Nomad Case Study

Council: Chesterfield Borough Council
Business / Service Area: Housing Repairs

1 Background

Chesterfield Borough Council's Operational Services Division (OSD) carries out over 50,000 response repairs a year to the Council's 10,300 dwellings. Over the last three years OSD has changed from a traditional council workforce, with largely paper-based working practices, to a flexible and more productive organisation with modern back-office systems, using mobile technology to deliver improved services more efficiently. The project to deliver this change was known as Project CHRIS (Chesterfield Housing Repairs Information System).

Chesterfield traditionally operated a client/contractor relationship for housing repairs. In 2002, the Housing service had been the subject of a Best Value review, which had resulted in the award of one star, and in the following year the Council's housing repairs and maintenance contract was due to be re-tendered.

Benchmarking activities had verified that OSD were performing very well in doing the actual repairs, but the management of the paper-intensive systems and communicating with the site-based workforce were presenting a barrier to significant future improvement. The client side had updated its IT systems a few years earlier but OSD was still reliant on a mixture of legacy and manual systems. To win the new repairs and maintenance contract OSD knew that they would have to significantly reduce their costs and improve the service delivery performance from the levels in the current contract. OSD recognised that step-change improvements to its current business processes and information technology were essential.

In October 2003, OSD submitted a successful tender for the new contract, based upon a modernised repairs service. They formed internal working groups looking at processes and quality improvement, mapping their business and identifying key issues and improvement opportunities. In late 2003, OSD began to change the traditional culture, making the workforce more mobile but without the technology and communications, although by February 2004 they were taking delivery of new vehicles fitted with GPS tracker systems.

During 2004 Chesterfield procured a work scheduling system and a mobile working solution. Implementing the new systems took a significant period of time as the Council were also changing their core financial systems and the value of the mobile solution contract brought it within the scope of EEC procurement legislation.

By January 2005, PDAs were being used by 30 craft operatives and by May 2005 all the craft operatives carrying out response repairs and void works were receiving their work through a PDA.

For Chesterfield, Project CHRIS has been much more than just the implementation of IT systems. It has been a major culture change project. Some of the changed processes and new techniques were introduced before the technology was fully implemented, and savings began to accrue once working from home arrangements and vehicles with tracker systems were introduced in early 2004.

2 Summary of the Solution

Chesterfield OSD has 70 mobile craft operatives undertaking all response and void repairs to the Authority's dwellings. All work is issued electronically and received by the operatives on their PDAs. The operatives no longer need to complete any paperwork.

When a tenant reports a repair to the call-centre, the staff are able to make an appointment from a schedule of appointment slots provided by the planning staff. Two types of appointment can be made, a 'firm' appointment of either a.m. or p.m., or a 'loose' appointment when the tenant doesn't want a fixed time (for external works for example) where a two to three day window is defined. Evening and weekend appointment options are available and appointments are offered for 95% of jobs.

When a repair is reported it is raised in the Housing IT system, which then sends a works order into a 'bucket' in the scheduling system, using text and Schedule of Rates codes to describe the work and estimate the duration of the job. The bucket is emptied by the planners, who put the jobs into appointment

slots for each operative on the scheduling 'board' within the system, selecting the most appropriate operative for each job. The system identifies which operatives are available at any point in time and will flag up other repair jobs for the same property, minimising multiple calls.

The planners load up each operative with work according to their expected capacity, based upon historical knowledge of each person's individual performance. Once on the scheduling 'board', jobs are sent to the operative's PDA up to three days in advance. Once the jobs are on their PDA, operatives are able to schedule their own work, subject to meeting all appointments and emergency response times.

The workforce starts from home each day and must 'check in' on the PDA when they begin work. The mobile system also requires operatives to confirm that they have completed basic safety items, such as the daily vehicle checks and a risk assessment before starting each job.

Full details of each job are sent to the PDA, including a repair history comprising the previous five jobs at the property. Emergencies are sent with an 'alarm', which the operative must either accept or decline. (To minimise the impact on routine work, OSD generally has one or two operatives in each area specialising in emergency work.)

Job completion is recorded on the PDA, and for gas work the tenant is asked to sign when the work is done. The operative also has to confirm that he has removed any rubbish, or raise an order for rubbish removal, before the job can be closed.

If the job doesn't appear to be correct when the operative is on site, he can request a variation through his PDA and will get a response within 15 minutes.

Materials used on the job are recorded on the PDA, which automatically sends a replenishment request through to the stores so that the operative can then collect a pre-prepared pack of materials to replenish the imprest stock held on the van. Non-stock materials can also be ordered through the PDA.

Chesterfield uses the Sx3 Housing back-office system and the CGS Metrix 4 scheduling system. The mobile solution is from Pervasic and the network service is provided by Orange, who is also the prime contractor for the solution. The solution is very robust, switching between GSM and GPRS depending on coverage. Connectivity capability has recently been improved with the introduction of 3G/GPRS enabled PDAs.

3 Efficiencies Achieved - Hard

Chesterfield has realised significant efficiencies and cost savings from Project CHRIS, which have made a major contribution towards achieving the Council's Gershon Annual Efficiency targets. Details of these efficiencies are set out in the paragraphs below.

3.1 Overhead Staff Savings

Project CHRIS has enabled Chesterfield OSD to significantly rationalise its overhead activities, achieving a total annual saving in staff costs of over £243,000.

The move to mobile working resulted in a reduction of eight supervisory, administrative and support staff during the 2004/05 financial year. This saved £138,700 in the first year and represents an annual saving of £174,800. In the following year, 2005/06, a further three posts were removed, saving £60,000 in the year and representing an ongoing annual saving of £68,300.

3.2 Fuel Savings

Since the move to mobile working OSD has experienced a significant reduction in fuel costs. This has resulted from a reduction in travel as the workforce now work from home, jobs are scheduled more efficiently, and unnecessary journeys have been minimised.

Fuel usage reduced by 24,700 litres (16%) in 2004/05 compared with the previous year, saving some £17,600. In 2005/06 there was a further reduction of 4,780 litres, equating to a total annual saving of 29,500 litres or £24,000 at current fuel prices.

3.3 Transport Savings

As well as fuel cost savings, more efficient working has enabled Chesterfield to reduce overall vehicle use, and in particular short-term vehicle hire. A reduction of one vehicle in 2004/05 saved £8,800 and a further reduction in 2005/06 resulted in a total annual cost saving of £14,400.

3.4 Productivity Increases

Efficiencies have enabled Chesterfield OSD to release a number of craft operatives from response repairs to work on capital schemes under the Decent Homes programme. The performance of OSD's own teams is known to deliver the improvements at a significantly lower cost than the external contractors undertaking the rest of the programme. OSD have also slightly reduced the overall numbers of craft operatives employed.

Overall, OSD's repairs workforce increased productivity between 2004/05 and 2005/06 by 10.58%, based upon the average value of work produced per labour hour, adjusted for inflation. This productivity increase enables the Chesterfield to undertake more work for the same budget, and would equate to annual savings of about £221,400.

3.5 Better Value for the Council

OSD's tender for the maintenance contract in 2004 was 29% below the price of the next lowest tender (based upon a £5.5 million annual spend model). They are also making a 6% surplus on the contract each year, which is now being returned to the Council and invested in further work.

3.6 Overall Savings

The overall savings achieved in each of the last three years are summarised in the table below.

The figures for each year in the table represent the savings compared with the cost of delivering the service prior to the implementation of Project CHRIS. Reductions in direct labour costs haven't been identified separately as these are reflected in the productivity savings.

Year	Annual Savings				
	Staff	Fuel	Transport	Productivity	Total
2004/05	£138,700	£17,600	£8,800	£140,500	£305,600
2005/06	£234,700	£24,100	£14,400	£221,400	£494,600
2006/07 (Projected)	£243,100	£24,100	£14,400	£221,400	£503,000
Cumulative total savings over 3 years:					£1,303,200

It is anticipated that the level of savings achieved in 2006/07 will represent the minimum level of savings for future years. Additional future savings may also be achieved following implementation of the initiatives outlined in section 5.

4 Efficiencies Achieved - Soft

The change in Chesterfield has resulted in several benefits for customers. Appointments are now made for 95% of jobs, and the number of repairs carried out within target times has increased from 88% in 2003/04 to 96% in 2005/06.

Overall satisfaction with the repairs service has increased from 58% in 2002 to 83% in 2005, and satisfaction with the most recent repair from 80% to 91% over the same period.

Formal consultation with tenants indicated that they wanted all the repair work to be done at the same time rather than in several visits. The facilities in the new systems make it much easier to co-ordinate multiple

repair requests and ensure a single visit completion, usually by one operative.

The change has also brought additional benefits for staff and management.

Craft operatives now have the opportunity to work with more autonomy. They are able to work flexible hours around a set of key requirements (i.e. immediate attendance for emergency works, keeping appointments, working safely, achieving good quality work and high levels of customer satisfaction). Lone worker security is improved by means of a bespoke panic alarm escalation procedure linked to the PDA and backed up by GPS.

Housing managers can view repair progress and performance, and management has complete real-time visibility of all the work in progress and can make more informed judgments to improve the service. Jobs are closed down and invoiced in real time and with a greater degree of accuracy, avoiding the need for time consuming cost error reconciliation.

The system prompts the craft operative to check for additional service offerings, such as organising rubbish removal and allows fast authorisation of essential job variations.

Environmental benefits will have been realised following the more efficient use of vehicles, the reduction in fuel usage of over 18% and the consequent reduction in emissions.

OSD's Project CHRIS has made a significant impact on the speed and quality of the response repairs service. The accuracy of forward planning, coupled with the speed of communication and the flexibility and autonomy invested in Chesterfield's craft employees has resulted in a mindset, a target and a reality of a "right first time" approach to service delivery.

5 Future Potential Efficiencies

OSD is looking in the near future to use the mobile technology to improve its materials supply and processing arrangements. Although efficiencies haven't yet been quantified, the areas where improvements will take place include:

- Full bin replacements for van imprest stocks (similar to a 'pit stop' approach)
- All direct materials will go through stores, improving the efficiency of the systems
- Electronic ordering from suppliers
- Capital works site managers will have PDAs to organise materials

Void inspectors will be supplied with PDAs, enabling them to raise orders directly. A single inspector will also be responsible for each void from start to finish, increasing accountability and control.

Call-centre staff are being given access to the schedule, avoiding the need for planners to provide appointment slots.

Printers are being installed in the vans for gas service engineers so that the safety certificate can be printed out on site.

Mobile working technology is seen as a success by the Council who are looking to extend it into other areas including:

- Enforcement
- Recreation and Leisure
- Housing management staff
- Anywhere where lone worker security is a concern

6 Key Pointers for Local Authorities

Chesterfield recognised that Project CHRIS was a significant culture change for all involved. Driving the change was a major challenge, with steep learning curves for many people, as was accepting that improving efficiency means fewer jobs of a routine nature and that future job roles would be ever more demanding.

Chesterfield's craft workforce were initially suspicious of the proposals. The implementation of the new technology and automated systems took away a degree of flexibility and freedom that was inherent in the paper-based systems. Craft operatives are paid on the basis of completed work and could potentially lose out financially. In order to help overcome potential suspicion, OSD wanted to empower the workforce and decided to allow them control over the scheduling of their own work. On this basis OSD decided not to adopt an automatic scheduler issuing one job at a time to an operative, but instead chose to manually allocate work and to give each craft operative up to three days work in advance. This resulted in the selection of the Metrix 4 scheduler, which was seen to provide more flexibility than some of the alternative automatic scheduling systems.

Steep learning curves were an inherent feature of Project CHRIS, and Chesterfield found that employee training needed to be greater in breadth and depth for some individuals than originally planned. One to one training was provided initially but problems were experienced with a few operatives not following requirements after training and a minority who kept forgetting the learning. Training the trade union representative on the system was a great benefit as he was then able to filter the problems and ensure that genuine issues with the system were appropriately raised.

Other challenges that had to be overcome were:

- Adapting private sector software to OSD business & language
- Lack of experienced resources for such a project within the business and in corporate IT, relying heavily on a few OSD staff and the suppliers to implement the solution.

7 Contacts

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