



I-INTELLIGENCE

Improving Data Quality

Chris Pallaris | Working with Big Data | June 2022



Information / Data Quality

Information / Data Quality



- **Definition**

- Information quality refers to the quality of the content in an information system
- Data quality refers to the quality of a specific dataset or data object
- Although the two terms are different, we will use information quality for convenience in this module

Information / Data Quality



- **Purpose**

- We evaluate the quality of our information to:

- Determine its suitability to the tasks or projects at hand
 - Determine its current and potential value to the organisation
 - Improve the quality of our information services / products
 - Improve the quality of our reporting and control mechanisms

Information / Data Quality



- **The Cost of Poor Information Quality**
 - Poor information can result in:
 - Increased operating costs
 - Operational inefficiencies
 - Decreased output
 - Project failure
 - Compliance failure
 - Lower stakeholder satisfaction and trust
 - Every one of these impacts affects the organisation's bottom line

Information / Data Quality



- Theory
 - The quality of your information is a measure of the quality of your work
 - It follows that the more effort we invest in improving information quality, the likelier we are to provide quality products and services to our stakeholders
 - Improving information quality obliges us to:
 - Identify the information assets we hope to evaluate
 - Set our quality standards
 - Define our quality metrics
 - Schedule an evaluation
 - Select an approach to quality assessment
 - Evaluate the information under our control



- **What to Evaluate**

- In theory, every information asset, service, product, data set, etc., can be evaluated using either a generic or specific set of quality metrics
- What you evaluate - and the sequence of your evaluations - should be determined by the criticality of the information to the organisation's work



- **Objective vs. Subjective Evaluations**

- A quality evaluation can be either:

- Subjective, or a matter of perception

- Objective, or made according to pre-defined quality criteria

- Naturally, the more objective one's assessment, the easier it is to justify action

- Objective assessments are typically made using a Data Quality Standard



- **Objective vs. Subjective Evaluations**
 - Naturally, the more objective one's assessment, the easier it is to justify the actions needed for improvement
 - Objective assessments are typically made using a Data Quality Standard



- **Defining Your Quality Standard**

- Every information asset should have its own quality standard to:

- Ensure the information generated is of the best possible quality
- Ensure any decisions taken are based on the best possible information
- Provide a benchmark against which to identify quality problems
- Provide a benchmark against which to evaluate the efforts of staff
- Measure the effectiveness of the standard and our wider quality efforts



- **Defining Your Quality Standard**

- Defining these standards is a challenging task and is predicated on:
 - The nature of the asset
 - Stakeholder expectations
 - Strategic and / or operational objectives
- Nevertheless, standard setting is an essential component of improving data quality and, by extension, service delivery



- **Common Quality Metrics**

- Accuracy
- Flexibility
- Sufficiency
- Informativeness
- Reliability
- Precision
- Usableness
- Level of detail
- Timeliness
- Format
- Usefulness
- Quantitativeness
- Relevance
- Interpretability
- Clarity
- Scope
- Completeness
- Content
- Comparability
- Understandability
- Currency
- Efficiency
- Conciseness
- Consistency
- Importance
- Unbiased



- **Data Quality Metrics**

- The most common metrics are as follows:

- Accuracy - Is the data correct?
- Conformity - Does the data conform to standard entry criteria?
- Consistency - Are data elements consistently defined and understood?
- Completeness - Is the data set complete?
- Integrity - Is the data complete? Has it been compromised in any way?
- Relevant - Is the data relevant to the organisation's work?
- Provenance - Where did the data come from?
- Currency - Is the data recent / up-to-date?
- Validity - Does the data fall within acceptable ranges?

Information / Data Quality



- **Information Quality Metrics**

- The most common metrics are as follows:

- Accuracy - Is the information correct?
- Presentation – Does the information enable understanding?
- Relevance - Does it support strategy and decision making?
- Reliable - Can the information be trusted?
- Timeliness - Is the information up-to-date?
- Completeness - Are any records missing or unusable?
- Effectiveness - Does the information help you meet your objectives?
- Compliance - Do the resulting products comply with policy?



- **Information Quality Assessments**
 - There are a number of tools to improve information / data quality:
 - Data Profiling
 - Data Cleansing
 - Quality Audits
 - Quality Checklists
 - Information Quality Policy
 - We will provide guidance on each of these in successive modules



- **When to Evaluate**
 - Quality assessments can be routine (i.e. scheduled) or ad hoc
 - Routine assessments oblige staff to regulate the quality of their data sets, information services and records on a regular basis
 - Ad hoc inspections can be used to measure routine compliance



- **Exercise**

1. Select an information asset you would like to evaluate
2. Determine an appropriate set of quality metrics
3. Elaborate how this metric will be measured
4. Specify the outcomes you expect to see as a result of better quality



Data Profiling and Cleansing

Data Profiling and Cleansing



- **Definitions**

- Data Profiling is the process of identifying routine or random errors in your datasets
- Data Cleansing is the process of tidying up the records or objects in a database

Data Profiling and Cleansing



- **Data Profiling**

1. Select the data set you wish to improve
2. Identify the quality issues affecting your data
 - Select and study random samples
 - Alternatively, conduct a rigorous assessment of your holdings
3. Determine how best to resolve these issues
4. Draft a short report listing the issues that need to be resolved

Data Profiling and Cleansing



Data Asset	
Quality Issue	How Do We Resolve This?

Data Profiling and Cleansing



- **Data Profiling**
 5. Schedule your next profiling exercise. Successive exercises will reveal the most common data quality
 6. Update your guidelines, SOPs and data dictionary to reflect the data quality standards you wish to reinforce



Data Profiling and Cleansing

- **Data Cleansing**

1. Analyse

- Identify the objects in a database or directory
- Identify the metadata fields (or attributes) that accompany each object
- Check whether guidance on the completion of these fields has been provided in the Data Dictionary
- This step is also referred to as “parsing”

Data Profiling and Cleansing



- **Data Cleansing**

- 2. Standardise

- Identify and standardise those variables that have inconsistent values
 - Standardise names, place names, addresses, etc.
 - Standardise dates, times, etc.
 - Standardise abbreviations etc.
 - Standardise file names, metadata, etc.
 - Complete missing fields, records as necessary

Data Profiling and Cleansing



- **Data Cleansing**

3. **Deduplicate**

- Identify duplicate records
- Consolidate and delete these as necessary

Data Profiling and Cleansing



- **Data Cleansing**

- 4. Finalise

- Check your data; invite a third party to validate your work
 - Update the Data Dictionary as necessary
 - Update the organisation's Data Policy as appropriate
 - Update the guidelines accompanying the specific service
 - Determine the date of the next audit

Data Profiling and Cleansing



- **Data Cleansing**

- 5. Automate

- Where possible, automate your data quality checks. Thus:
 - Have the system prompt the user to enter data according to a consistent format
 - Do not let the user save their data until it is consistently formatted
 - Alert the information asset owner on data quality issues



Data Quality Audits

Data Quality Audits



- **What is a Data Quality Audit?**
 - A data quality audit is a structured approach to improving data quality in a database or information service
 - Audits measure variability in data samples to determine the incidence of errors. As such, audits are typically conducted manually
 - The audit process assumes a data quality standard has already been defined for the asset in question

Data Quality Audits



- **Process**

1. Identify the data you wish to evaluate
2. Define the decision, action or outcome this data should support
3. Identify the rules and standards that apply to the data; use the Data Dictionary to guide you here
4. Generate your sample and evaluate its quality according to:
 - The norms specified in the Data Dictionary (i.e. what should be entered where, and how)
 - Generic or specific data quality criteria already defined

Data Quality Audits



- **Process**

5. Identify the incidence of error in your sample as a percentage
6. Calculate the likely percentage of erroneous records within the asset
7. Determine whether the data is fit for purpose
8. Communicate your findings together with remedial actions and a deadline



The DIKAR / RAKID Model

DIKAR / RAKID



- **Definition**

- The DIKAR / RAKID model provides a simple tool to evaluate the impacts of data quality, whether good or bad

- DIKAR builds on the Data - Information - Knowledge continuum to determine how good data quality can drive action and results
- RAKID takes an inverse approach. Analysts begin with the results they hope to achieve and then determine the levels of quality needed to do so

DIKAR / RAKID



Data-Driven Approach

Results-Driven Approach



Data Quality

- Accuracy
- Completeness
- Validity
- Integrity
- Consistency
- Etc.

Information Quality

- Relevance
- Timeliness
- Rigour
- Presentation

Knowledge Quality

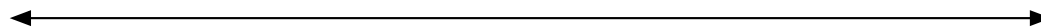
- Authority
- Applicability
- Tacit abilities
- Explicit abilities

Action Quality

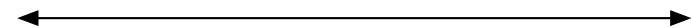
- Efficiency
- Effectiveness
- Efficacy
- Appropriate
- Timeliness
- Value-generating

Results Quality

- Goal realisation
- Increased productivity
- Value-creation
- Stakeholder satisfaction



Mainly Operational



Mainly Strategic

DIKAR / RAKID



- **Purpose**

- The DIKAR / RAKID model can be used to:

- Identify quality criteria for the organisation's IM assets
 - Validate existing information / knowledge flows
 - Improve workflow analysis
 - Develop a data quality policy
 - Develop a data quality strategy



- **Process: The Data-Driven Approach**
 1. Identify the dataset you wish to evaluate
 2. Identify and evaluate the data quality criteria that need to be met for your dataset to be of value
 - Use a generic set of quality criteria or develop a specific typology
 - For each criterion specify the quality standard that needs to be satisfied



- **Process: The Data-Driven Approach**
 3. Determine how good data quality will inform information quality
 - Use conditional If / Then statements to help organise your thinking



- **Process: The Data-Driven Approach**

4. Determine the Information Quality criteria that need to be met

- Here, identify specific quality criteria for each information output
- Thus, what quality criteria will you apply to the text documents, graphics, etc. that you intend to produce with your data set?



- **Process: The Data-Driven Approach**

5. Determine how good information will impact staff knowledge

- How will good information inform their know what?
- How will good information enable their know how?
- What knowledge, skills and capabilities will good information encourage?



- **Process: The Data-Driven Approach**

6. Determine the quality criteria that you will apply to this knowledge

- How will you evaluate the quality of your organisation's tacit knowledge?
- How will you evaluate the quality of your organisation's explicit knowledge?
- How will you measure knowledge growth or decay?



- **Process: The Data-Driven Approach**

7. Identify how good knowledge will enable informed action

- Again, use conditional If / Then statements to identify outcomes of good knowledge



- **Process: The Data-Driven Approach**

8. Identify the results you can expect from informed action

- Your results might include

- Greater operational efficiency / effectiveness

- Improved stakeholder satisfaction

- Greater value creation

9. Organise your thinking in a matrix to enable feedback and refinement



- **Process: The Results-Driven Approach**
 - The RAKID model invites you to work backward. Thus:
 1. Identify the result(s) you would like to achieve
 2. Identify the actions needed to achieve each result
 3. Identify the knowledge needed to take action
 4. Identify the information needed to enable knowledge
 5. Identify the data needed to develop this information
 - In Steps 3 to 5, be sure to clarify the quality criteria that need to be met!

DIKAR / RAKID



- **Benefits**
 - DIKAR / RAKID
 - Offers a holistic approach to quality evaluation
 - Encourages descriptive and predictive thinking



- **Limitations**

- Knowledge quality can be difficult to determine in novel situations, as can the outcomes you hope to achieve
- The model can encourage you to overlook those skills (e.g. people management) that are necessary to achieving team-based outcomes



- **Recommendations**

- Nonaka's theory of the middle-up-down manager is no less relevant here, particularly where knowledge is concerned
- Thus, for example, it can help to start with the knowledge needs of an individual and work forward and backward as necessary



- **Exercise**

1. Think of a dataset you are currently developing for a project. Run this through the DIKAR model to identify the results you hope to achieve
2. Think of a second project or activity you are engaged in. Evaluate this using the RAKID model to determine the quality of knowledge, information and data needed



Quality Checklists

Quality Checklists



- **Definition: Checklist**
 - An index of items required
 - A sequence of tasks to be completed (so as to achieve a specific outcome)
 - An aid to failure reduction and quality improvement that compensates for the limits of memory and attention

Quality Checklists



- **Definition: Quality Checklist**
 - A tool to ensure:
 - A consistent approach to information / data quality
 - The consistent development of quality outputs
 - Support to the development of specific outputs
 - Compliance with the organisation's information quality standards



Quality Checklists

- Purpose
 - Quality checklists are used to:
 - Ensure policy compliance
 - Ensure product consistency
 - Improve verification of one's efforts
 - Instill discipline
 - Ensure performance
 - Aid human judgment

Quality Checklists



- Theory

- There are two types of checklist:

1. Read / Do - Staff carry out a series of tasks and check them off as they go along (e.g. a pre-flight check)
2. Do / Confirm – Staff perform their duties from memory or experience. They then use the checklist to ensure everything was done as required

Quality Checklists



- **Process**
 1. Identify the product or process you wish to improve
 2. Identify the errors that generate poor data. Your assessment should include:
 - Errors of ignorance (mistakes made from a lack of knowledge)
 - Errors of ineptitude (mistakes made from a failure to apply the knowledge we have)
 - Errors resulting from process failures or non-compliance

Quality Checklists



- **Process**
 3. Validate your error list with relevant stakeholders
 4. Identify the relevant “Do” steps. These are reminders to
 - Perform a specific action
 - Observe a particular quality criterion

Quality Checklists



- **Process**

5. Identify the relevant “Talk” steps. These require staff to talk so as to:

- Validate that the work has been done
- Ensure the quality criteria have been met

Quality Checklists



- **Process**

6. Compile the checklist

- Use a simple action / check box approach
- Ensure your checklist template includes additional fields as necessary
- Include all Do and Talk steps as necessary but try and keep the checklist to one page

Quality Checklists



- **Process**
 7. Test the checklist with relevant stakeholders
 8. Refine the checklist as needed. This will be an iterative process
 9. Communicate the checklist and mandate its use
 10. Monitor use and compliance over time, as well as results

Quality Checklists



- **Benefits**
 - Checklists are one of the simplest, cheapest and most effective approaches to quality improvement
 - They are a boon to policy compliance and encourage the order and discipline needed to achieve and maintain a consistent level of quality compliance

Quality Checklists



- **Limitations**

- Excessive dependence on checklists can:

- Encourage a culture of compliance
 - Undermine efforts to innovate
 - Hinder performance in novel or time-critical situations
 - Discourage flexibility and the application of simple common sense

Quality Checklists



- **Recommendations**

- Develop a checklist template for every major information product in your product portfolio. This should be simple to download and complete

Quality Checklists



- **Exercise**
 1. Identify a routine information asset that might benefit from a checklist
 2. Identify the quality criteria that should be applied to this product
 3. Identify the quality actions that should be performed to deliver this product
 4. Develop a checklist to improve the quality of this product



Data Dictionary

Data Dictionary



- **Definition**

- A Data Dictionary documents an organisation's approach to data management by providing:
 - Standard definitions of data elements
 - Their meanings and allowable values
 - Other data-specific terms
- They provide an institutional glossary and "style guide" for effective data management and improved data quality across the information assets

Data Dictionary



- Purpose

- Data dictionaries are commonly used to define:

- The data objects within the organisation's information assets
- How these objects should be managed
- Organisational standards and conventions with regard to:
 - Codification
 - Naming / spelling
 - Data classification
 - Data quality
- Data-specific terms and phrases
- Guidelines for database management

Data Dictionary



- **Process**

- There are no best practice guidelines for developing a data dictionary.
- Your approach will reflect the needs of your organisation and the information assets under your control
- The steps that follow use an object-based, bottom-up approach to construct your Data Dictionary
- We recommend constructing your dictionary using Excel (at least to begin with)

Data Dictionary



- **Process**

1. Identify the information assets in your organisation

- Index each asset in a separate Excel worksheet to begin with
- Each asset will eventually constitute a separate “chapter” in your Data Dictionary
- Give each asset a specific ID number. Better yet, use the ID number identified in the IAR

Data Dictionary



- **Process**
 2. For each asset identify the data objects it contains. Give each object a specific ID number



- **Process**

3. List the attributes of each object. Thus, for example:

- Attribute Name
- Attribute Type - Text, number, other
- Attribute Description - A short summary of the attributes purpose
- Field Length - The number of characters permitted
- Required - Indicate yes or no whether this field should be completed or not
- Example - Provide an illustrative example for database users
- Notes for users - Provide supporting notes for users

Data Dictionary



- **Process**

4. For each attribute list:

- Permissible units and values
- Codification rules (i.e. how to enter content)
- Classification rules (i.e. how to annotate content)
- Typographic rules (i.e. preferred spelling conventions)

- If the rules are unclear or inconsistently applied, say so



- **Process**

5. Continue indexing each asset and its associated objects. While doing so consider the following questions:

- How consistent is your approach to codification, classification, etc. within each database?
- How consistent is your approach to codification, classification, etc. across all databases?
- Are these inconsistencies due to error, laziness or the absence of formal guidelines?
- Can your data management efforts be made more consistent?



- **Process**

6. Standardise your approach to codification, classification, etc.

- The more consistent you are, the easier it is to improve data quality and interoperability. To this end, try to standardise how you enter:
 - Dates
 - Times
 - Spatial coordinates
 - Numerical values
 - Monetary values
 - Country names / codes
 - Etc.



- **Process**

7. **Classification Rules**

- A chapter of your Data Dictionary can be dedicated to the challenge of cataloguing content in a repository. To this end, explain:
 - The business value of cataloguing and classification
 - How to determine a document's subject matter
 - How to select and apply relevant keywords
 - How to extend the taxonomy if needed

Data Dictionary



- **Process**

- 8. Data Glossary

- Your Data Dictionary should include an index of commonly used data terms and phrases
 - Organise these alphabetically, by function, or both
 - Refer new staff to the glossary during their induction. Communicate changes to all staff at regular intervals



- **Process**

- 9. General Guidelines

- Your Data Dictionary can also include general guidelines on database management, including with regard to:
 - Data collection
 - Data cleansing
 - Data normalisation
 - Data management
 - Data security
 - Etc.

Data Dictionary



- **Recommendations**

- Data Dictionaries can take considerable time and effort to compile, and invariably require successive iterations before they are complete
- The final structure of your Data Dictionary will emerge as a result of these iterations, and as your knowledge of your assets grows
- A copy of the Dictionary should be given to all staff at the start of their employment. Revised copies should be distributed at regular intervals
- Ideally, the Dictionary is maintained using a wiki tool to enable easy access and maintenance



Information Policies

Information Policies



- **Definition**

- An information policy is a set of rules or norms governing an organisation's use and management of information
- They clarify or regulate how staff should work and elaborate on what is and isn't permissible

Information Policies



- Purpose
 - Policies are established to:
 - Establish intent
 - Regulate behaviour
 - Establish best practices
 - Encourage compliance
 - Mitigate risks
 - Initiate change

Information Policies



- Purpose
 - Information management is not an easy discipline to implement, not least because of the range of activities involved
 - It is one of the few disciplines that mandates conformity in organisational life
 - Such conformity can be easier to achieve by giving people guidance in clear, simple language

Information Policies



- **What Policies Do You Need?**

- Information policies come in many different guises. Some are generic to the entire organisation, others specific to a particular system
- The range of IM policies you establish will depend on the strategic objectives of your organisation
- Will one policy suffice or is a dedicated document needed for each stage of the information lifecycle, or specific activities like data quality?
- Either way, your strategy and your policies should be in sync. The challenge is to strike the right balance between detail and brevity

Information Policies



IM Policies	Legal Policies	Security-Related Policies
<ul style="list-style-type: none">• Information Management Policy• Records Management Policy• Sharing Policy	<ul style="list-style-type: none">• Data Protection Policy• Freedom of Information (FOI) Policy• Privacy Policy	<ul style="list-style-type: none">• Password Policy• Digital Signature Policy• Email Acceptable Use Policy• Internet Acceptable Use Policy• Access Control Policy• Data Classification Policy• Email Security Policy• Laptop Security Policy



- **The Structure of a Policy Document**
 - Policies documents tend to have a consistent set of elements clarifying the what, why, how and who
 - Your policy documents should adopt a consistent structure so that staff can navigate them effectively
 - The next two slides detail a series of common policy elements you might wish to choose

Information Policies



Document Element	Purpose
Opening Elements	<ul style="list-style-type: none">• Title Page• Document Control Page• Table of Contents• Acronyms and Abbreviations
Introduction	<ul style="list-style-type: none">• A short introduction to the policy summarising its purpose, objects and scope
Policy Purpose	<ul style="list-style-type: none">• This section provides the context, explaining why the policy exists and what it entails. Thus, is there a strategic or legislative objective that has to be met?
Policy Objectives	<ul style="list-style-type: none">• An outline of what the policy aims to achieve. This should be an aspirational statement of strategic and / or operational intent
Scope	<ul style="list-style-type: none">• To whom is this policy relevant? Who will it apply to? Be as specific as possible

Information Policies



Document Element	Purpose
Legal / Statutory / Operational Frameworks	<ul style="list-style-type: none">• Clarify the legal, regulatory or operational context that makes this policy necessary• Summarise relevant legislation and offer links to the full document
Policy Compliance	<ul style="list-style-type: none">• Clarify what risks you face if compliance isn't met (functional, operational, reputational, etc.)• Clarify the assurance regime you will employ to validate this policy• Clarify how the records arising from this policy are to be managed and where
Policy / Procedure	<ul style="list-style-type: none">• Offer a step-by-step outline of how the policy should be implemented• Use do / don't / shall statements• Use conditional if / then statements to clarify exceptions• Use a flow chart or process model to support understanding

Information Policies



Document Element	Purpose
Roles and Responsibilities	<ul style="list-style-type: none">• Clarify who will do what, including teams, individuals, decision-making bodies, etc.• Where appropriate, include hierarchy diagrams to illustrate how the various roles will work together
Contacts	Include the full contact details of the: <ul style="list-style-type: none">• Policy author• The policy department• The governance body
Closing Elements	<ul style="list-style-type: none">• References• Appendices

Information Policies



- The Features of a Good Policy
 - A good policy is:
 - A learning tool
 - Clarifies the what, how, why and who
 - Backed by solid research
 - Informed by stakeholder and expert input
 - Robust enough to last
 - Professionally written and edited
 - As long as necessary, but as short as possible



- **The Policy Making Process**

- The process of defining an organisational policy is little different to that used by governments to shape legislation
- Indeed, you are encouraged to use the same nomenclature so that better understand, and contribute to, policy making elsewhere in public life
- Of course, one can always dictate policy and so skip the steps that follow. But you cannot expect stakeholder buy-in in such instances

Information Policies



- **Process**

1. Preliminaries

- Appoint a director or coordination for policy development
- Define the scope of your work
- Establish the policy team, ensuring all relevant stakeholders are either represented or engaged

Information Policies



- **Process**

- 2. Issue / Problem Identification

- Identify the data-related challenges you have to address
 - Identify current and potential impacts stemming from these challenges
 - Make the business case for policy development and implementation

Information Policies



- **Process**

- 3. Research

- Survey stakeholders
 - Generate expert input
 - Seek legal advice as appropriate
 - Identify and evaluate potential solutions and their alternatives

Information Policies



- **Process**

4. Prepare a Discussion Paper (Green Paper)

- Prepare a discussion paper elaborating on the nature of the problem and the options available to resolve it

Information Policies



- **Process**

- 5. First consultation

- Circulate the discussion paper to relevant stakeholders and invite feedback
 - Organise interviews, workshops, etc. to generate as much input as possible
 - This step can drag on if deadlines are not set or observed. In such instances, argue that no response is equal to consent

Information Policies



- **Process**

6. Prepare a draft policy (White Paper)

- Prepare a draft policy detailing
 - The scope of the policy document
 - The proposed solution to the data-specific challenge
 - The steps or actions necessary to implement it
 - Roles and responsibilities

Information Policies



- **Process**

- 7. Second consultation

- Circulate the draft policy to relevant stakeholders and solicit a second round of feedback
 - Invite them to help you clarify the policy before it is implemented. As before, make it clear that no reply will be taken as consent

Information Policies



- **Process**

- 8. Adoption

- When all comments, criticisms and concerns have been properly addressed, finalise the policy document
 - Invite management to formally adopt the policy
 - Enter this decision into the minutes of a management meeting

Information Policies



- **Process**

- 9. Communication and training

- Communicate the policy as extensively as possible
 - Where appropriate, train staff in the proper implementation of the policy

Information Policies



- **Process**

10. Implementation

- Implement the policy, ensuring you lead by example
- Recognise that the learning curve is always steepest on implementation
- Thus, acknowledge and correct any shortcomings in the policy quickly

Information Policies



- **Process**

11. Monitor, evaluate and amend

- Monitor the policy by assessing the speed and rigour with which it is adopted and implemented by staff
- Set a date for an official policy review (e.g. after 18 – 24 months). That said, update and amend the policy document as and when necessary
- Remember: however rigorous the policy process, no policy document is perfect, or remains perfect for very long

Information Policies



- **Exercise**

1. Using the matrix in the next slide, identify the IM-related policies needed by your organisation
2. For each policy document, specify:
 - The purpose: why is this policy being established?
 - The objective: what specific outcomes do you want to achieve?
 - The scope: who will it apply to?
 - Compliance: how will you regulate compliance?

Information Policies



Policy	Purpose	Objective	Scope	Compliance



Then Ten Elements of Quality

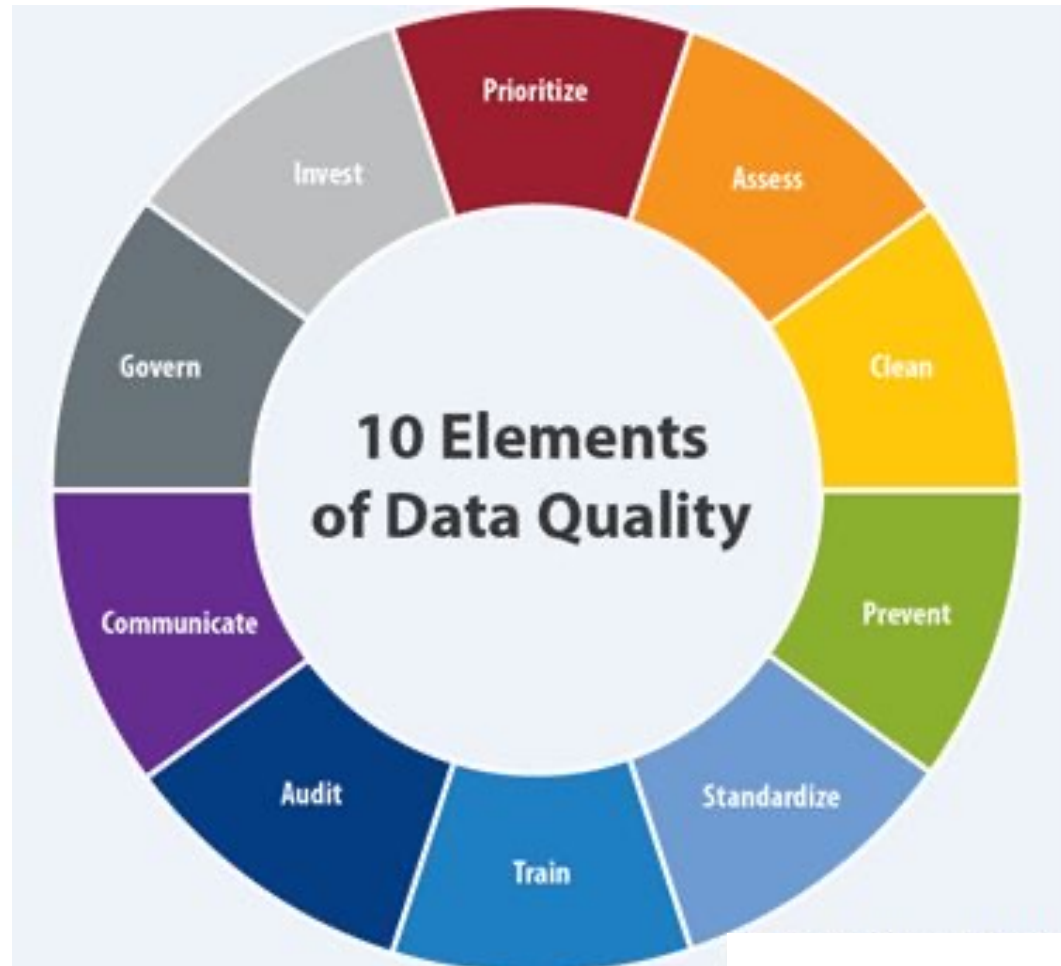
The Ten Elements of Quality



- **Introduction**

- The Ten Elements model was developed by Deloitte to help organisations evaluate their approach to information quality
- The model invites you to appraise your efforts with regard to:
 - Priorities
 - Assessment
 - Cleansing
 - Prevention
 - Standardisation
 - Training
 - Auditing
 - Communication
 - Governance
 - Investment

The Ten Elements of Quality



The Ten Elements of Quality



Element	Key Questions
Priorities	<ul style="list-style-type: none">• What information assets will you prioritise for evaluation or improvement?
Assessment	<ul style="list-style-type: none">• How will you evaluate the information these assets contain?• What standards will you use to make your assessment?
Cleansing	<ul style="list-style-type: none">• How should the data be cleansed or normalised?• Who will be responsible for cleansing the data?• Who will be responsible for validating their efforts?
Prevention	<ul style="list-style-type: none">• What measures will you put in place to prevent the incidence of error or encourage greater quality?• Will this measures be generic to all assets or specific?
Standardisation	<ul style="list-style-type: none">• What data quality standards do you need to develop or overhaul?• What updates need to be made to your data dictionary?• What updates need to be made to your information policy?
Training	<ul style="list-style-type: none">• What training needs to be given to staff?• Who should provide it?• What outcomes should the training ensure?

The Ten Elements of Quality



Element	Key Questions
Training	<ul style="list-style-type: none">• What training needs to be given to staff?• Who should provide it?• What outcomes should the training ensure?
Auditing	<ul style="list-style-type: none">• How should you improve routine audit procedures?• What audit schedule will you employ?
Communication	<ul style="list-style-type: none">• How should you improve communication with stakeholders on key data quality issues?• What needs to be communicated, when and to whom?
Governance	<ul style="list-style-type: none">• How will you improve data governance and compliance?• What incentives will you put in place to improve compliance?• How will non-compliance be handled?
Investments	<ul style="list-style-type: none">• What investments need to be made to improve information quality?• Are these investments specific to an asset or generic to the organisation?

The Ten Elements of Quality



- **Exercise**
 - Using the Ten Elements Model, outline the approach you will take to improving the quality of your organisation's information
 - Use the preceding set of questions to guide your thinking

Thank You



Chris Pallaris
Director

i-intelligence

+41 (0) 44 243 3849 | Skype: chrispallaris | c.pallaris@i-intelligence.eu

www.i-intelligence.eu | [@i_intelligence](#)