

NORTH LINCOLNSHIRE COUNCIL

AUDIT COMMITTEE

DATA QUALITY UPDATE

1. OBJECT AND KEY POINTS IN THIS REPORT

- 1.1. To provide the Audit Committee with a position statement on the current status of data quality audits of the council's priority performance indicators.
- 1.2. To provide the Audit Committee with an overview of wider developments on data quality.
- 1.3. Key points are:
 - The target of auditing 100% of the current priority performance indicators has been achieved for year end 2013/14
 - Findings from the audits indicate that overall data quality is robust.
 - A new Data Quality Framework has been developed to measure and improve the council's data quality across key systems, processes and functions.

2. BACKGROUND INFORMATION

- 2.1. Public bodies are accountable for the money they spend and the data they capture. The financial and performance information they use to account for their activities, both internally and externally to their citizens, partners, commissioners, and to government departments and regulators, must be based on reliable data that is 'fit for purpose'.
- 2.2. Historically, the council was subject to an audit of its data quality arrangements by the Audit Commission. From May 2010, under the current coalition government, there has been a reduction in demand by central government for data and a re-emphasis on local performance and regulation, coupled with less external inspection of key systems, processes and functions.
- 2.3. The council is committed to data quality and continues to support the fundamental standards set out by the Audit Commission. The data quality framework is reviewed annually to ensure that the council does not allow the focus on the quality of local data to decline. Well managed authorities continue to place an emphasis on ensuring that the data they capture for their decision making and for external accountability is of high quality and 'fit for purpose'.
- 2.4. We have continued to carry out a significant amount of work over the last 12 months to ensure that our data quality arrangements are robust. A new Data Quality Framework (appendix A) has been developed to widen the focus beyond KPIs to encompass data held in key IT systems, processes and functions. Data quality findings arising from audits in these new areas will be reported at future meetings.

- 2.5. A key element to ensuring data quality arrangements are robust is to carry out audits and reviews on our systems, processes, functions and priority key performance indicators. Priority key performance indicators undergo regular audit. Indicators scoring a maximum 5 stars are re-audited after 18 months. Those priority performance indicators not receiving a 5 star rating would have an action plan and be reviewed 6 months later with regular checks to ensure that the action plan is being implemented.
- 2.6. It was agreed at the corporate Information, Improvement and Value for Money group and reported to the Audit Committee that the council would aim to carry out a Data Quality audit on all of the priority Indicators by the end of March 2014.
- 2.7. As at 31 March 2014, 100% of the 106 priority performance indicators have been audited, as detailed below:

Directorate	Total Priority Performance Indicators	Audited	
		Number	Percentage
Policy and Resources	31	31	100%
Places	40	40	100%
People	24	24	100%
Public Health	11	11	100%
	106	106	100%

- 2.8. Audits are awarded a rating based on the number of recommendations identified with in each of the 5 sections of the audit checklist. A maximum of 5 stars is awarded where no recommendations are identified and all expected data quality controls are in place. The improvements made to the Data Quality Framework means there now is a review process for any audits not achieving 5 stars, including an escalation route should timescales not met in line with the Data Quality Framework. The improvements made to the process will enable an increase on the Data Quality Star rating in the next financial year.
- 2.9. Based on the audits of the priority indicators where a data quality rating has been allocated, the current average rating is 4.1 out of 5. This indicates that robust data quality arrangements are generally in place. This figure has remained consistently above 4 stars since this method of rating data quality audits was introduced.

3. OPTIONS FOR CONSIDERATION

- 3.1. As detailed below.

4. ANALYSIS OF OPTIONS

- 4.1. **Option 1** – That the Audit Committee considers that the current progress and recommended developments provide sufficient assurance of the adequacy of the council's data quality arrangements.
- 4.2. **Option 2** – That the Audit Committee considers the current progress and further recommended developments are not sufficient and requests additional work be undertaken.

5. RESOURCE IMPLICATIONS (FINANCIAL, STAFFING, PROPERTY, IT)

- 5.1. The risk in not identifying and addressing weaknesses in data quality is the consequences of decisions based on inaccurate data that relate to resource allocation.

6. OUTCOMES OF INTEGRATED IMPACT ASSESSMENT (IF APPLICABLE)

- 6.1. An integrated impact assessment is not required for this report.

7. OUTCOMES OF CONSULTATION AND CONFLICTS OF INTERESTS DECLARED

- 7.1. The new data quality framework has been subject to extensive consultation via the Information, Improvement & Value for Money Group, and has been approved by both the Council Management Team and the Cabinet member for Policy and Resources. There are no conflicts of interests to report for this meeting.

8. RECOMMENDATIONS

- 8.1. The Audit Committee should consider whether the report provides sufficient assurance of the adequacy of the council's data quality arrangements.
- 8.2. That future update reports on Data Quality are submitted to the Audit Committee on an annual basis.

DIRECTOR OF POLICY AND RESOURCES

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Data Quality Framework

Version 1.1



www.northlincs.gov.uk

Documentation Control

<i>Document Title</i>	<i>Format</i>	<i>Version</i>	<i>Status</i>	<i>Location</i>	<i>Approved</i>	<i>Author</i>	<i>Date</i>
Data Quality Policy June 2010	PDF	0.1	Superseded	Network Drive (Bkup) *	Yes	Nigel Manders	June 2010
Data Quality Policy March 2011	PDF	0.1	Superseded	Network Drive (Bkup) *	Yes	Nigel Manders	March 2011
Data Quality Policy August 2011	PDF	0,1	Superseded	Network Drive (Bkup) *	Yes	Nigel Manders	August 2011
Data Quality Policy February 2013	PDF	0.1	Live	Intralinc, Website, Network Drive	Yes	Nigel Manders	February 2013
Data Quality Framework – Draft	Word	0.2	Superseded	Network Drive	No	Tony Holder	December 2013
Data Quality Framework	Word, PDF	1.0	Superseded	Network Drive	No	Tony Holder	February 2014
Data Quality Framework	Word, PDF	1.1	Awaiting approval	Network Drive	No	Tony Holder	March 2014

* Original document has since been removed from the Network Drive but remains on the Network Backup for retention purposes.

Change Control

<i>Document Title</i>	<i>Version</i>	<i>Effective Date</i>	<i>Pages</i>	<i>Reason</i>
Data Quality Policy June 2010	0.1	June 2010	Not specified	Both protocol and policy updated to reflect new national guidance, links to spot check questions, recommendations from the Audit Commission and Internal Audit and links to new auditing method developed by the performance team.
Data Quality Policy March 2011	0.1	March 2011	Not specified	Updated to reflect changes to the National Context and to include references/links to useful documents/website.
Data Quality Policy August 2011	0.1	August 2011	Not specified	Updated to reflect changes to the corporate performance framework and data quality expectations.
Data Quality Policy February 2013	0.1	February 2013	Not specified	Minor updates to reflect internal changes to council structures – terminology and include the One Council logo.
Data Quality Framework – Draft	0.2	December 2013	All pages	Major changes to reflect data quality across the authority and not just the corporate performance framework. New terminology and policy alignment to Information Governance and Council Strategy/Priorities.
Data Quality Framework – Draft	0.2	February 2014	All pages	This document has been superseded as no longer in draft form, has become the Data Quality Framework document and subject to approval.
Data Quality Framework	1.0	February 2014	All pages	Minor changes to various pages to enable the document to be presented for approval. Submitted for consultation at I&VFM in February 2014, followed by CMT and cabinet member approval. Schedule 15 on title page added to advise that this document is part of the Information Governance Framework.
Data Quality Framework	1.1	March 2014	Pages 4, 5, 11, 13, 14	Introduction updated, Audit Committee added to Roles and the Auditing and Reporting Section updated, along with a small section advising KPI audits will be prioritised on council Strategy Priorities.

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1. Introduction to Data Quality

Good data quality is required for any organisation to plan, make its key decisions, and deploy its resources and for the smooth operation of its operations. Data quality can mean different things depending on your role within the council but fundamentally business analysis or business intelligence is reliant on the quality of the data used and this can be affected by the way it is:

- Captured
- Entered
- Stored
- Managed

The process of data quality assurance verifies the reliability and effectiveness of data. Managing data quality requires a periodical approach and typically involves updating, standardising and cleansing of records.

A definition of 'Data Quality'

Data is of high quality if they are fit for their intended uses in operations, decision making and planning (J.M.Juran).

Data quality is the perception or an assessment of data from a system (manual or electronic) to ensure that the data's fitness to serve a particular purpose in a given situation. This may be to deliver a service or provide data to third parties etc. Aspects of data quality include:

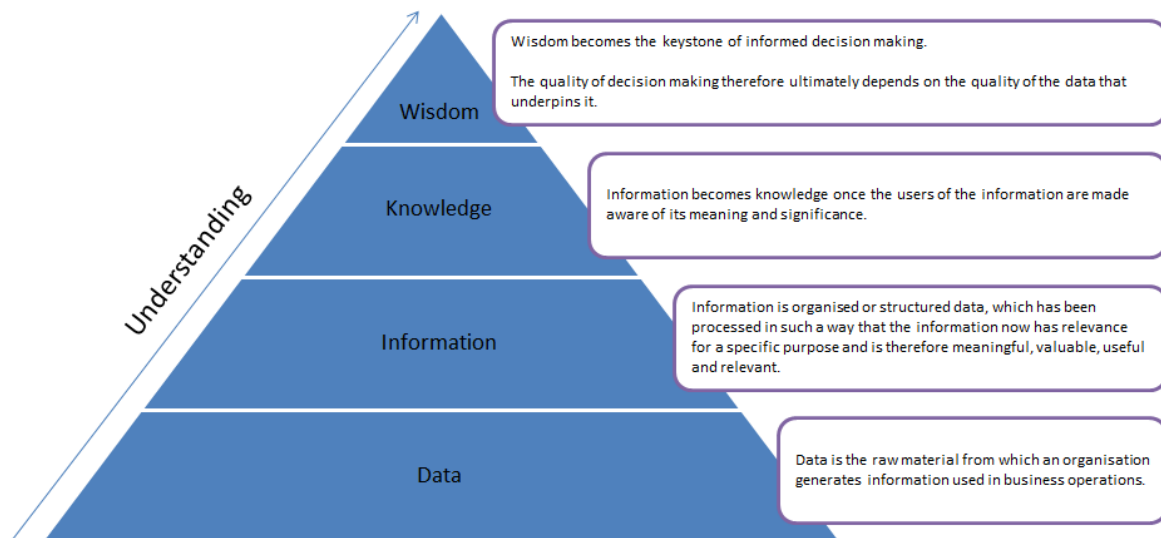


Please refer to Appendix 1 for detailed explanation of aspects of data quality

Common data quality issues are incomplete or missing data, out-dated information, duplicate data and inputting errors. Assuring data quality can increase efficiency, enhance customer satisfaction, enable more informed decisions.

The term 'data', 'information', 'knowledge' and 'wisdom' are frequently used and interchangeable throughout the authority. Data is the raw material for where the authority generates information. The diagram below provides a pictorial representation of the data hierarchy from the basic raw material of data to the wisdom becoming the keystone of informed decision making.

1.1. Data hierarchy to decision making



Data is captured by services for several reasons:

- Operational running of a service
- Measure progress towards targets, outcomes and priorities
- Set targets
- Compare current performance and past performance
- Inform policy decisions
- Enable the correct use of finite resources
- Understand customer needs and requirements

Producing data that is fit for purpose should not be an end in itself, but an integral part of the authority's operational, performance management, and governance arrangements. Putting data quality at the heart of their performance management systems are most like to be actively managing data in all aspects of their day-to-day business, in a way that is proportionate to the cost of collections and turning that data into reliable information that in turn provides knowledge and wisdom to support decision making more informed.

1.2. Where data quality problems occur

A key thing to understand about data quality is that it is not an Information Technology problem or a service problem. In reality it is usually a combination of both. The causes of poor data quality are often complex, involving inter-relationships between people, process and technology. This has significant implications for how to go about improving data quality. Poor data quality is a holistic authority problem.



People

Inadequate training

Sometimes people enter incorrect data as they have not been properly trained. For example, a fault repair data officer who has not been made aware that fault codes (identifying the cause of the fault) have been updated)

Human Error

When people input data via keyboards or handwrite data into fields on forms, from time to time they make mistakes. For example, an order officer who mishears a citizen's postcode, or a citizen online who types in the wrong post code. The most common errors are those of transcription (where an incorrect keystroke is made) and transposition (where digits are switched inadvertently).

Data as power

Many people in organisations want to capture and manage their own data. They feel this gives them direct control over the data and are often reluctant to share it with others in the organisation, seeing it as a source of influence and advantage.

Lack of ownership or responsibility for data quality

This is a major problem in many organisations. When data is wrong, all too often no-one is held responsible for fixing the problem.

Denial

Many people are in denial about data quality problems as their organisational culture might regard them as failing. So they pretend all is fine, covering up issues as and when they arise and not exposing them to others, or seeking help to address them.

Process

Inappropriate goals and objectives

Many data quality problems arise where goals and objectives are set which pay no attention to the need to preserve and enhance data quality. For example in a sales department telephone sales people are incentive solely on the basis of the number of calls they make and/or the value of the sales they secure. In this environment, it is inevitable that data quality will suffer.

Process failures

Data quality problems can also arise from the fact that processes can be designed to preserve and enhance data quality but are not adhered to. For example, in a major telecommunication company field engineers are expected to record any changes they make to customer connections in roadside cabinets. Sometimes they fail to do this so that the physical connections wired in are not reflected in the data sources which store connection data.

Process design

All processes require data to support them and in a world of siloed processes, it is hardly surprising that supporting data stores are similarly fragmented. The HR department holds data on employees used for personnel processes, the Finance Department a version for payroll purposes, and so on. As a result, multiple copies of data proliferate.

Lack of common data standards

Often data standards have been defined to meet the specific needs of one business process, so when data is transferred to another process, the data takes on a different meaning.

For example, consider a global organisation that operates in both the UK and USA. In the USA date standards are normally formatted as MM-DD-YY, whereas in the UK they are DD-MM-YY. This could present a major problem if data from the two territories ever needs to be combined.

Poorly-designed and implemented processes tend to generate poor quality data. Well-designed and implemented processes tend to generate good quality data. Data quality can therefore be a good measure of both process design and implementation.

Technology

Shortcomings in data capture:

IT data capture design needs to focus on providing pre-populated and/or existing data held within or outside the organisation to ensure that the data capture process creates data that is consistent with data already held and industry standards.

For example, using an address generation tool, which creates an address sourced from the UK Postal Address File (PAF), only requires the agent or customer to capture a postcode to generate a standard format address that can subsequently be matched to addresses already held.

Multiple data sources

The development of IT systems to support specific business processes has created the multiple data sources we see in so many organisations today, with larger organisations often holding hundreds of copies of variations of what is in effect the same data.

Process design

Some experts have suggested that up to 80% of a typical IT department's focus is on trying to manage data interactions between IT systems. The existence of multiple, even hundreds of systems creates the need for IT to build and maintain thousands of data transfer and applications interfaces between them. When changes occur in one system (for instance the creation of a new data field in a customer database), these interfaces have to cater for them as the change will have a downstream impact on other systems. In this world of immense complexity, things inevitably go wrong, with data quality frequency suffering.

2. Purpose

The purpose of this policy is to set out North Lincolnshire Councils approach for ensuring that staff at all levels who have responsibility for collecting, analysing, manipulating or using data:

- ✓ Have a greater awareness of data quality and their responsibilities
- ✓ Recognise the importance for good quality data, and how they contribute to it
- ✓ Have the knowledge and competencies to produce good quality data and information.

This data quality framework links with the information governance framework. Services should follow this policy when dealing with data. Not only is it important for ensuring that all data they use to inform decision making should be sound and where services work with partners and/or contractors they should be satisfied that the information that comes from these sources is correct. Services are required to put in place a process of reviewing internal and external data, this should be done by setting their own performance indicators for data quality and conducting audits. Where data comes from an external body that is contracted through the council then the requirements to produce accurate and timely data should be specifically built into the contract terms and conditions.

3. Stakeholders and their information needs

Stakeholder	Information needs/uses
Service users and the public	Exercising choice, understanding the service standards to expect and holding public bodies to account.
Staff in public sector organisations	Delivering services day to day at the front line; the starting point for data collection and use.
Managers in public sector organisations	Monitoring and managing service delivery and benchmarking against others in particular performance.
Local councillors, trust non-executives	Decision makings; monitoring strategic objectives, targets and use of resources; ensuring accountability.
Partners	Monitoring the achievement of partnership targets and the use of resources; ensuring accountability.
Commissioners	Identifying population need and determining priorities and services for meeting it; monitoring the achievement of contractual arrangements.
Central government	Developing policy; monitoring progress of new initiatives, and the achievement of national targets; publishing local performance information at national level; identifying poorly performing organisations and rewarding good performance with autonomy and resources.
Regulators	Monitoring performance and use of resources of local bodies; publishing comparative performance information and national studies; planning work programmes proportionate to risk.

4. Training

Awareness of data quality will be raised through council wide notices, e-learning courses and workshop sessions if required for staff involved in data collection. The focus of the training is to:

- ✓ Develop greater awareness and understanding of what is meant by data quality.
- ✓ Raise awareness of the content of the data quality framework and the importance of data quality across the organisation.
- ✓ Raise awareness of the importance of continual verification (auditing) of data to check data quality arrangements
- ✓ Highlight roles and responsibilities for staff in terms of assuring the quality of data and information they use, analyse, supply or have responsibility for.

Data quality is also included in both the corporate and management induction programme and is also part of the employee generic competencies. Training needs should also be addressed through one to one's and the employee appraisal process.

The council's aim is to keep reviewing and improving, and to have data quality arrangements which are robust enough to withstand internal and external scrutiny.

5. Roles and Responsibilities

Cabinet Member

Cabinet Members have overall member responsibility for performance and need to be pro active in raising issues around data quality challenging progress made against corporate and service data quality objectives.

Directors/Assistant Directors

Directors and Assistant Directors have overall responsibility for challenging performance and data quality.

Heads of Service

Heads of Service are accountable for the accuracy and quality of data and information within their service area and need to ensure their officers are aware of their data quality requirements.

Service or Team Managers

Service Managers and Team Managers are responsible for the accuracy and quality of data and information, undertaking necessary checks and complying with the guidance as well as identifying and implementing improvement measures to improve the quality of data.

Information Asset Owner (IAO)

IAOs are concerned with the information used within the running of their particular area of business. They are senior individuals and their role is to understand what information is held, what is added and what is removed, how information is moved, and who has access and why. As a result they are able to understand and address risks to the information, and ensure that information is fully used within the law for the public good, and provide written input to the SIRO annually on the security and use of their asset.

Roles and Responsibilities continued...

Data Asset Owner (DAO)

Data Asset Owner responsibilities are the same as IAO's except for specific systems or processes. They understand what information and data is held, what is added and what is removed, how information or data is moved and who has access and why. They are responsible for the data quality of the system or process.

Performance Management Editors

Editors

Have an understanding of the relevant indicator definitions and guidance documents sufficient to fulfil their roles, they ensure results, target data and relevant information is entered into the Performance Management System (PMS) in line with the authorities data quality policy.

Performance Management Owners

Owners

Ensure that results, target data and information is entered onto the PMS in line with the authorities data quality policy. All data has been subjected to data validation and quality assurance to uphold the level of quality and ensure that accountability is clearly defined.

Performance Management Approvers

Approvers

Have a thorough understanding of the KPI definition and ensure that results submitted have been subject to data validation and quality assurance checks are in line with the authorities policies.

All Officers and Elected Members

All Officers and Elected Members need to be aware of the data quality policy and where applicable, should be aware how their day to day activities contribute to the quality and fit for purpose of data.

Roles and Responsibilities continued...

Information Providers (Internal)

Internal

Authority departments or teams providing data or information is supplied to relevant services in line with agreed policies. Any sharing of data or information needs to ensure that this is fit for purpose and of good quality.

Information Providers (External)

External

Authority departments or teams receiving data for information externally are responsible to ensure that the data or information received is fit for purpose and of good quality. They need to ensure that sound governance arrangements are in place.

Audit Committee

Seeks assurance from officers and external audit that the council's audit, financial, constitution, governance, performance and risk arrangements etc are in place and monitors how well they are performing. It oversees the council's Annual Governance Statement, and seeks assurance that systems, best practice and on going improvement practices are in place in relation to Information Governance including Data Quality.

Senior Data Quality and Information Management Officer

Ensure that results, target data and information is entered onto the PMS in line with the authorities data quality policy. All data has been subjected to data validation and quality assurance to uphold the level of quality and ensure that accountability is clearly defined.

6. Auditing and Reporting

All documentation created/produced, published and used during the auditing of systems and KPIs will be subject to the authorities appropriate Records Management Policy and therefore be subject to appropriate retention and disposal.

6.1 Auditing – Authority Systems

It is impossible for the authority to achieve 100% data quality; the aim should be for data to be fit for purpose, not perfect. Data is an authority asset, so any data improvement initiatives must be owned and led by the business in partnership with the Information Governance Team (IGT). The IGT adopts a five step approach to data improvement, the diagram (Fig.1) represents this five step approach and further detail is in appendix 2.



(Fig.1)

A key element of ensuring sound data quality arrangements is the on-going programme of audits. The Information Governance Team in partnership with the authority's service areas will undertake an annual data

management plan audit and system/process data quality audit on a 5 year rolling programme of events.

Year 1 – Full data management plan audit followed where appropriate by a full data quality audit

Year 2/5 – Review the data management plan and random sample data quality audit.

Should there be a requirement then a full review of the data management plan and data quality audit would be concluded.

Information is a key corporate asset to the authority and the Information Governance Framework is a key policy with the data management plan and audit help to deliver this. The audit could be completed by appropriate officers in the authority (i.e. Information Asset Owners (IAOs) or Data Asset Owners (DAOs)). It is anticipated completion time would approximately be 2/3 hours depending on the information required to be gathered to support the answers. It is not expected that the audit would be completed in one go but the Information Governance Team (IGT) would expect that the audit would be completed within 2 weeks of commencement. On submission the IGT will produce an action plan along with the request (if appropriate) for a copy of the system's/process data for profiling and data quality audit. The following 4 years would see a random sample of data quality audits ensuring that data quality is maintained or improved within reasonable percentages.

6.2 Auditing – Key Performance Indicators (KPIs)

All KPIs are subject to a Data Quality Audit. This framework recognises that the auditing of KPIs requires a more specific guidance and explanation therefore Appendix 3 contains the Data Quality Protocol for performance management.

Each KPI once audited will be monitored on the working KPI system. This is maintained by the Strategy & Information Governance Team. This system contains the dates of the audit and the KPI star rating, along with full re-audit date and review dates if appropriate.

Each KPI undergoes an initial audit and will be prioritised on the council annual strategy i.e. priority one KPIs generally would be audited first then priority two KPIs etc. Once the audit has been completed this date is entered into the working KPI system along with its star rating. If all requirements have been met and there are no action plan/recommendations from the audit it would have been awarded 5 stars and is then only subject to an additional re-audit in 18 months' time, however should the audit fall short of five stars then a review would be required to ensure that the actions/recommendations have been implemented. The table below explains the review periods:

Star Rating	Review Period
****	1 month
***	2 month
**	3 month
*	4 month
Q	5 month
<i>'Q' rating refers to an audit where significant errors have been found in the calculation of the Key Performance Indicator</i>	

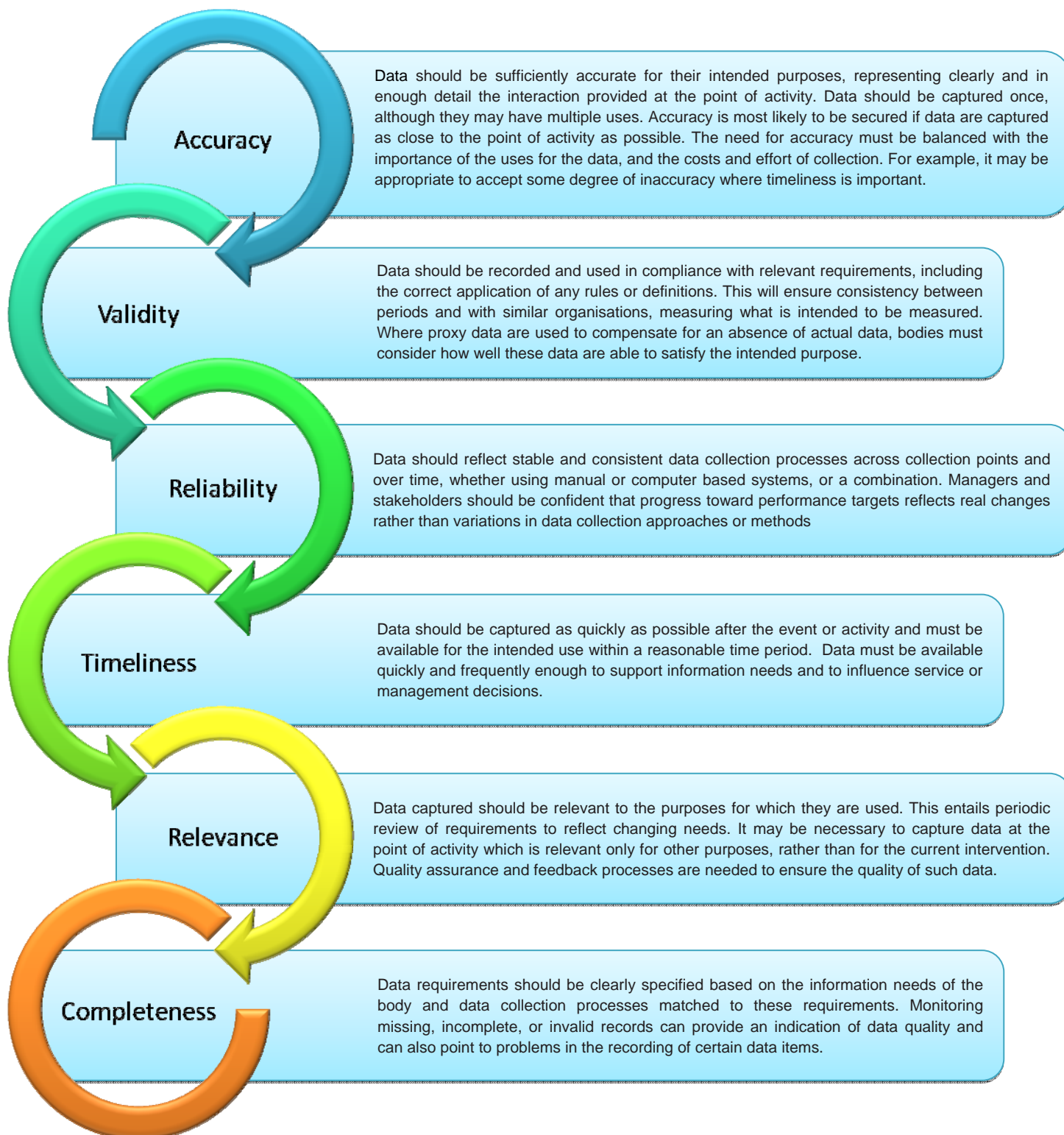
The Strategy & Information Governance Team will follow up all KPIs that fall short of 5 stars around the review period. Should actions/recommendations not have been implemented by the review date then this will be escalated to the appropriate service manager with a period of one month to be actioned. Failing to implement the actions/recommendations one month after the service manager has been notified will then result in the KPI being reported to the Audit Committee at the next available meeting.

6.3 Reporting

Findings of audits would be reported to the audit owners and managers, along with aggregated information to the audit committee. The IGT will monitor the authorities overall data quality along with individual systems/processes data quality and provide assistance where and when required. The IGT will also monitor all KPI audits, undertake reviews as for mentioned above and report at each Audit Committee meeting.

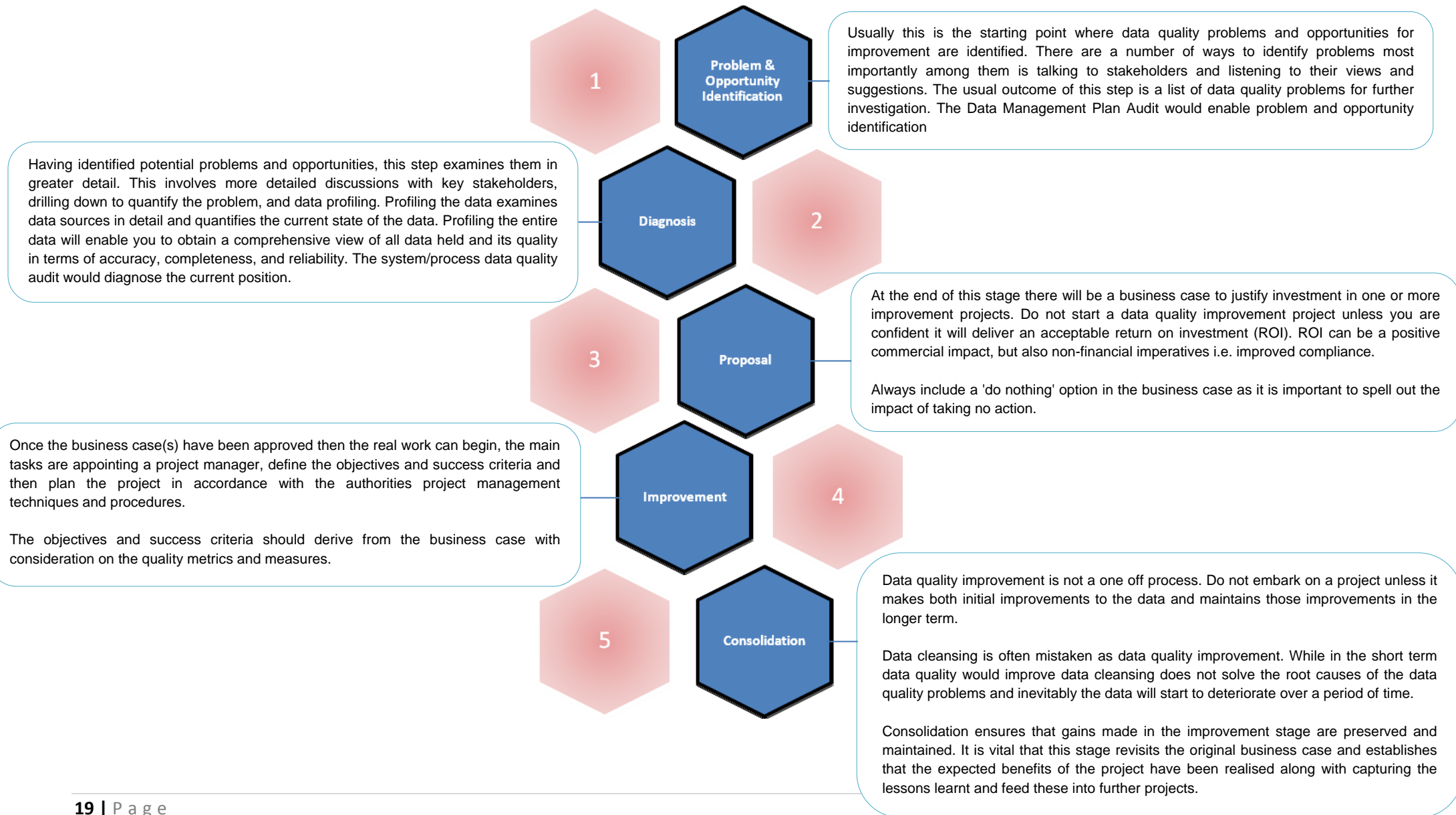
Appendix 1

Aspects of Data Quality



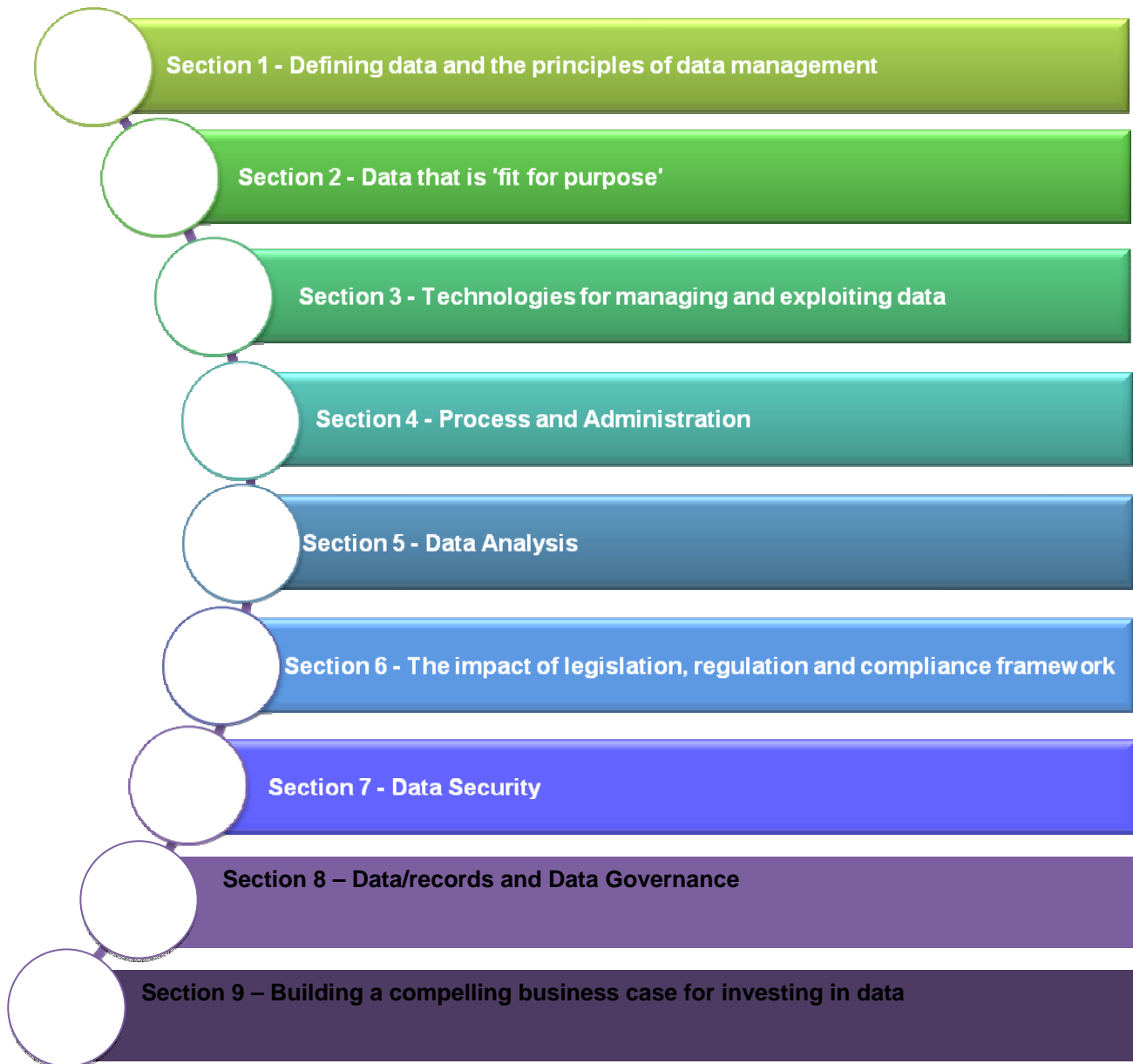
Appendix 2

Five step approach to data quality – for systems, processes or functions



Data Management Plan Audit

The Data Management Plan Audit is a joint audit for Data Quality and Information Governance. The audit is split into 9 sections (*fig.1*), consisting of over 80 questions. The Information Governance Team has been tasked with undertaking an authority wide Information and Data Quality Audit. These will enable the authority to produce a Data Management Plan that helps in fulfilling action for internal audit, NHS information governance self-assessment and legislation.

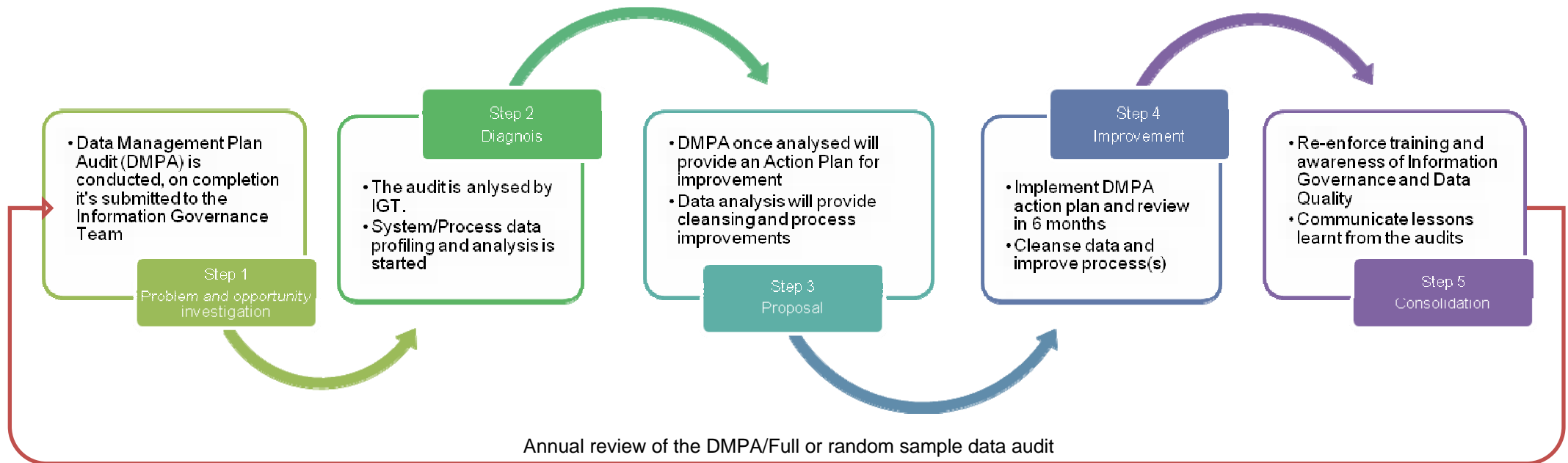


(*fig.1*)

Information is a key corporate asset to the authority and the Information Governance Framework is a key policy and this audit would help to deliver this. It is anticipated that the Audit would be completed by Systems Owners, Records Co-ordinators, Information Asset Owners (IAO) or Data Asset Owners (DAO). Anticipated completion time is approximately 2-3 hours depending on information to be gathered to support the answers. It is not expected that the audit would be completed in one session but the IGT would expect that the audit to be completed within 2 weeks of commencement.

Audit(s) Process Map

Data Management Plan Audit (DMPA), System/Process data analysis mapped over the five step approach to data quality



The DMPA would be reviewed on an annual basis along with an action plan (if required) and 6 monthly review of that action plan, whereas the System/Process data analysis would initially have a full data audit to enable profiling. This profiling enables a greater understanding of the data then “fit for purpose” can be applied along with percentage of complete records, recommended data cleansing and any other business rules specific to the system/process. The data would then on an annual basis have a random sample check to ensure that improvements are been made would be required for the next 4 years annually. During the random sample should the outcomes be in with a 5% drop tolerance of the original result (recorded on PMS) then no further action would be required, however should the random sample fall outside the tolerance levels then a full data quality audit could be conducted with recommendations to rectify the situation.

Appendix 3

Data Quality Protocol for performance management (Key Performance Indicators - KPIs)

Performance management is a key aspect of the day-to-day operation of a service. Performance information, often in the form of indicators, is a key illustration of how well a service/function is performing in a particular area. This information can be used for a number of purposes such as – monitoring how well a service is performing, to set future targets to drive continuous improvement in how we deliver our services, as a benchmark of performance or cost against other bodies and to inform the residents of North Lincolnshire of how well the council is delivering services. In order that performance information can be used for these purposes, the quality of the data used must be robust and reliable.

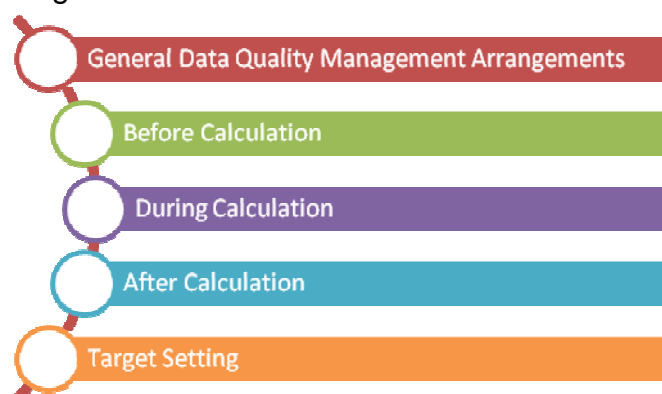
In most instances, the exact specification of how a performance indicator must be calculated will be supplied by an external body. If this is the case then the guidelines provided by the external body must be followed precisely and a clear audit trail of how the indicator has been calculated, backed up by hard-copy evidence where appropriate, must be available. In other cases, a service may decide to monitor and review performance information that they feel is more relevant to the council ambitions and local priorities.

Whether performance information is being used by an external body to analyse our delivery of services, or whether it is being used internally to help drive improvement the need for robust, reliable data is clear. With this in mind, this Data Quality Protocol has been produced. The protocol elements take into consideration:

- Key Lines of Enquiry from the Audit Commission, key principles from the Audit Commission joint paper: *Improving Information to Support Decision Making: Standards for Better Data Quality*.
- Audit Commission spot check questions.
- Improvements identified during external audits of our data quality arrangements
- Advise and input from internal audit function
- National & local benchmarking data
- Best practice research.

Where practicable, all information and documents should be attached to the Performance Management System.

The protocol has been structured as a checklist, to help you make sure the data you are producing is accurate. This checklist should be used whether the data is being used internally or externally. We have structured the checklist into five sections please refer to the diagram below:



During the audit, the controls in place will be evaluated in each area to assess the robustness of the data quality arrangements. Upon completion of the audit the findings are assessed and a Data Quality Rating is awarded to the service.

The lowest possible rating is one star and the highest possible rating is 5 stars. For each section of the checklist evaluated, if all controls have been met and no recommendations or improvements are identified, five stars are awarded. However, if an error is identified which leads to which leads to incorrect calculation of the final result, the indicator is automatically qualified and given a “Q” rating.

Star Rating	Description
*	Recommendations have been identified in 4 of 5 sections of the audit checklist
**	Recommendations have been identified in 3 of 5 sections of the audit checklist
***	Recommendations have been identified in 2 of 5 sections of the audit checklist
****	Recommendations have been identified in 1 of 5 sections of the audit checklist
*****	No recommendations identified
Q	Significant error found

Documentation is available on the Intralinc which services can use to carry out audits of their priority indicators. It is expected that ALL SERVICES adhere to the Data Quality Protocol and that all services utilise the available audit documentation to test the robustness of their data quality arrangements.

The documents available on the authority’s intralinc are:

Indicator Definition template	A key element of ensuring sound data quality arrangements is the on-going audits of the council's key priority indicators, before an audit is carried out an indicator definition should be completed, its purpose is to define the key elements of the indicator from the description to how it is calculated. All KPI's require an Indicator Definition Document.
KPI Audit Template	A key element of ensuring sound data quality arrangements is the on-going audits of the council's key priority indicators. These audits are carried out by means of a checklist to ensure that data quality requirements are being met. This document is the checklist template used during an audit to assess the data quality controls a service has in place. It is the responsibility of individual directorates to carry out a programme of audits on priority indicators. This document can be downloaded and utilised by directorates for this purpose.
Performance Indicators Process Map Guidance	A process map is a diagrammatical way to define the sequences of activities (processes) that must take place when calculating a performance indicator result from data collection through to final calculation. This guidance document has been developed to aid in the construction of process maps, ensuring a quality, consistent approach across the organisation.