship of collective responsibility, responsible behaviour and mutual interest, *Accelerating Change* suggests that payment delays and retentions should cease to be a significant issue.

- ***The Strategic Forum's first headline target is that by 2004, 20% of projects are undertaken by integrated teams, increasing to 50% by 2007.***

The Strategic Forum's Integration Toolkit contains workbooks for both Integrated Project Teams and Integrated Supply Chains, each containing practical step by step advice to help achieve integration. It is available from www.strategicforum.org.uk/sfctoolkit2/home/home.html. Constructing Excellence

has published a guide to Effective Teamwork which is available at www.constructingexcellence.org.uk/resourcecentre/themes/themedetails.jsp?id=4007&track=Teamworking

Being prepared to participate early in the process

Accelerating Change calls for competitive tendering to be replaced by long term relationships and established supply chains based on clear measurement of performance and continuous improvement. Such relationships enable integrated teams - early on in the project - to analyse every aspect of the supply chain process, and to draw on the experience and expertise of the members of the supply chain in offering solutions. Collaboration with other members of the team provides opportunities to drive out waste at all stages; to raise productivity and to reduce project times; to reduce costs by 'getting it right first time'; and to 'design out' health and safety risks at source. And working with the integrated team will enable you to contribute to the minimisation of risk to health and safety of all those who construct, maintain, operate and refurbish the construction product.

As well as participating fully in an integrated team, as a key manufacturer you should also help the team to harness the potential and expertise of your supply chain. Teams are more likely to engage with manufacturers who are prepared to participate early on and who have integrated supply chains to support them, since the expertise of members of the supply chain will be drawn upon in offering solutions. Integrated teams made up of established supply chains which stay together from one project to the next take experience and a culture of continuous improvement with them and offer a number of demonstrable business, efficiency and safety benefits.

The principles of supply chain management are explained in the *Prime Contracting Handbook of Supply Chain Management* parts of which are available on the web at www.mod.uk/linked_files/sc-handbook.pdf. The full book is published by CIRIA under the title *Building Down Barriers: The Handbook of Supply Chain Management*.

Promoting the advantages of standard solutions

Accelerating Change recognises that product manufacturers, suppliers and specialists have the research and development expertise to develop innovative solutions that:

- involve less site processing
- reduce health and safety risks, and
- improve quality and reliability.

If these benefits are to be gained by the industry, manufacturers must take every opportunity to advise teams on the availability of new products and innovative solutions, and to promote the advantages of increased standardisation, pre-assembly and pre-fabrication to clients and designers. There are enormous opportunities to reduce waste, add value and enhance the finished product, which can be achieved only if manufacturers familiarise themselves with the clients' business needs and promote solutions that clearly meet them.

Exploiting information technology by getting wired up

Most manufacturers recognise that IT can deliver significant benefits and are already use information technology extensively in-house. However, the move to e-business and virtual prototyping requires the industry to transform its traditional methods of working and its business relationships.

At its simplest, electronic communication can enhance speed and accuracy of communication. More comprehensively, re-engineering business processes around electronic document management can reduce redundancy and duplication. Ideally, you and others members of the integrated team will devise an IT strategy which will best enable you to work electronically within the team, while also collaborating electronically with your supply chain. The level at which you will align your systems

with the team will depend on the nature of the project, the capabilities of the parties, and an assessment of the scale of the resulting benefits. Potential benefits of exploiting IT include:

- improved communication including speed of information delivery and reductions in errors and omissions
- improved business relationships from less repetitive processing of information
- raised efficiencies and skills development from knowledge management
- improved visualisation of alternative options and sequencing of trades
- economy and speed of construction
- reductions in the costs of transactions between the parties.

Wide-ranging advice on IT in construction is available from the from the IT Construction Best Practice programme website: www.itcbp.org.uk.

Providing products and processes that meet sustainability criteria

According to *Accelerating Change*, sustainable construction requires a step change in the culture of the industry, characterised by clients procuring - and integrated teams delivering - sustainable construction projects, products and services. Increasingly, building owners will be judged by their customers and other stakeholders on their ethical stance in relation to environmental performance and sustainability. Buildings that are more pleasant to be in and use, cheaper to run and maintain, and have better environmental performance will improve the image and reputation of the industry.

Manufacturers and suppliers must therefore help clients to meet their environmental and social responsibilities. As a minimum, they should provide the integrated team with data about the life cycle costs and benefits of their products, in order to encourage the use of a whole life value approach to decision making. More broadly, they must take responsibility for the environmental sustainability of their own products and, jointly with others in the team, of the complete structure.

The ability of an integrated team to pre-plan a project through from start to finish is a prerequisite to designing in sustainability. Sustainable processes and products should not be added on to the end; they are achievable only if well integrated from the very beginning. Projects must be pre-planned for ease of construction, make maximum use of standard components and processes, conserve scarce resources, and protect wildlife habitat and biodiversity. The completed building should meet best practice levels of energy and water consumption targets, helping to reduce environmental pollution and tackling climate change. These actions will ensure each project enhances the built environment in a sustainable way and improves the quality of life. Pre-planning, designing and specifying projects around the goals of sustainable construction will help to ensure they achieve the triple bottom line of sustainable development by maximising economic and social value and minimising environmental impacts.

Constructing Excellence has published an introductory fact sheet for suppliers about sustainable construction which is available from the website at:
www.constructingexcellence.org.uk/pdf/sus_suppliers.pdf.

Providing products and processes that minimise waste

At every stage, you should collaborate with the other members of the delivery team and their supply chains to analyse every aspect of the supply chain process – acquisition, delivery and transport, storage, and the flow of materials and components to their point of use. Careful planning of these activities by every member of the team will help to minimise waste, reduce the likelihood of products and components being lost in transit or damaged on site, and prevent defective work. Products and materials should be designed, and delivered to site, so to minimise waste during the construction process as well as enhancing long term performance and functionality of the completed project.

Supply chain management is the process by which one optimises the flow of goods and materials from supplier to the point of use and logistics is the process used to manage the flow of goods and materials,

equipment, services and people through the supply chain. Both these themes have the potential to deliver:

- Productivity improvements
- Waste reduction
- Sustainability (energy saving)
- Improvements to health and safety
- Promotion of wide use of IT.

Accelerating Change recommends manufacturers and suppliers to examine the principles of logistics and how these can be applied to facilitate integration. This includes the logistics of supply and delivery of goods and materials to site, and the tracking of goods and materials through the supply chain from manufacture to the point of use.

Providing training, facilities and conditions that demonstrate 'Respect for People'

All too often the construction industry is perceived as offering a low-skilled, unsafe working environment and in consequence has failed to attract the best people. Holiday and pension arrangements are relatively unattractive, and there is a culture of long hours. This is not healthy for the industry's employees and is costly for employers and their clients. The Strategic Forum is determined to turn construction into a professional industry - improving its image and how the workforce views itself, and reversing a long-term decline in the industry's ability to recruit and retain a quality workforce. The Strategic Forum urges employers in the industry to honour recognized working rule agreements, to offer pay and working conditions which make construction an attractive industry in which to work, that value the existing workforce and attract new entrants. Employers must also train the workforce and have excellent health and safety records.

Rethinking Construction identified 'respect for people' as one of its five drivers for change. A follow up report *Respect for People – a framework for action* puts forward a strong business case for action, and recommends that manufacturers of all kinds and sizes should commit to achieving the standard of Investors in People. Respect for People Toolkits focus on equality and diversity in the workplace, quality of working environment, career development, lifelong learning and worker satisfaction. Your support for these initiatives will help construction become an industry whose workforce is appropriately skilled and qualified, benefits from a systematic programme of continuing personal and professional development, and is properly valued in the workplace.

A suite of Toolkits and Performance Indicators to support improvement in companies or projects is available via the Resource Centre of the Constructing Excellence website - www.constructingexcellence.org.uk/resourcecentre.

Protecting the health and safety of all those who come into contact with your products and processes

Accelerating Change reminds all those associated with construction that the high levels of accidents and fatalities identified with the industry is no longer acceptable. It calls for projects to be pre-planned and well-designed with inherently safe processes to ensure they are good, safe and predictable.

In order to minimise health and safety risks, at each stage the integrated team should be able to certify that they have - as a team - considered these risks in order to ensure that the facilities currently developed will be safe to build and safe to maintain and operate. Delivering excellence in health and safety performance will enhance the corporate reputations of all the stakeholders. Manufacturers and suppliers need to provide comprehensive information to the team about the health and safety aspects of their products and their use in practice, and be prepared to devote time to negotiating with the team about achieving the conditions necessary to minimise health and safety risks.

Further actions that can contribute to reducing risk in this area include:

- Using the CSCS scheme to ensure that those people who work at height are competent to do so, i.e. develop a specific test to evaluate their preparedness
- Maximising the opportunities to develop solutions that involve less site processing and more pre-assembly and pre-fabrication
- Developing transportation and materials distribution methods that reduce risk to personnel on site.

Learning from successful projects

The construction industry rarely spends enough time debriefing at the conclusion of a project. Yet post project reviews are a valuable learning opportunity for individual participants and for their organisations. Ideally, you, the other members of the integrated team, and the members of your supply chain, should carry out systematic reviews of the teams' effectiveness, to learn from feedback and improve performance on subsequent projects, as part of a culture of continuous improvement. Examining what happened and why it happened will help your organisation to be better informed about the strengths and weaknesses of the approaches taken, the procedures followed, and the project outcomes.