

Data quality and the MPS

“The benefits of the project have snowballed as we have progressed,” says Commander Steve Allen (right) about the Metropolitan Police Service’s Data Quality project.

Steve Allen, MPS Commander for the City of Westminster, the largest borough in London with over 2000 Police officers and support staff.



Commander Allen is the Senior Sponsor for the MPS’s Data Quality project. He chairs the board that guides the strategic direction of the project. The work is led by a specialist data quality team from the Met’s Directorate of Information (DoI). Together they have a clear aim of ensuring that the project delivers operational benefits without over-burdening staff.

Although the project was conceived and implemented by the DoI, who support and develop the MPS ICT infrastructure, its aims are wider than simply delivering an IT solution to data quality issues. “The project team had a clear vision of what needed to be delivered” noted Commander Allen, “and has ensured that the project works towards the delivery of benefits for operational policing, such as officer safety, policing effectiveness and public protection.”

The project currently focuses on information recorded in key policing systems. Work is directed to data identified by stakeholders and users as most valuable to their job. Three main approaches are employed to improve quality:

- Enhanced data entry validation to help police officers to get it right first time.
- Data quality reports sent directly to boroughs for review and action (see box).
- Identification and dissemination of data quality best practice.

DATA QUALITY REPORTS

Two forms of data quality reports are produced regularly:

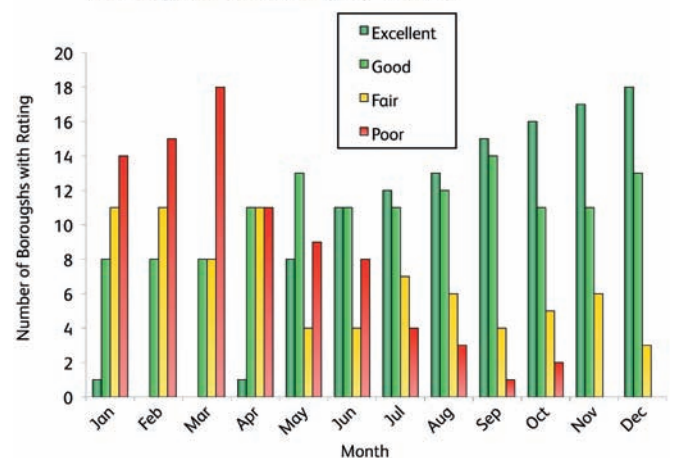
- **Daily exception reports** highlight specific records with data quality issues. The reports are sent to borough staff, who can correct records as required. Data quality issues are therefore addressed in a timely manner at a local level.
- **Monthly metrics reports** provide an indication of overall data quality at each borough. They are sent to the borough’s nominated Data Quality Liaison Officer and a Senior Management Team lead for action. Summary reports showing the relative performance of boroughs go to central management.

Communication is a key aspect of the project. The project team has worked with Detective Superintendent David Tucker, the project’s Senior User, to develop a network of links across all MPS boroughs. Each borough has a nominated Senior Management Team (SMT) lead and a local Data Quality Liaison Officer (DQLO), who has a key role in

monitoring local data quality (using the information provided in the monthly reports) and sharing guidance about data quality best practice with colleagues. Other communication activities have included intranet articles, roadshows, presentations to borough SMTs and a centrally run Data Quality Forum.

Engagement and support at a senior level within the MPS has been crucial to the success of the project. Commander Allen has played an important role in this. He notes that the demonstration of data quality improvements and the link to operational benefits has helped secure high level strategic support.

Borough Data Quality by Month



Over the past year the Data Quality project has brought remarkable improvements to the quality of MPS data. The project provides each MPS borough with a view of its data quality. There are several reports, of differing levels of granularity, to support different types of user, but at the highest level, data quality performance is represented by a Red, Amber and Green (RAG) status. At the original baseline, only one borough demonstrated “Excellent” data quality. Now (as of December 2008), almost all boroughs have “Good” or “Excellent” data quality.

Data quality is measured against standards based on business rules and processes. Where appropriate, the IMPACT data quality standards have been applied. At present, around two hundred business rules across three major MPS applications (Crime, Custody, Stops) are monitored. Missing and invalid data, as well as inconsistencies such as dates that do not align with other information in a record, raise exceptions, which are reported upon.

EXAMPLE

A prolific offender was arrested in the weeks before Christmas, for daytime burglary. A routine check on the Stops database revealed that this offender had been stopped at 3am the previous morning, shortly after a woman had been mugged in the area. In a lineup after the arrest, the woman identified her mugger as the offender. The accurate and timely Stops data entry allowed the link to be made. It also allowed the woman to identify the mugger while his face was fresh in her mind.

Nick Crouch, head of the DoI's Data Management Team, says: "This is not about performance measurement. We are providing operational staff with practical tools for them to use to improve quality. The direct outcome here is that real operational data is corrected and made fit for purpose."

The benefits to the MPS include improving the ability to find and link information on offenders. This increases public and officer safety and contributes to greater efficiency. It enhances confidence in the data, increasing the likelihood that it will be used and trusted by MPS staff and partner agencies.

There is a challenge in identifying specific incidents where data quality improvement has led to positive outcome. As D. Supt. Tucker says, "Most improvements simply mean that a potential error or incident does not occur and business progresses unremarkably." However, one of the successes of the project has been a significant improvement in the timeliness of entering Stops records. The case described in the box above is a good example of the value of this work to operational policing.

LESSONS LEARNT

So, what are the main learning points we can use from this success and implement elsewhere?

- Senior sponsorship is crucial. It opens doors and minds. Where there are many stakeholders across the enterprise, such support is vital for engagement at all levels.
- Rigorous analysis of the data, its quality, the value of individual data items to the business and the impacts of getting it wrong, is critical. This informs priorities and lends credibility when talking to stakeholders. They realise that the project team knows what it is talking about and that the outcomes will be linked to their own priorities and concerns.
- Clear aims and objectives that align with operational policing and are demonstrably relevant to frontline staff are essential. A benefits "map" to demonstrate that alignment is a useful communication tool.
- A strong communication strategy ensures that stakeholders are engaged effectively. Enlisting the energies of local staff to cascade messages with frontline staff/officers is important. Keep doing it – communities need to be nurtured.
- Recognise that improving data quality is not just about building an IT system to measure quality. Business change is required to ensure that it becomes business as usual. Reporting is primarily a tool to support data quality improvement, not a performance measure or a means of apportioning blame – although it can also be motivational, a way of evidencing progress.

IN SUMMARY

- Senior sponsorship and engagement with senior staff is crucial
- Know your data and its business value
- Have clear aims linked to business objectives
- Use a variety of communication methods and utilise local contacts
- Remember... this type of work is about improving rather than measuring data quality or placing blame

The success of the project in delivering data quality improvements and gaining support from borough staff and officers to make the data quality improvements has surprised many within the MPS. However, D. Supt. Tucker noted that the project has generated a considerable amount of support within boroughs – in particular, a number of the borough DQLOs (including his own) have become extremely proactive.

This bodes well for the continued success of the programme and the embedding of good data quality practices as business as usual. As Nick Crouch says "We are just starting out on our data quality improvement journey but are hugely encouraged by its success so far". Further steps will include extending the data quality analysis and reporting to other policing systems. There are also plans to raise standards further for the data covered by existing reports.

Commander Allen summarises "Good quality information is vital for operational policing. Poor quality data at best is useless and at worst.....".

For more information on the MPS data quality project, you can contact Nick Crouch on nick.crouch@met.pnn.police.uk.

IMPACT PROGRAMME BUSINESS DATA PREPARATION (BDP) TEAM

The IMPACT Programme's BDP team is available to assist forces with the preparation of their data. The team consists of members security clearance to SC level and relevant experience to assist forces in all aspects of data quality preparation, including planning, data mapping, data extract processes, testing and data profiling.

The BDP team can also identify the root cause of problems and make recommendations to solve them, such as technical fixes, additional staff training or procedural changes.

For more information on data quality, either contact your IMPACT BDP representative, your IMPACT Regional Coordinator or visit the IMPACT extranet at www.npiaextranet.pnn.police.uk/microsite/impact/datapreparation.html.

If your force has any stories regarding data quality, please email them to impact.programme@npia.pnn.police.uk and we will consider publishing them in the next edition.