Foreword

Since the 1990s our industry has changed for the better: we work more collaboratively and understand that clients are looking for best value, not lowest cost. There is still much scope for improvement, but we have made important strides towards real and lasting change.

Currently it is apparent that the built environment industry is suffering the effects of the global recession. Having enjoyed over a decade of growth, our industry is facing dramatically reduced demand and increased competition for projects. Many organisations are focused on short term survival. Yet we must not revert to type: to adversarial ways of working and price-cutting.

Research and innovation are critical for organisational success - at no time more than in lean times. Organisations can differentiate themselves by offering innovative solutions and processes: clients want teams that will collaborate and innovate to offer them best value[1].

We must not relapse to short-termism and lose sight of the future. Inevitably the market will recover and organisations must be ready for the up-turn. We believe that only by industry driving more relevant research programmes, can we be sure of answering issues that are critical to our clients' businesses and our industry's success.

You have told us what these critical success factors are: front and centre, you believe our industry needs to become truly client-orientated and value-based; we need to exploit ICT and automation capabilities on widespread basis; our industry must be proactive in reducing the resources it consumes.

We would strongly urge you to become involved in the research activities outlined here. We would urge Government – both as client and policy maker - to drive research and innovation in our industry, and research funders to invest in research and innovation that will make a real contribution to improving the quality of the built environment.

Bob White
Chairman, National Platform; Chief Executive, Constructing Futures.

1 Equal Partners, 2008, Construction Clients' Group / Business Vantage

Next Steps

On behalf of our industry, the National Platform has identified the research agenda for the UK. A significant amount of Research, Development and Innovation funding has been identified to support work that will benefit our industry. To access this funding, we need leaders in the Built Environment sector to get involved.

A final consultation is being undertaken to prioritise specific research projects that will formulate the research programme. For further information on the research programme and specific projects or to register your interest, please access the National Platform website at www.nationalplatform.org.uk

Picture credits:
Cover (top): Castle Rock (c) Paul White
Spread (bottom): Earthship Brighton (c) Mischa Hewitt

Current National Platform Members

Terry Hill	**Arup**
Jeremy Watson	**Arup**
John Findlay	**Balfour Beatty Infrastructure Services Ltd**
John Brumwell	**BERR**
Denis Walker	**BERR**
Peter Whittington	**BERR**
Matthew Locke	**Bovis Lend Lease**
Peter Bonfield	**BRE**
Deborah Pullen	**MBE KTN**
Andrew Eastwell	**BSRIA**
Andrew Cripps	**Buro Happold**
Zara Lamont	**Carillion/MBE KTN**
Richard Saxon	**CBE**
Peter Cunningham	**Constructing Excellence**
Beth Morgan	**Constructing Excellence**
Bob White	**Constructing Futures**
Murray Bean	**Corus**
Lynne Sullivan	**Sustainable By Design**
Steve Hindley	**Midas Group**
John Rackstraw	**Pearce**
Nigel Woolcock	**Prudential Property Investment Managers**
Peter Morris	**UCL**
Peter Barrett	**University of Salford**
Rennie Chadwick	**VINCI Construction UK**
James Wates	**Wates**
Chris Woods	**Wates**
Keith Clarke	**WS Atkins**

If you would like to participate or have further information, please contact:
Peter Cunningham on 020 7592 1100
peter.cunningham@constructingexcellence.org.uk

Research priorities for the UK Built Environment

Advancing research and innovation for the built environment

National Platform for the Built Environment
CONSTRUCTING EXCELLENCE

Background

The National Platform for the Built Environment was formed in 2005 to significantly increase the level of research applicable to the Built Environment industry and its clients. It is a business-led group, providing industry with a single voice to research funders and suppliers, academia, and national and international governments.

Since its inception, the National Platform has produced a Strategic Research Agenda (SRA) for the United Kingdom. On the basis of extensive industry consultation, this agenda identifies the three key research priorities for the Built Environment sector:

- Building a client-orientated, knowledge-based, value-driven industry;
- ICT and automation; and
- Reducing resource consumption.

The National Platform subsequently commissioned industry-led scoping studies in each of these three areas. These studies identify more detailed programmes and projects in each of the three areas.. These outputs are summarised here, along with details of current and future National Platform activities.

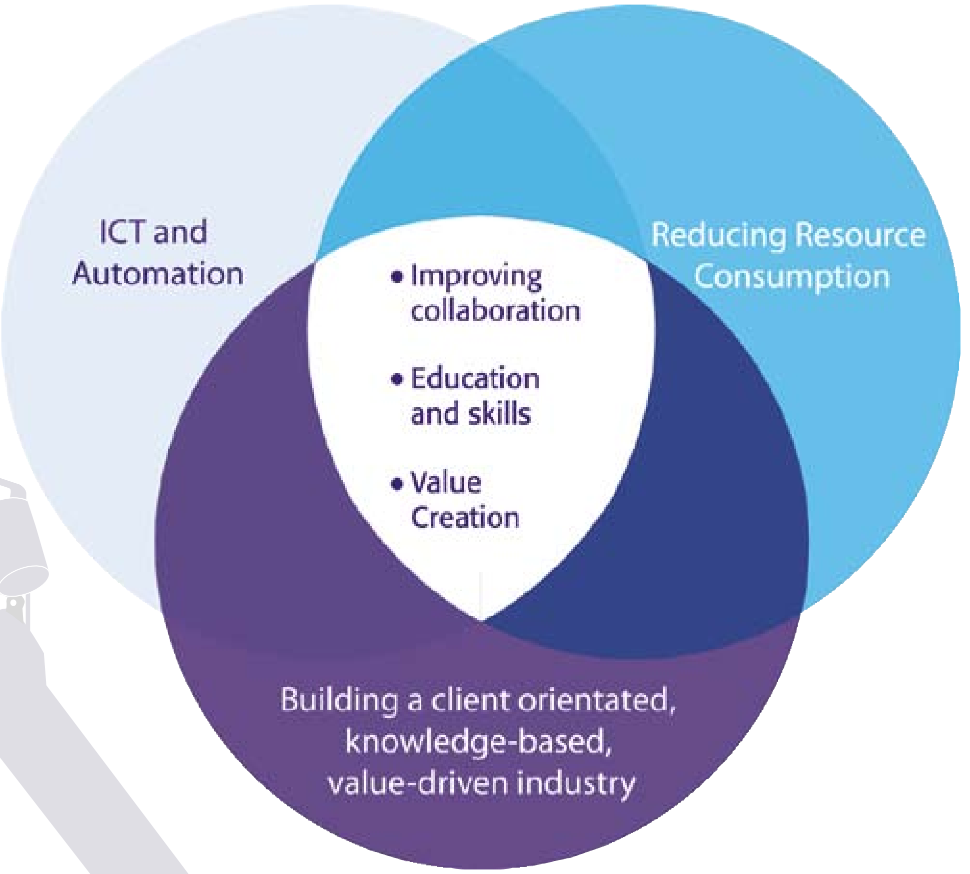
The Built Environment is fundamental to the social and economic health of the nation. Construction alone accounted for some 8.7% of the UK's Gross Value Added in 2007[2]. Extending this to encompass the entire Built Environment industry – including property, construction, design and management, and facilities management – this proportion rises to an estimated 20% of the UK's GDP[3].

The Strategic Research Agenda

Using the European Construction Technology Platform's SRA as a basis, the National Platform undertook an industry survey to prioritise in terms of importance to their business three key themes.

The driving principle behind the National Platform is that it is industry led: it aims to engage a range of organisations from the Built Environment Industry from across the industry's supply chain in research programmes that are relevant to their future success. For too long, the Built Environment industry has been a reactive one: our clients say we often wait to be told what to do rather than proactively guiding the process and innovating[4]. By getting involved with the National Platform, organisations are proactively addressing key issues that will affect their futures and their clients' futures.

While each of the three Research Priorities has its unique research requirements, the majority fall into three broad themes namely value creation, improving collaboration and education and skills. Here we summarise the research requirements in each priority area.
For more information regarding the full scoping study reports please visit the National Platform website - www.nationalplatform.org.uk.



	Value creation	Education and skills	Improving collaboration	Other
	The ultimate goal of any innovation must be to create greater value for stakeholders in the built environment. In particular, research is required for tools and metrics that support decision-making for clients.	Clients see a future skills shortage as the biggest threat to the industry delivering innovation when the economy recovers. All three studies identify the need for retaining and acquiring new skills as crucial to supporting future innovations arising from research.	The industry has made significant steps towards improved partnering and collaborative working since the 1990s. It is clear however that research and innovation can bring significant further benefits in this area.	
Building a client orientated, knowledge-based, value-driven industry Arguably the vision presented in this study encapsulates the overarching theme for the future of the Built Environment sector. Recent economic events have brought the need to be more client-focused and value-driven.	▪ Examining the systems integration function ▪ Establishing an owner oriented governance lifecycle methodology ▪ Developing integrative quantitative models – defining models and metrics by identifying 'what good looks like'	▪ Defining 2020 education and skilling needs, including the professions' and insurance industry's roles 	▪ Examine the impact of ICTA and intelligent materials on the supply chain	▪ Examine procurement options and limits ▪ Explore the implications of new funding requirements and mechanisms ▪ Explore 2020 Planning and Regulations needs
ICT and Automation Highlighting the key role that research into ICTA could play in supporting the future competitiveness of the UK construction industry. This Priority Area is seen as particularly important in improving collaboration across the industry.	▪ Mass adoption and application of offsite manufacturing, automation and mechanisation processes & system ▪ Collaborative prototyping to define and deliver client requirements	▪ Well trained, well qualified workforce able to use the latest best practice technologies	▪ Efficient, seamless sharing of information across the built environment stakeholders ▪ Ability to interact with Real Time information regardless of physical location or timezone	
Reducing Resource Consumption (RRC) Perhaps of all the Priority Research Themes this is the most complex, not least because of the number of organisations developing ideas and initiatives for RRC within the industry. There is a clear need to integrate these efforts and to highlight potential research partnerships. It has also become apparent that the implementation of existing technologies is underdeveloped.	▪ A decision support tool for the Built Environment – identifying comparative benefits that are likely to be created ▪ A broader systems approach to the way in which individual buildings interact with their surrounding environment and community ▪ Mechanisms to ensure effective deployment of technology for RRC	▪ Identification of skills required to implement new RRC technologies effectively ▪ Ensuring occupants are able to use building features aimed at RRC to maximum benefit	▪ Development of appropriate research partnerships – particularly those spanning industry and academia 	A number of detailed research recommendations are made in three key areas: materials, water and energy. These can be found in the executive summary of the full report on the National Platform website: www.nationalplatform.org.uk

2 BERR, 2007
3. Be Valuable, 2005, Constructing Excellence
4 Equal Partners, Construction Clients' Group 2008, Business Vantage