



# INFRASTRUCTURE 21 STRENGTHENING THE UK'S SUPPLY CHAIN

INFRA   
 STRUCTURE  
TWENTY   
 ONE 

# SAFE

Improving safety behaviours was identified as one of the industry's highest priorities

## The construction industry has pooled its resources to identify the key issues it faces as workload starts to grow.

■ The UK infrastructure sector faces a significant challenge as it seeks to ensure its supply chain has the capability and capacity to respond to growing future demand.

■ Some of the industry's leading contractors have worked with the Civil Engineering Contractors Association, CITB and New Civil Engineer magazine to identify the key competencies that will be needed in the future, and have developed free or low cost support to enhance companies' capability in these areas.

■ The project has been delivered with the support of the UK Commission for Employment & Skills as part of its UK Futures Supply Chain Leadership & Management competition.

■ More than 500 companies took part in engagement events in relation to

this project, with 80% responding to a request for feedback on what these key competencies were.

■ Through this research, health & safety, including safety behaviours and leadership, were identified as the industry's highest priorities, alongside support for industry in leadership & management, collaborative working, innovation, risk and quality management as well as commercial awareness.

■ The industry's customers also saw environmental sustainability and promoting equality & diversity as priorities that the industry needs to respond to.

■ Training developed to respond to this research includes regional seminars, e-learning, self-assessment and bespoke training programme, and will be rolled out from June 2015 onwards.

## Introduction

Mark Hansford  
Editor of New Civil Engineer

# 7.9%

**The UK's infrastructure sector is booming. Across the country, the physical evidence of this is visible in projects, large and small, which will upgrade our transport and utilities networks. Meanwhile the respected Construction Products Association February 2015 Forecast tipped this surge to endure with activity set to rise 7.9% in 2015 and 51.5% by 2018.**

After the challenges faced by the sector following the 2008 global financial crash, this boost is welcome for the companies that operate in the sector.

Yet this increase in activity also presents a problem. Having shed resources as workloads dwindled, those involved in delivering this work are having to very rapidly rebuild their capacity to meet future demand.

Nowhere is this challenge more acute than in the supply chain. Having used up financial firepower keeping their heads above water in the downturn, supply chain companies have little resource available to invest in upskilling the workforce to meet new demands.

And yet these demands are not standing still. Customers will want the companies that work on their projects to be aligned to their requirements, bringing in new capabilities in areas such as collaborative working, innovation and diversity. There is a real risk that these demands could become overwhelming for suppliers, being pulled in different directions to try to match up to the requirements of their many customers. Letting this situation become a reality is unacceptable to everyone in the sector, as it runs the risk of leaving the industry without the appropriate capacity to meet demand. For that reason, in 2014 some of the industry's leading contractors started work with the Civil Engineering Contractors Association to tackle the issue.

Through engagement with more than 500 people across the industry, a detailed picture has been built up of what these leading contractors and their supply chain believe are likely to be the key capabilities that they will need to demonstrate to deliver the growing pipeline of investment in the sector in the years to come.

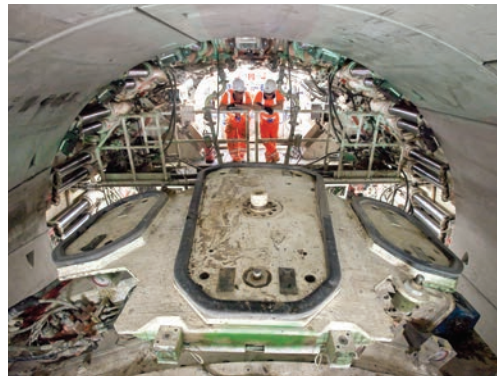
But they have gone further. With support from the

# Percentage activity is set to rise in 2015

Construction Industry Training Board and others, they have put together a programme of free and low-cost support to supply chain companies, offering a consistent and affordable way to get up to speed with these demands as quickly as possible, ensuring that the industry is ready for the growth to come.

This publication outlines the results of this research, and provides for the first time details of this supply chain upskilling programme. We look forward to getting on with delivery of its recommendations.

In doing so we must also recognise the incredible support that we have had in developing this work from the UK Commission for Employment & Skills. In agreeing to include Infrastructure 21 as one of the projects backed by its UK Futures supply chain leadership & management competition, UKCES provided us with the additional financial resources and the expertise to push forward with the programme. We are grateful for this support, and believe that it will act as a catalyst to ensure that the UK infrastructure supply chain is ready to delivery in the 21st century.



## Introduction

Engaging with  
the industry

# 400+

**Infrastructure 21 has been developed by a consortium of leading contractors working with the Civil Engineering Contractors Association, the Construction Industry Training Board and NCE.**

In November 2014 representatives from each organisation joined a board to oversee the project, bringing experience from a diverse range of backgrounds including training & development, supply chain, business development, communications and public affairs.

This board drew together desktop research from a wide range procurement documents and policies from leading customers to identify the 30 most commonly required competences for companies working on UK infrastructure projects.

These were then robustly tested through a series of regional events, where more than 400 people working in the supply chain got to have their say on which of the competencies were of highest priority. This was backed up with direct engagement with leading customers, to ensure that their views were aligned with those who were delivering on their behalf.

The outcome of this research presents, for the first time, a detailed picture of the views of the UK infrastructure sectors as a whole, setting out where organisations working in it believe there is room for improvement. This information has been analysed to identify specific trends in requirements between different types of organisation, and for different parts of the UK.

The results of this research are presented on the pages that follow.

**“More than 400 people working in the supply chain got to have their say”**

Number of people working in the supply chain who chose their highest priority competencies



## Results

### Detailed survey analysis

# One of the big concerns about the return to growth in the sector has been that this escalation in activity might stretch companies, leaving resource gaps that allow poor health and safety practice to emerge.

**As an industry that has worked hard, but still has much to do to improve the safety of its workforce, such backsliding into bad habits is clearly unacceptable.**

As such, it is very heartening to see that respondents to the survey rightly put health and safety right at the top of the industry's improvement agenda. Safety in construction, safety leadership and safety behaviour & culture occupy the top three spots in the survey, demonstrating the industry's continuing awareness of its obligation to ensure that every worker goes home safe every day.

While health and safety competencies dominated the top slots, this was followed in close succession by two other vitally important issues relating to the way that the industry works together.

There was a strong demand for better leadership & management in the supply chain. Strong supply chains rely upon strong leadership from those in charge at each organisation, to ensure that these companies have the confidence, knowledge and authority to deliver.

Closely behind leadership and management

came collaborative working. Sixty three per cent of those polled felt that the infrastructure supply chain must enhance its ability to work together if it is to deliver better results for its customers.

Other competencies identified as high priority by more than 50% of respondents were training, technical competence, innovation, lean and delivering value.

The survey also looked at whether there were variations between groups of respondents. It had been recognised that it was possible that there may be differences between the issues that supply chain members felt were priorities and those competencies that were important to their customers.

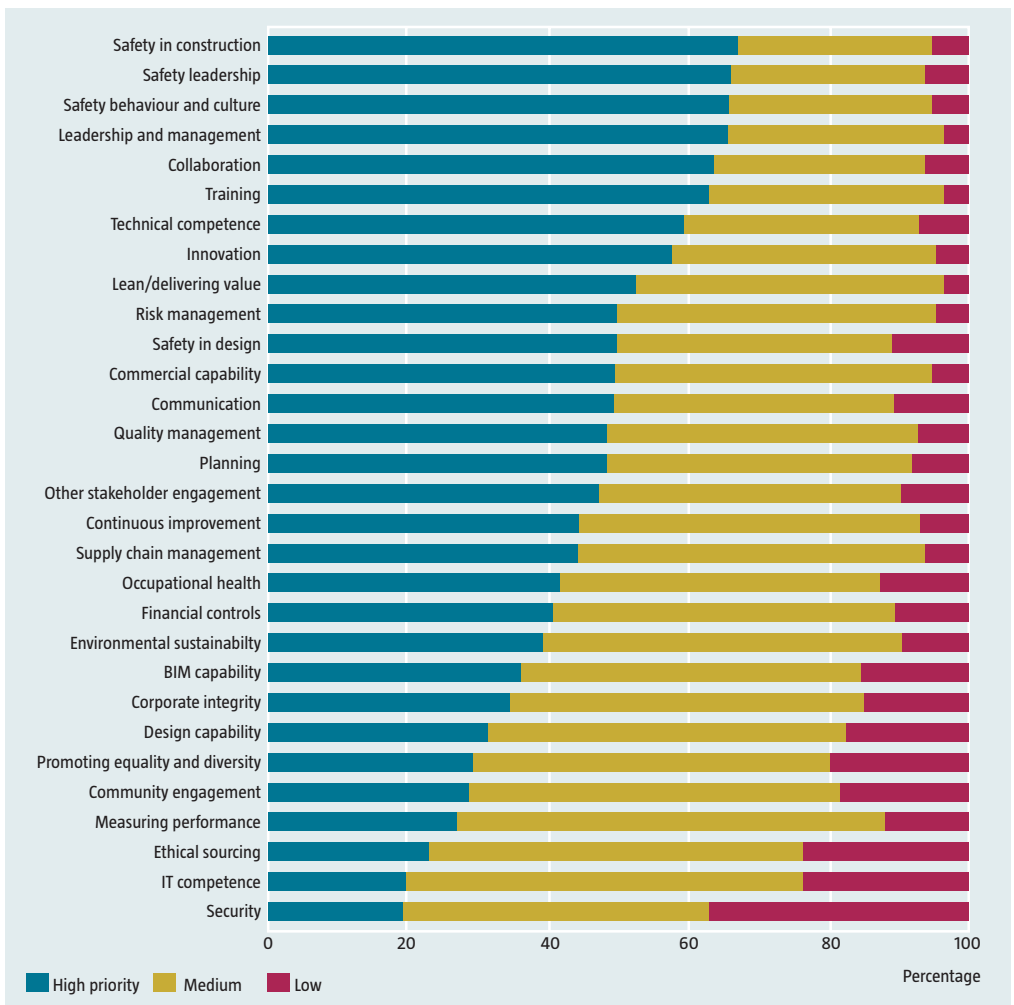
When the responses were split into customers, tier 1 contractors and supply chain, such differences did indeed emerge. Perhaps the most significant of these related to variations between the issues that the industry's customers prioritised and the views of the industry as a whole. While supply chain members generally did not see environmental sustainability as a leading priority (just 42% saw it as such) this was not matched by the customers who valued it far higher (58% said it was a high priority).





## The Survey

Overall results of Ceca-led survey  
of supply chain skills needs



## Results

### Key survey findings

# ISSUES >

Here is an analysis of the key issues facing the industry, as identified by the Infrastructure 21 research.

>> There was a similar variance between customers and supply chain in terms of their views on promoting diversity and equality. This was the fifth lowest priority for supply chain firms, yet placed nine places higher for customers with 84% polled, saying it was a high or medium priority. Analysis at a regional level also threw up some interesting priorities around the country. While there was broad agreement with the national picture on most points, each region had competencies that it prioritised more highly than others.

North of the border in Scotland, respondents strongly prioritised technical competence, while planning found favour with those in the Midlands. A relatively poor showing for building information modelling across the UK was contradicted by respondents from the East of England, who put it as their ninth highest priority. Finally, companies in the South West were looking for greater support on customer engagement than their colleagues around the rest of the country.

### **Opportunities for upskilling**

The Infrastructure 21 board has taken these



results and has used them to develop a detailed programme of support to the supply chain. In doing so it has chosen to focus first on those areas where there is greatest need.

This relates either to competencies where there was strong support from across the sector, or competencies that the sector's customers saw higher priorities than the supply chain, suggesting a need to close this gap through the provision of awareness raising.

## **01** Safety in Construction

### **Why?**

Our sector has made great strides to improve the health, safety and wellbeing of those we employ, and the wider public who interact with the work that we carry out. Yet the construction industry still has much to do to improve this record. Our research indicates that Safety in Construction is a high priority for customers, tier 1 firms and the supply chain.

### **What?**

We are developing proposals for a single UK-wide safety stand down, allowing all companies and individuals operating in the sector to spend time focusing on health and safety, and what they can do in the coming year to improve in this area. Companies will make commitments to improvement, with monitoring 12 months on to see how these issues have been acted on. A cross-industry working group has been established to take this forward. The first national safety stand-down day will take place in spring 2016.

### **When?**

The first national safety stand-down day will take place in spring 2016.

## **02** Safety leadership

### **Why?**

While there is a general need for the industry to improve its performance on health and safety, our research also highlighted a particular need to focus on how those running companies in the supply chain provide leadership on health and safety issues. It is only with strong leadership and a commitment to better performance that our sector will sustain and build on recent improvements in safety performance. This was a high priority for customers, tier 1 and supply chain.

### **What?**

We will be running a programme of training seminars for senior directors and managers at supply chain companies to improve their ability to lead on health and safety issues. The programme will look to draw from existing training that is available in the sector, but through running joint seminars we will reduce the cost to any individual company.

### **When?**

The first seminars will take place in Q3, 2015

## **03** Safety behaviour & culture

### **Why?**

In recent years there has been a growing understanding of the importance of changing the behaviour of individuals as a way to improve the health & safety of the industry. Through behavioural change there is the opportunity to rethink how the industry approaches safety, creating a culture where poor performance becomes unacceptable. This is a high priority for customers, tier 1 and supply chain.

### **What?**

We are in the process of developing a single cross-industry entry level course in behavioural safety for supply chain members. This course will be developed by a dedicated health and safety working group.

### **When?**

The first meeting of the working group took place in May. It is expected that the course will be launched in Q4, 2015.

## Results

### Key survey findings

#### 04

##### Leadership & management

###### Why?

Many of the priorities that have been identified within this research will require strong leadership within supply chain companies. But our research found that this is an area where there is a real demand for improvement.

###### What?

Work has begun to develop a regional pilot in the Midlands looking at mentoring between tier 1 contractors and the supply chain. Under the Infrastructure 21 initiative we will also promote the CITB-supported Construction ILM course, which provides a level 3 qualification suitable for team leaders, supervisors and site managers. We will also signpost suppliers towards the government-led Growth Accelerators programme, which provides subsidised support and leadership and management training.

###### When?

We anticipate launching the mentoring pilot in the Midlands in Q1 2016. Support for the Construction ILM and Growth Accelerators is available immediately

#### 05

##### Collaboration

###### Why?

A growing number of the industry's leading customers now demand evidence that their suppliers can behave collaboratively, and demonstrate that they have done so in the past. Our research found that collaborative working is a high priority for customers, tier 1 and supply chain.

###### What?

We are arranging a series of free Introduction to Collaborative Working seminars in Scotland, Wales and in the English regions. This will be followed by more focused, low cost workshop for suppliers wishing to develop what they have learned in the seminars, helping them move towards achievement of the BS11000 standard for collaborative working. We will also be directing supply chain companies towards the Supply Chain Sustainability School's collaborative planning e-module.

###### When?

The Supply Chain Sustainability School e-module is available immediately. The seminars will take place in autumn 2015, with the workshops to follow.

#### 06

##### Innovation

###### Why?

Recent research suggests that only retail, hotels and mining have lower percentages of innovative business among the major sectors of the UK economy. If suppliers can be encouraged to innovate more, there are opportunities to improve products and services, raising productivity and delivering better results.

###### What?

We are developing a series of regional seminars highlighting the support that is available to industry to help them be more innovative. This will include details of R&D tax credits, Patent Box and European funding, as well as introductions to research body CIRIA, Innovate UK, the Knowledge Transfer Network and local universities. This will be supported by the creation of a construction innovation group, drawing together representatives from the supply chain to identify and resolve barriers that are blocking implementation of innovation.

###### When?

The construction sector innovation seminars to be launched in Q4 2015, alongside the construction innovation group.

## 07

### Lean/delivering value

#### **Why?**

With potential future constraints on resources, it is vital that any work that is carried out to deliver UK infrastructure projects is carried out as efficiently as possible. Yet the sector still faces challenges in terms of the waste and unproductive work that goes on during project delivery. To address this, customers and suppliers are increasingly moving towards models of lean construction, establishing a rapid, high volume and low waste approach to construction. This is a high priority for customers, tier 1 and supply chain.

#### **What?**

The Civil Engineering Contractors Association is seeking to build a partnership with companies already providing guidance on lean construction, supporting the roll out of a lean construction seminars in Scotland, Wales and the English regions.

#### **When?**

The first regional seminars are programmed to commence in 2016.

## 08

### Risk management

#### **Why?**

The complex nature of construction creates the opportunity for a range of different risks to arise for those involved in delivery, including those in the supply chain. For this reason, significant work has been carried out over the years to understand and manage these risks. Yet much of this work is at a high level and can be inaccessible to suppliers. Finding a better way to assist suppliers to assess their risks is a high priority for customers, tier 1 and supply chain.

#### **What?**

Experienced risk managers from tier 1 contractors have agreed to work together to develop a simplified approach to identification and assessment of risks. This work will also guide on the management of these risks with case study examples.

#### **When?**

E-learning modules and seminars to be developed by early 2016.

## 09

### Commercial capability

#### **Why?**

Our research highlighted concerns from across the sector about the commercial confidence and capability of the supply chain. Understanding and managing the successful commercial performance of projects while sustaining positive working relationships with customers and suppliers was recognised as a key requirement for all parts of the industry

#### **What?**

The Civil Engineering Contractors Association is running a series of events throughout the UK at a regional level to increase awareness of commercial issues including construction insurances, NEC contractual case law, Preparation and relevance of contract data under the NEC contract; and liquidated and delay damages to which supply chain members are invited.

#### **When?**

Seminars will run throughout 2015, with immediate availability for supply chain firms to attend.

# Results

## Key survey findings

### 10

#### Quality management

##### Why?

It is vital that as the industry grows it not only continues to deliver on time and on budget, but that it also achieves the high quality expectations of its customers. Our research identified quality management as a key concern for customers, tier 1 and supply chain.

##### What?

With significant existing activity already underway in the sector to raise standards of quality management, we are looking to work with others to identify an effective means of providing quality management training to suppliers. This may be through signposting to existing training support, or through the development of new and bespoke training.

##### When?

Availability of support to suppliers will be subject to the conclusion of discussions with other organisations already providing support to suppliers on quality management issues.

### 11

#### Environmental sustainability

##### Why?

In recent years it has become increasingly apparent that the construction industry has an important role to play in terms of protecting the environment, directly through the impact of the work itself, and also in terms of the impact of sourcing the materials used by the industry and the waste it creates. While improving environmental sustainability was a medium priority for tier 1s and suppliers, it was a high priority for customers.

##### What?

Infrastructure 21 will promote use of the existing Supply Chain Sustainability School, an initiative led by 13 infrastructure contractors who have collaborated to produce a free learning resource for infrastructure suppliers and service providers.

##### When?

Access to the Supply Chain Sustainability School is free and available online immediately.

### 12

#### Promoting equality & diversity

##### Why?

The UK construction industry employs more than 2M people and comes into contact with countless more through its activities. In doing so it is vital that it does so in a way that treats people equally and inclusively. Many of the industry's leading customers are increasingly demanding better performance from their suppliers in terms of the way that they promote diversity and equality.

##### What?

The Civil Engineering Contractors Association is working with other members of the cross-industry Fairness, Inclusion and Respect working group to develop learning resources and toolkits to include toolbox talks, e-learning tools together with some face to face interventions and a resource library to support the construction industry's fairness, inclusion and respect agenda.

##### When?

The results of this work will be introduced from June 2015 onwards, with seminars running from autumn 2015.

**2M**

Number of people currently employed  
by the UK construction industry

**INFRA**   
 **STRUCTURE**  
**TWENTY**   
 **ONE** 