

Title: Data Quality Strategy

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Purpose

The purpose of this report is to seek approval of a Data Quality Strategy.

Background

A new approach to the BVPI audit was launched last year, which moved away from simply testing a number of BVPIs to looking at the Council's overall arrangements for data quality. These arrangements are then used by the Audit Commission to determine how many BVPIs it will inspect. The Audit Commission has produced a key lines of enquiry (KLOE) and a standards document, 'Improving information to support decision making: standards for better data quality', which set out minimum levels local authorities are expected to achieve. Failure to achieve these minimum requirements is likely to lead to an increase in inspections, more detailed auditing of the Council's performance information and an inability to improve its CPA rating. Furthermore, Government is looking for evidence that local authorities can be trusted with greater powers, and as such is looking at performance indicators and the data on which they are based, to decide which authorities can manage with less intervention, and which authorities need more.

CMT considered a range of issues concerning data quality at its meeting on the 9 May 2007. The development of a formal strategy for data quality was recommended in last year's Best Value Performance Plan and data quality review 2006-07. CMT agreed that a data quality strategy needed to be produced. A formal draft strategy was presented to CMT on 23 May 2007.

Key Issues

The Data Quality Strategy is attached at Appendix A. It includes an action plan following a brief assessment of current position and areas for further development. This assessment was based on the Audit Commission key lines of enquiry.

The adoption of this strategy will require considerable further work in the areas highlighted in the action plan. Of particular importance will be:

- Communicating internally to Members and staff what is meant by data quality, and providing training where necessary. There seems to be considerable confusion about data quality and it being equated to the 'provision of information'.
- The need to ensure data quality features in all contracts and service level agreements, especially where around 50% of services are now externalised. At present this is not the case. For example, the service level agreement with the Citizens Advice Bureau includes a section on monitoring and statistical information. It requires that certain information is provided, such as number of enquiries received on an annual basis. However, there is no direct reference to data quality or any provisions to ensure high quality data is provided. This means that a future funding decision for CAB support could be based on inaccurate data.
- Getting consistency across the organisation and adhering to common data quality standards. The integration of systems and the use of a corporate system is likely to become increasingly important in the future.
- In the medium term, developing information sharing agreements with other partner agencies.

Effects on strategies and codes

There are no direct effects on other strategies and codes.

Risk management implications

If the Council does not address the data quality issues, it will run the risk of scoring low against the Audit Commission's standards. This in turn could lead to greater inspection and intervention, and could have a negative effect on the Council changing its CPA rating.

In addition, if the Council is basing its decisions, such as awarding contracts and directing resources, on inaccurate information, then it runs the risk of making the wrong decisions. This could have a long-term impact on the Council's ability to function efficiently, and would result in decreasing satisfaction levels amongst both its customers and its staff.

Poor data quality could also have an impact on partnership working, as other agencies will want to be able to rely on the data provided by the Council. Assumptions could be made about the quality of the Council in general if the data it provides is seen as inaccurate, which could lead to issues over trust.

Financial and performance implications

There are no direct financial implications for data quality. The adoption of the draft Data Quality Strategy could have a considerable impact on the way performance in the Council

is measured, and how the Council is viewed by other organisations.

Legal and human rights implications

There are no direct legal and human rights implications.

Next Steps

The Data Quality Strategy will be embedded across the Council. This will be achieved primarily through the Policy and Communications team, director and service data champions and service managers.

Recommendations

The Audit Committee is asked to approve the Data Quality Strategy and suggest any changes needed.

Background Papers

The Audit Commission documents to be found in the Policy and Communications office:

Data quality key lines of enquiry

'Improving information to support decision making: standards for better data quality', March 2007

Data quality strategy

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Introduction

Why is a strategy needed?

The Council is accountable for the money it spends and the services it provides to the citizens of West Wiltshire. To be accountable, a wide range of financial and performance data and information is published and the Audit Commission and other bodies undertake various inspections of the Council. However, in recent years the use of performance information is increasingly being used as an alternative to inspection, and a greater emphasis is being placed on the management arrangements for producing high quality data. If these arrangements are inadequate it is likely to lead to more detailed auditing of the Council's performance, an increasing number of inspections, and it may have an adverse impact on CPA.

Quality data is also essential for effective and timely decision-making and in working with other partner agencies. Management decisions, such as continuation of contracts, are partially based on the information supplied through monitoring, including the ability of contractors to meet service level agreement targets. Good quality data can highlight which services are performing and well, and which services need additional support. Increasingly, external partners are demanding that data quality standards be in place to support data sharing initiatives, making data quality an important aspect of partnership working. Poor quality data can lead to the wrong decisions being taken, services not being recognised for their performance, and a loss of confidence in partners to share data and information.

The purpose and scope of the strategy

This strategy aims to ensure that data quality, and the processes behind it, is corporate, consistent and comprehensive. It ensures data quality in the Council is at a good level, and works towards the standards laid down by the Audit Commission in their document 'Improving information to support decision making: standards for better data quality' and in their Key Lines of Enquiry (KLOE). These are appended to this strategy.

This strategy is applicable to:

- Any information system used or managed by the Council, including paper, electronic or other forms of media.
- Data produced for BVPIs, local performance indicators, government returns, and surveys
- In-house services and those provided through contracts or other agreements
- Partnership working and any data sharing initiatives

What is good quality data?

There are six criteria against which data quality can be assessed: accuracy, validity, reliability, timeliness, relevance and completeness.

- **Accuracy:** Data should be sufficiently accurate to present a fair picture of performance and to inform decision making. Definitions for data should be specific and unambiguous. Data must have an appropriate level of detail and be within a reasonable margin of error.
- **Validity:** Data should clearly and appropriately represent the intended result and be in an agreed format, which conforms to recognised national or other standards.
- **Reliability:** Data collection processes and analysis methods should be stable and consistent, both across services and over time, to increase confidence that changes in performance information reflect real improvement rather than variations in collection methods.
- **Timeliness:** Data must be up-to-date and available for the intended use within a reasonable time frame and frequent enough to influence the appropriate level of decision-making.
- **Relevance:** To be of value to users and to save resources, only relevant data should be collected, analysed and used.
- **Completeness:** All relevant data should be recorded. Monitoring missing or invalid information can provide an indication of data quality and point to problems of recording.

Data quality objectives and principles

The Council will work to ensure high quality data supports the delivery of the Corporate Plan, both in terms of informing decision making and reporting progress, both internally and externally. The Council will ensure that:

- Processes and procedures used to generate data are robust and well developed across the whole authority
- Data quality is integrated into other schemes, strategies and agreements including service and resource planning, performance monitoring, risk management, business continuity planning, contracts and other agreements

- The importance of data quality is regularly communicated with staff via performance management training and through briefing updates to corporate team and service managers. Staff should be aware of their responsibilities and roles in relation to data quality

The Council will adhere to the following overall data quality principles that were originally set in 2006. The key principle is to get data accuracy 'right first time'.

Data quality principles

Data accuracy

- Get data accuracy 'right first time'
- Ensure no future external audit qualification or reservation of national BVPIs
- Avoid the use of estimated data wherever possible
- All figures to be calculated to two decimal places unless statutory guidance states something different

Definitions and guidance

- Policy and Communications to ensure any changes or updates to BVPI definitions from the Audit Commission or DCLG to be notified to service managers as soon as practical
- Ensure local performance indicators are clearly defined and unambiguous by including definitions and methods of calculation where appropriate

Reporting and timeliness

- Service managers must ensure the timely production of data for quarterly monitoring and year end

Audit and review

- Up to date working files must be produced for each performance indicator to allow for effective audit and review
- All key indicators are to have a user guide which is to be reviewed annually

Risks and security

- Data quality is considered in strategic and service risk assessments
- Business continuity plans should include data recovery and backup procedures

Roles and responsibilities

- Service managers are responsible for data quality
- Data quality roles and responsibilities are to be incorporated into job descriptions

To ensure these data quality objectives and principles are fully embedded into the organisation an action plan has been produced. This addresses issues following an assessment of our current position and where we need to be against Audit Commission guidance in the following areas: governance and leadership, policies, systems and processes, people and skills, and data use.

Governance and leadership

The Council is committed to ensuring it achieves and maintains high quality data standards. There is Member and senior officer responsibility and accountability for data quality. It forms a part of the Council's approach to performance management and in developing a performance culture within the organisation.

Current Position

The Council has worked hard to improve the quality of its data and the information derived from it, and made a clear commitment to improve it further in the future. It has a number of data quality principles to which it conforms, including the commitment to getting data 'right first time', rather than relying on extensive cleansing exercises, and ensuring that there is no future external audit qualification or reservation of national BVPIs.

Data quality has commitment from senior management, with a named corporate director taking responsibility for, and driving improvements in, data quality. All service managers are accountable to the corporate director. Senior managers, as part of the corporate management team, check the quality and reliability of all performance information before it is released to the public, and take an active role in ensuring performance constantly improves.

Two member data champions have been appointed to improve data quality accountability and to ensure those responsible for it take it seriously.

Each service area has a designated data champion who checks that those collecting data do so in a manner which ensures good quality. Data champions review and report on departmental compliance with the relevant policies and procedures, and will rectify any instances of non-compliance.

Service managers assist their data champions with procedures and by instilling the importance of data quality within the staff they manage. Managers set data quality objectives for the service and develop data quality policies to support these objectives.

The Policy and Communications team is responsible for communicating the Council's commitment to data quality to staff at all levels, and for informing relevant staff of any policy or procedural change on a timely basis.

Areas for further development

This strategy needs to be directly linked to other key strategies, including the Corporate Plan and the Performance Plan. This should ensure that data quality priorities are highlighted within corporate and service level plans, and that data quality standards are consistent throughout the Council.

In addition to appointing member data champions, the Council should seek to provide training to all members on the importance of data quality and to ensure they are familiar with the Council's specific approach to it. In particular, members of the Scrutiny Performance Management Group and the Audit Committee should receive training to further their understanding of data quality and the issues affecting the Council.

As part of the corporate performance system, issues relating to data quality should be reported to the Corporate Management Team. A framework for monitoring data quality, with regular formal reporting on key measures to service managers and data champions, should enable effective challenge to the integrity of the data. Data quality should be embedded into corporate risk management systems with regular assessments of the risks associated with unreliable and inaccurate data. In addition, each service should have its own data quality actions incorporated within its service plans and set challenging data quality targets, to aid the improvement of data quality.

Policies

The Council's Corporate Plan provides the starting point for developing policies on data quality. The Council's vision, values and role include being efficient, open and honest and insisting on high standards of performance. A number of essential policy statements are highlighted below.

- Data is only collected where it is required: to help develop and monitor the Corporate Plan and other key strategies, to effectively manage services and inform decision making, and for specific statutory returns
- Data must be produced efficiently and in a way which can be used to help inform effective decision making
- There must be equal application of data standards for both in-house and externalised services
- The Council will be open to data sharing with partners where this is beneficial to customers and in such circumstances to develop information sharing agreements
- The need for confidential data will be minimised. Essentially, this will be confined to personal and commercially sensitive data which could not be released without damaging the standing and integrity of the Council.
- Data will be published in accessible ways tailored to the needs of different audiences
- Tools and training will be provided allowing staff to effectively manage data and ensure its quality.

Current position

In line with the Council's approach to improving the quality of its data and related information, the Council has developed a number of performance management procedures. These currently cover analysis and reporting of performance indicators and other management information (such as complaints monitoring). They are linked to the Corporate Plan and have specific focus on improving performance in priority areas. The procedures are closely tied to national standards and guidance, are kept up-to-date and widely disseminated throughout the authority.

Areas for further development

In addition to procedures on the production of performance information, the Council needs to ensure it has an up-to-date policy covering the extraction of this information, including the collection and manipulation of data. Furthermore, to ensure compliance with national guidelines, and to satisfy partners on the safety of data, a confidentiality policy which meets national standards, and includes the Data Protection and Freedom of Information Acts, will need to be produced and communicated to staff and the wider community. The policies must be complemented by clear and detailed operational procedures, and enhanced through examples of best practice.

Although information is subject to cross-checking and top level approval before it is published to the general public, the Council should apply the same standards to data supplied by other organisations. Ideally, this should be formalised in an information sharing

agreement, which should be in place between all partner organisations to ensure clarity and uniformity of purpose. The Council should apply the same rules to information received externally as it does to information derived from inside the organisation, and should be subject to rigorous checks and quality assurance practices to guarantee reliability.

As a number of prioritised services, such as waste and grounds maintenance, are operated by contractors, it is important that the data received from them is accurate. Work has recently been undertaken to improve the level and quality of information provided by contractors, as well as to improve overall contractor monitoring. However, as it is difficult to change a contract before it is completed, this task will continue for some time. The Council needs to ensure that whenever a contract is renewed or issued, data quality is included in the new contract. Data from contractors also needs to be subject to checks and assurances. Standards need to be in place to guarantee quality data, and there needs to be a system of documented and consistent checks across services to ensure not only that the data quality is acceptable, but also that all contractors are treated in the same manner.

Mechanisms need to be in place to monitor compliance with data quality procedures. Any instances of failure to comply with the corporate policies or national standards should be investigated and corrective action should be taken.

The policies and procedures should be reviewed on an annual basis to measure progress against actions and to ensure that guidance remains correct. This should form part of the usual performance management process.

Systems and processes

In the Corporate Plan the Council is committed to putting in place sound performance and financial management systems (under the GTJD principle - a well planned and focused approach). It will work towards an integrated approach, bringing together key systems that produce data including the CSU customer relationship management system and others?

Current position

Various systems are used by the Council for collecting the data. Each service is responsible for collating its own data, in the manner which best suits their individual needs. These systems can be either manual or electronic. At present there is no overarching umbrella system which collates the information produced by each service. The Council has introduced a number of processes to improve the quality and reliability of its performance information. Many of these are corporate, with each service expected to abide by them. Some services have also implemented their own processes.

To ensure the quality and accuracy of the data, the Council has a series of end of year checks in place. A sign-off form has to be completed for each Best Value Performance Indicator (BVPI) to ensure that the correct guidance has been used to collate and calculate the result, and that all background papers for the indicators – including calculations and working papers – are available to view. By signing off in this manner, it is hoped that the data collected will be 'right first time', removing the need for corrections and alterations at a later stage. The officer responsible for collecting the data, the data champion, and the service manager are all responsible for signing the form. Data is therefore subject to departmental checks before being reported upwards to senior management or disseminated amongst partners and the public.

The Council is committed to avoiding the use of estimated data wherever possible and, to improve accuracy and uniformity, asks that all figures be calculated to two decimal places unless statutory guidance state otherwise.

Up-to-date working files are produced for each performance indicator to allow for effective audit and review, and all indicators have a user guide which is reviewed annually and updated with any new guidance and processes.

Help and advice is available for staff reporting on performance indicators, with the Policy and Communications team acting as a 'help-desk' facility. They ensure that the information is reported in a timely fashion and that all national standards and best practice guidance are disseminated to those who need it. In addition, the Policy and Communications team provide information on the correct population, number of households and other data required for calculating indicators. This ensures uniformity in calculations and methodology.

Arrangements for collecting and recording data are integrated into the wider business planning and management processes. It is incorporated into strategic and service risk assessments, and business continuity plans include data recovery and backup procedures.

Areas for further development

There are a number of ways in which the Council can improve its systems and processes for collecting and reporting data. It can tighten the way data is collated, utilising a central system, which all staff can access. This will allow for a more obvious reference point, a clearer and more precise audit trail, and clarify individuals' responsibility. In having a central system, furthermore, the consistency of the data will improve. When designing an umbrella system, controls should be built in to avoid erroneous data entry and improve accountability. This will enable the Council to work better towards the 'right first time' principle. Any systems should be designed and reviewed through consultation with the members of staff using them, and should be fit for purpose.

The Council must ensure that detailed procedure notes and manuals are available for all electronic and manual systems. Although support is available in the form of help-desk facilities and dissemination of guidance, more could be done to expand this system to be consistent across all services.

Protocols could be developed to cover information sharing both internally and with partners. This would be particularly useful where confidential information is being reported, by explaining exactly what information can be shared, how it can be shared, and for what purpose. In this manner, the Council could confirm that it is working towards the principles laid down in the Data Protection Act, as well as increasing data security.

Security arrangements, including access control, should be in place to ensure both the data and the systems holding it, are secure. These should be in compliance with the international standards ISO/IEC 17799 and ISO/IEC 27001. Electronic records and data which are essential to the correct running of the Council should be backed up regularly to ensure safety. Systems should regularly be tested to ensure they continue to function properly. Risk assessments must take account of possible issues which could be caused by system malfunction or failure, and safety checks should be put in place to minimise their chances of occurring.

People and skills

Developing a customer focused performance culture is central to the work of the Council. The need for high quality data will form a part of this culture.

Current position

There is a network of data quality champions across the Council, who oversee good quality data for their individual service areas. The Council provides training and briefing sessions for these champions, as well as for service managers and data collection officers. The Policy and Communications team performs an annual review of staff awareness of data quality through the staff satisfaction survey. This highlights whether any additional or refresher training is required individually, by service area, or throughout the Council as a whole. They are also responsible for ensuring staff are aware of any changes in the data requirements.

Areas for further development

The Council aims for data quality to become 'business of usual'. It hopes that ensuring good quality data will become second nature to all staff, who will automatically adhere to data quality principles.

All staff need to be aware of data quality issues. Although staff who are directly responsible for the correct collation of data have the principles of data quality included in their job descriptions, and are given training through their respective services, more work can be undertaken on raising awareness on a general level. Commitment to data quality needs to be communicated clearly, to ensure that all staff, not just those who are responsible for performance indicators, know they have a responsibility for data quality. This is possible through the dissemination of this strategy, the increased awareness of procedures around data quality, and through general staff training, such as induction days. This will allow continuity across teams and services, and assist with staffing issues, for example when the data collection officer is on leave. The Council should undertake an assessment of the data quality skills that it has in place across the workforce, identify potential gaps and provide the relevant training to fill them.

Those entrusted with ensuring data quality should have it included as a specific part of the appraisal process. Staff should receive specific training on effective collection, recording, analysis and reporting of data, and should have the necessary technical and IT knowledge to be able to ensure good data quality. Briefing sessions and refresher training programmes can assist in raising the level of staff competence in data quality. The training provision should be reviewed regularly to ensure it is still fit for purpose, and to allow it to respond to changing needs. Roles and responsibilities should be clearly defined in terms of data quality, applied consistently across the organisation, and should be incorporated into job descriptions. Data quality targets and standards should be set; staff should be made aware of these and assessed against them.

Data use

The use of data should be clearly understood, otherwise the need for its collection will be challenged.

Current position

The Council currently uses the data it collects for a variety of purposes. In addition to reporting on national and local indicators, it is used internally for management information.

This includes trend analysis, highlighting movement over time, and to aid in the service and resource planning process.

Areas for further development

Reported data should be fed back to those who generate it to reinforce understanding of the way it is used and the purposes and uses behind it. Where possible, the data used for external and performance reporting purposes should also be used in the day-to-day management of the services. This can include its use in the planning processes and for resource allocation. Management action should be taken to ensure that any issues identified are tackled effectively and quickly. The Council should be aware of what changes could occur in the future and to plan effectively before then, to enable a proactive, rather than a reactive, approach to data quality.

Action plan

An action plan has been developed to allow the Council to improve its approach to data quality.

These actions need to be completed to meet the standards set out by the Audit Commission. Actions are divided into levels, detailing which level of standard will be met by the completion of the action, where 2 is the lowest acceptable standard and 4 is the highest standard; and the expected level of difficulty in achieving it, where 1 is reasonably straightforward requiring little additional resources and 3 requiring a more long-term approach and which is likely to require greater resources.

Action	By when	Responsible officer	Audit Commission Standard	Ease of completion
Governance and Leadership				
Short-term				
Outline commitment in Corporate Plan and other key documents	November 2007	PM	2	1
Member training on data quality	April 2008	PM	4	1
Incorporate data quality actions into each service and resource plan	June 2007	Service managers	3	2
Introduce reporting on data quality as part of the formal reporting procedures for Big Wednesday	July 2007	PM	3	2
Medium-term				
Embed data quality into corporate risk management assessments	October 2007	IJ	3	2
Policies				
Medium-term				
Write a Confidentiality Policy, which includes the relevant elements of the Data Protection and Freedom of Information Acts	March 2009	Policy and Communications	2	2
In conjunction with partners, establish an Information Sharing Agreement	March 2009	Service managers, WIP?	3	3
Include data quality in all new and renewed contracts/SLAs	Ongoing	Contract Monitoring	3	3

		Group, Legal services		
Systems and Processes				
Medium-term				
Develop data quality standards and processes, including data checking and controls, to ensure data is 'right first time'	March 2008	Data champions, service managers	2	2
Produce clear and detailed operational procedures and user guides for all data collection and reporting	April 2008	Data champions and Policy and Communications	2	3
Introduce a central data quality system which pulls together all information and guidance	March 2008	Policy and Communications	2	3
People and Skills				
Short-term				
Include data quality training in staff induction	August 2007	PM	3	1
Establish regular data champion meetings	June 2007	DK	4	1
Medium-term				
Undertake an assessment on current levels of staff skills	April 2008	Staff survey	2	1
Ensure all staff responsible for data collection or reporting undertake refresher training	October 2008	Service managers	2	2
Data Use				
Short-term				
Establish a system for checking and holding all audit trail documents	December 2007	Policy and Communications	2	2
Medium-term				
Establish a register of which data is collected by the Council and how it is used	March 2008	IG	2	2