



**Client:** Highways Agency  
**Assignment:** Roll out of Six Sigma performance improvement among contractors on A66 Surtees bridge replacement

## Process improvements on bridge scheme sets the standard for Major Projects Community

**In 2006, the A66 Surtees Bridge crossing the River Tees near Stockton was replaced in a scheme costing £17 million. The Highways Agency used this project as a test-bed for Six Sigma performance improvements... with impressive results.**

Our consultants worked with the main contractors – Edmund Nuttall, TMNE Traffic Management and A One Integrated Highway Services – to build Six Sigma capability and implement a range of projects delivering immediate return on investment.

### Getting Started

To begin, a client-consultant team came together on a Partnering Day and generated over 100 potential project ideas. We narrowed this down to 43 by taking out duplication and projects unsuitable for Six Sigma improvement. Then we worked with a Steering Group of senior managers from the HA and the three contractors to approve a final list of 13 projects for implementation.

### Building Capability

Our consultants – all Six Sigma Black Belts – recruited seven senior managers on the scheme to receive full training and act as programme Champions. Eleven project leaders were then selected from the three contractors and trained as Six Sigma Green Belts. This training gave them the tools and skills to manage the projects identified on the Partnering Day and apply Six Sigma DMAICT methodology to solve problems and improve processes.

### Process Improvement

The focus of the Six Sigma projects was to streamline work, eliminate unnecessary processes and introduce new ways of working to raise performance. These projects included:

- Reduction in injuries by the correct use of hand and eye Personal Protection Equipment (PPE)
- Improvement of the cost capture process
- Improvement of the short-term planning process
- Identification and management of risk to minimise impact on the scheme
- Control of traffic speed through roadworks
- A study into the reasons for cost variance

### Value delivered

Overall, the Six Sigma projects delivered a financial return in excess of £500,000. Non-financial benefits included a significant reduction in on-site accidents and injury, plus more efficient and effective project management procedures.

In every project, new skills and Six Sigma improvements were regarded as highly transferable to other schemes. The tools and techniques learned on this scheme will be rolled out through the participating contractors