



Case Study

Record

A weekly inspection is carried out. The results are recorded on a paper form using a digital pen. The form is left with the team.

Transmit

The information has been captured electronically by the pen and is transmitted immediately to a centralised system.

Report

Accessible via a Web browser, live reports are immediately available with automatic escalation of issues to inform the management team.

## Enabling the reduction of non-compliance, and improvement of team performance in the field.

The North West Gas Alliance (NWGA) is tasked with a significant £380m programme to reinstate and replace some 3,500km of gas mains in the North West of England. NWGA is an alliance of National Grid, who owns the gas network, and Balfour Beatty, the prime engineering contractor.

Current operations are carried out at over 500 sites in the region, comprising of 20 engineering sub-contractors and over 5000 contract workers.



**The challenge:** To enable a process which ensures safe working practices and zero accident frequency rate (AFR) across the 500 sites and by all personnel.

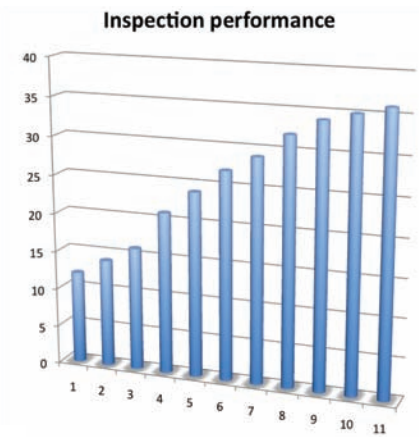
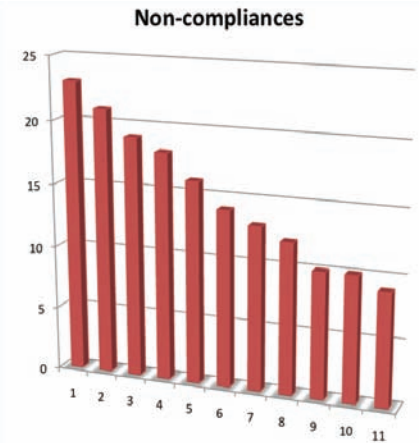
A conventional site safety approach had reduced the independantly audited instances of poor working practice (non-compliances) reported to 700 during 2006, but was failing to deliver further significant improvements.

The existing 40 mobile site supervisors were unable to demonstrate that they were correcting unsafe working practices and effectively coaching their teams on safe working.

# The Solution

Digital pen and paper provides a simple, yet effective, means of capturing information in the field and it does not intrude on the safety conversations that the supervisor has with the field engineers.

The information is sent immediately from the field to update live management reports on safety performance.



A review of the business process highlighted that:

**Remote field working was causing field supervisor information to be lost in transit or reported ineffectively;**

**This issue caused time delays in information being fed back to the management team;**

**There was no formal mechanism for on-site supervisors to record issues;**

**Issues were being found and rectified on site by supervisors, but not recorded – thereby hiding the true nature of the problem.**

Following the review a lightweight process was developed to enable the 40 mobile site supervisors to:

**Conduct weekly safety conversations with their teams in the field;**

**Record instances of safe and unsafe practice in the field;**

**Automatically transmit information back to the management team.**

The solution included providing the site supervisors with a digital pen to record the conversation on paper coaching forms. These are then retained by the teams and form the basis of their safety performance feedback.

Crucially, the process, training and the design of the coaching form encourages the supervisor to 'tell the truth' by recording any issues found, and correcting and closing whilst still on site.

The information captured by the supervisor is immediately transmitted from the pen to a central system. This is used to generate a live management report on safety performance across the organisation.

Major non-compliance issues can be escalated to key stakeholders within seconds of the issue being reported from the field, using text messaging and emails.



## The Benefits

**The digital pen technology deployed in the field supports the conversational style of the process, and enables the supervisor complete freedom to capture whatever information is appropriate in order to deliver flexible feedback to his teams.**

Use of paper-based coaching forms ensures that the teams retain a hard copy of feedback provided to them. These form a historical record which is easy to review without the use of any additional equipment, by the teams, the visiting supervisor and any regulatory bodies.

The regular and on-going nature of the reviews conducted by the supervisor

helps ensure that performance improvement needs are monitored and appropriate steps can be taken to rectify issues.

The immediacy of the inspection information which is delivered back to the management team ensures that they are fully appraised of safety issues out in the field, and can thus appropriately support their field supervisors.

The management reporting provides a full auditable trail of evidence to demonstrate the nature of supervision that is taking place in the field.

The digital pen and paper solution is robust and extremely reliable in use.

Feedback from the supervisors indicates that it is very easy to use, just like the usual pen and paper.

A digital pen and paper based system can be deployed to replace an existing paper based system very quickly and with minimal changes to the current business processes.

The system accommodates many different types of form in the field and does not require any changes to the field equipment when a new form is released.

The digital pen can work in conjunction with other field technologies such as the PDA, and is very cost effective in comparison.

# North West Gas Alliance

**Partnered with Balfour Beatty, National Grid formed the North West Gas Alliance in April 2005. In its first year over 500 people were mobilised across a geographical area of 13,800km.**

“The North West Gas Alliance is focused on delivering the programme of works with safety as it’s primary concern. Our successful partnership is continually reviewing new initiatives and ideas in order to provide the most effective and efficient service possible.”

**John Edwards, Alliance Manager**

## Contact details for this case study

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**We deliver remote data capture and analysis solutions and services which provide meaningful and accurate information enabling informed decision making.**

We use technologies that are easy to use in the field and we apply behavioural science techniques in the design and deployment of our solutions.

We work with leading organisations where there is a need for capturing information remotely and central reporting of analysed information.

Smart Document Solutions is a company of systems integrators, software engineers, designers and management consultants.

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