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Data Pathways

Data Maturity Framework

Harness the power of data in education with our adapted Data Maturity Assessment (DMA), tailored specifically for the sector's needs. Explore our comprehensive framework to pinpoint strengths and weaknesses within your institution's data ecosystem, allowing for nuanced analysis across various topics and themes.

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Introduction

In the realm of education, an organisation's ability to harness and leverage data effectively is pivotal in attaining strategic, operational, and overarching goals. Recognising this significance, we have adapted the Data Maturity Assessment (DMA) for Government, originally crafted by the UK government for public sector entities. Our adapted framework, tailored for the education sector, utilises the licensed structure of the UK government's DMA, which can be explored further here.

This framework serves as a comprehensive tool for comprehending and pinpointing the strengths and weaknesses inherent in an educational institution's data ecosystem. The assessment, conducted through the data maturity assessment framework, delves into various topics, themes, and maturity descriptors specifically relevant to the unique context of the education sector.

Unlike traditional scoring systems, our maturity assessment offers a nuanced matrix view, allowing organisations to identify varying levels of maturity across different topics and themes. Through this lens, educational institutions can discern areas of high maturity, serving as pillars for successful delivery, as well as areas of concern where low data maturity poses a risk to organisational priorities.

Structured across ten distinct topics intersecting with six overarching themes, each row within the assessment delineates the features or behaviours associated with progressing from low to high maturity for a specific topic and theme. This dynamic approach to evaluating data maturity promotes a cross-cutting analysis, encouraging a balanced and strategic approach to development and progress within the education sector.

Ultimately, this adapted data maturity framework provides educational organisations with a valuable instrument for evidence-based prioritisation of resources, facilitating the identification and resolution of areas where low data maturity may hinder organisational objectives, and the preservation of high maturity areas critical to overall success.

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Maturity Levels

Level 1 :: Beginning

- Compliance with minimum legal requirements.
- Insular approach and siloed working.
- Organisation does not see data as valuable for its outcomes.
- Lack of defined responsibility and oversight for data.
- Very limited knowledge of what data the organisation holds.
- Very limited data literacy.
- Limitations and restrictions by default rather than by design.

Level 2 :: Emerging

- Data is used but is not a priority.
- Data seen as an IT or administrative responsibility.
- Use of or access to data is limited to specialist staff.
- Lack of awareness about the value of data held in the organisation.
- Ownership of and responsibility for data is not well communicated.
- Disconnect between business leadership and data leadership.
- Focus is on highest profile processes and outputs only.

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Maturity Levels

Level 3 :: Learning

- Data and analytical literacy valued in leadership roles.
- Legal and policy requirements are firmly embedded and widely understood.
- Senior strategic leaders appreciate the importance of data.
- Staff engagement with data extends beyond IT or administrative roles.
- Non-expert staff require support from specialist users to work with data.
- Broad drive and desire to improve data capability.
- Intentional breaking down of silos.

Level 4 :: Developing

- Beginning to embed policies and practices across organisation.
- Non-expert data users have little or no reliance on specialist support.
- Some external outreach and engagement.
- Regular review of policies and practices.
- Data consistently seen as a priority.
- High levels of engagement with data from all staff.
- Deep capability.
- Implementation of practices across organisation may be inconsistent.

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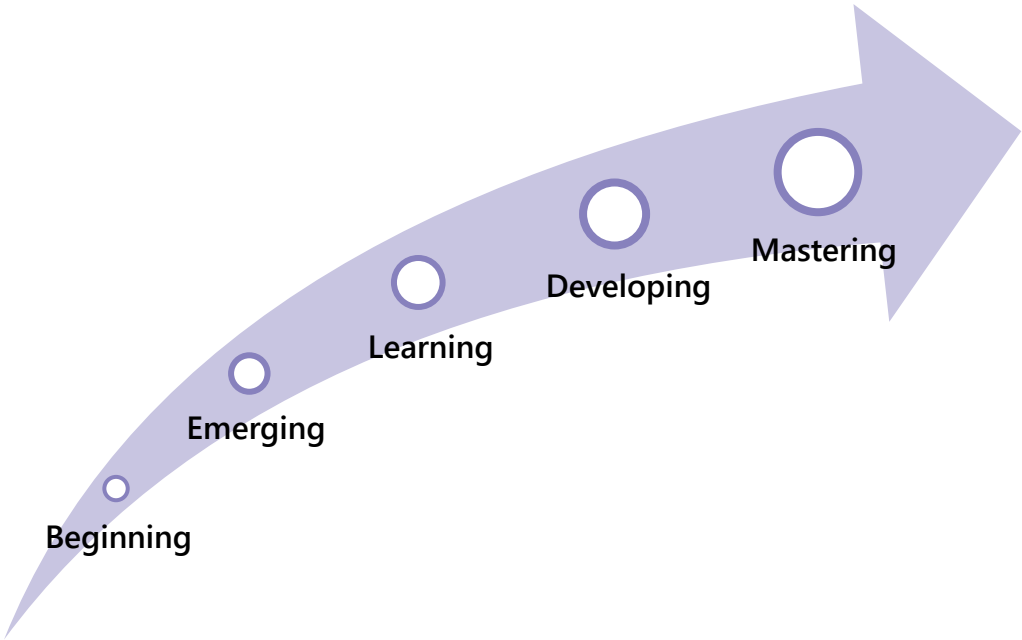
Maturity Levels

Level 5 :: Mastering

- Seen as an exemplar.
- Consistently proactive.
- Organisation-wide implementation.
- Strong internal and external engagement.
- Clear understanding of needs and proportionate responses.
- Futureproofing and prediction of future needs.
- Broad and deep capability.



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Topics in the Education Data Maturity Framework

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1. Engaging with others

Your engagement with others in the data ecosystem

Data Issues & Concepts

- **Making Data Available**
  Ensuring data accessibility for those who need it.
- **User-Centric Changes**
  Considering user needs during data modifications.
- **Strategic Data Sharing**
  Sharing data internally as part of organisational strategy.
- **Learning from Mistakes**
  Promoting a culture of discussion and learning from data-related errors.
- **Meeting User Needs**
  Collaborating with internal data users to meet their requirements.
- **Developing Data Skills**
  Engaging with networks for the continuous development of data skills.

Themes

- **Culture**
  Fostering a culture that encourages open discussion, learning, and collaboration.
- **Skills**
  Actively participating in networks to enhance and develop data-related skills.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Data Issues & Concepts

- **Staff Literacy**
  Recognising data's importance in individual roles.
- **Sharing Understanding**
  Knowing when to share data.
- **Outcome Alignment**
  Linking data practices to organisational goals.
- **Leadership Skills**
  Embedding data skills in leadership.
- **Expertise Valuation**
  Promoting and valuing data expertise.
- **Resource Allocation**
  Appropriating resources for data literacy.
- **Role Responsibility**
  Defining roles with data responsibility.
- **External Collaboration**
  Engaging external networks for skill development.
- **Commitment to Literacy**
  Defining and committing to staff data literacy.
- **Skill Gap Addressing**
  Choosing methods to address skill gaps.
- **Tech Integration**
  Incorporating tech into training.
- **Specialist Support**
  Supporting specialist data staff.
- **Development Opportunities**
  Providing staff skill development.
- **Organisational Needs**
  Understanding data skills needed.
- **User Accessibility**
  Making data accessible for different users.

Themes

- **Culture**
  Fostering a data-centric organisational culture.
- **Data**
  Recognising the importance of data in decision-making.
- **Leadership**
  Instilling data skills in leadership roles.
- **Skills**
  Developing and enhancing data and analysis skills.
- **Uses**
  Ensuring data accessibility for diverse user needs.

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3. Having the right systems

Tools and systems for effective data management

Data Issues & Concepts

- **Resource Allocation**
  Allocating resources for tool improvement.
- **Analytical Tools**
  Having tools for data analysis.
- **Organisational Tools**
  Having tools for organising and accessing data.
- **Data Access Tools**
  Utilising tools for appropriate internal data access.
- **Effective Planning**
  Planning for adequate data tools.
- **Internal Data Sharing**
  Sharing data internally.
- **Internal Analytics Sharing**
  Sharing analytics internally.
- **Data Collection and Storage**
  Having tools for collecting and storing data.
- **Scalable Storage**
  Ensuring scalability of data storage.
- **Integration Strategies**
  Developing effective integration strategies.

Themes

- **Leadership**
  Allocating resources for improved data tools.
- **Tools**
  Ensuring the right tools and systems for data collection, storage, and analysis.
- **Uses**
  Incorporating the right tools and systems to meet organisational needs.

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4. Knowing the data you have

Recording, cataloguing, and preserving your data

Data Issues & Concepts

- **Data Findability**
  Ensuring easy discoverability of data.
- **Documenting Data**
  Recording data sources and metadata.
- **Data Quality Assessments**
  Applying assessments for data quality.
- **Data Validation Processes**
  Implementing validation processes.
- **Handling Data Anomalies**
  Addressing and managing data anomalies.
- **Automation in Data Processes**
  Understanding which data processes to automate.
- **Reproducible Data Processing**
  Building reproducible data processing.
- **Data Standards Application**
  Applying data standards within the organisation.
- **Data Disposal Management**
  Properly managing the disposal of data.

Themes

- **Data**
  Focusing on effective data recording, cataloguing, and preservation.
- **Tools**
  Leveraging tools for data findability, documentation, and quality.

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5. Making decisions with data

Leveraging data for improved decision making

Data Issues & Concepts

- **Data-Driven Decision Making**
  Basing decisions and organisational planning on data.
- **Outcome-Linked Decisions**
  Linking decisions affecting organisational outcomes to data.
- **Performance Monitoring**
  Using data to monitor and improve performance.
- **Machine Learning Adoption**
  Incorporating machine learning for enhanced decision-making.
- **Operational and Strategic Data Use**
  Utilising data for both operational and strategic purposes.
- **Stakeholder Influence with Data**
  Influencing stakeholders through data.
- **Data in Business Planning**
  Using data for business planning and strategy.
- **Product/Service Performance Monitoring**
  Monitoring product or service performance and resource utilisation.

Themes

- **Leadership**
  Basing decisions on data, linking decisions to outcomes, and using data to monitor performance.
- **Skills**
  Developing and enhancing data and analysis skills.
- **Uses**
  Employing data for operational, strategic, and business planning purposes.

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6. Managing and using data ethically

Integrating data ethics into planning and use

Data Issues & Concepts

- **Transparency**
  Accounting for limitations in data and addressing potential biases.
- **Bias Mitigation**
  Actively working to mitigate biases in data.
- **Inclusivity**
  Ensuring tools and data practices are inclusive.
- **Oversight and Scrutiny**
  Incorporating oversight and scrutiny into data management.

Themes

- **Culture**
  Embedding ethical considerations in data practices.
- **Skills**
  Developing skills for understanding ethical data management.
- **Tools**
  Ensuring inclusivity in tools for data management.

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7. Managing your data

Ensuring usability through effective data management

Data Issues & Concepts

- **Data Quality Culture**
  Prioritise a culture that values data quality.
- **Disposal Management**
  Handle data disposal appropriately.
- **Limitation Communication**
  Communicate data limitations effectively.
- **Outcome-Linked Collection**
  Connect data collection to organisational outcomes.
- **User-Centric Design**
  Incorporate user needs into product design.
- **Quality Assessments**
  Conduct assessments to ensure data quality.
- **Lifecycle Management**
  Manage data quality across its lifecycle.
- **Understanding User Needs**
  Recognise and address data quality needs of users.
- **Automation Planning**
  Identify tasks for automation in data processing.
- **ETL Processes**
  Use Extract, Transform, and Load (ETL) processes.
- **Reproducible Practices**
  Establish reproducible data processing practices.
- **Standards Application**
  Apply data standards within the organisation.
- **Leadership Engagement**
  Involve senior leaders in understanding data's value.

Themes

- **Culture**
  Emphasise a data quality culture and proper disposal practices.
- **Data**
  Prioritise quality, user needs, and lifecycle management.
- **Leadership**
  Engage leaders in recognising the value of data.
- **Tools**
  Use tools for efficient data processing, including ETL processes.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Data Issues & Concepts

- **Policy Management**
  Implementing policies for data protection and security.
- **Access Control**
  Controlling access to data securely.
- **Governance Review**
  Regularly reviewing governance and security incident responses.
- **Business Continuity**
  Ensuring business continuity for data.
- **Effectiveness Measurement**
  Measuring the effectiveness of data protection processes.
- **Risk Assessment**
  Assessing risks to data assets.
- **Regulatory Compliance Training**
  Training staff to comply with and enforce data protection regulations.
- **Secure Work Practices**
  Training staff to work with data securely.
- **Data Protection Tools**
  Employing tools dedicated to protecting data.
- **Recording and Securing Systems**
  Recording and securing data tools and systems.

Themes

- **Culture**
  Emphasise policy adherence, access control, governance, and business continuity.
- **Data**
  Measure effectiveness, assess risks, and ensure regulatory compliance.
- **Skills**
  Train staff for regulatory compliance and secure data practices.
- **Tools**
  Use dedicated tools for data protection and secure system recording.

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9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Data Issues & Concepts

- **Creating Data Principles and Policies**
  Establishing and embedding data principles and policies.
- **Organisational Alignment**
  Linking data principles and policies to organisational objectives.
- **Data as Organizational Priority**
  Recognising data as a priority within the organisation.
- **Strategic Alignment**
  Linking data strategy to organisational strategy.
- **Data Goal Alignment**
  Aligning data goals with organisational needs and outcomes.
- **Value Understanding**
  Recognising the value of data to the organisation.

Themes

- **Culture**
  Create and embed data principles and policies within the organisational culture.
- **Leadership**
  View and prioritise data as a crucial organisational element.
- **Uses**
  Understand and leverage the value of data for organisational success.

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10. Taking responsibility for data

Establishing accountability and responsibility for effective data management

Data Issues & Concepts

- **Accountability Definition**
  Defining and recording accountability and ownership for data.
- **Governance Implementation**
  Creating and embedding data governance.
- **Responsibility Definition**
  Defining who should have responsibility for data.
- **Legislation Awareness**
  Maintaining awareness of data legislation within senior leadership.
- **Structured Accountability**
  Creating and enforcing structured responsibility and accountability for data.
- **Skills Oversight**
  Defining oversight and responsibility for ensuring staff have necessary data skills.
- **Tool and System Ownership**
  Assigning ownership and responsibility for data tools and systems.

Themes

- **Culture**
  Define and record accountability and ownership within the organisation.
- **Leadership**
  Maintain awareness of data legislation, enforce accountability, and oversee necessary skills.
- **Skills**
  Ensure structured responsibility and oversight for necessary data skills.
- **Tools**
  Assign ownership and responsibility for data tools and systems.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.1	Making data available to those who need it.	Culture	Makes data available by default only to a single specialist person or team. Discourages sharing data internally.	Beginning to share data internally either verbally or via reports. Does not encourage data sharing across teams or provide ways to share data directly.	Enables specialist users to access and share some data internally, but systems or processes limit access to, and sharing of, data by default rather than by design. Some internal users are have appropriate access to data they need but may require specialist support to access or share data.	Beginning to provide ways to access and share data directly, but non-expert staff may require some intervention from specialists to do so. All users have appropriate access to data they need when they need it.	Data can be accessed and directly shared appropriately by all users who need it. All users can access data they need when they need it, without specialist support.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.2	Considering the needs of the users when making changes to data.	Culture	Makes changes to data without considering impact on users. Communicate changes to data only where it is externally mandated by legal or policy requirements.	Makes changes to data without considering users' needs or how the changes will affect the users. Communicates changes to high profile data. The approach and format of communication is inconsistent.	Considers the needs of high impact users when making changes to data. Communicates changes to high profile data consistently and clearly.	Considers and consults some users and re-users of the data when making changes in order to understand their needs. Communicates changes to data clearly, however the approach or format is somewhat inconsistent across the organisation.	Has a comprehensive understanding of the needs of most users and re-users of data. Consistently makes best possible efforts to ensure that critical user needs are met when making changes to data. All changes are communicated clearly and consistently.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.3	Sharing data internally as part of strategy.	Culture	Sees data sharing as an administrative task. Senior leaders do not hold responsibility or accountability for successful sharing.	Sees data sharing primarily as task, not as strategy. Beginning to become more open to data sharing in some pockets of the organisation.	Sees data sharing as strategy not task. Has more open attitudes to data sharing.	Beginning to see limited data sharing as a strategic priority. Beginning to define structures of responsibility and accountability for ensuring successful data sharing.	Includes data sharing in strategic priorities. Senior leaders take responsibility and hold accountability for ensuring successful data sharing. These structures are enforced and communicated consistently.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.4	Discussing and learning from mistakes.	Culture	Staff or teams resolve data problems individually. Does not encourage avenues and forums to openly discuss issues with data. Does not record or communicate lessons learned from past mistakes.	Beginning to form a culture of openness and learning from mistakes. Makes some efforts to communicate lessons learned in an ad hoc way.	Openly discusses data issues lessons learned from past mistakes. Communicates these consistently. This mostly occurs reactively in response to incidents.	Openly discusses data and learns from data problems regularly rather than reactively. People from different teams and levels of seniority regularly discuss data issues and how to act on them. Makes efforts to communicate lessons learned widely, but may not reach all relevant areas of the organisation.	Proactively and regularly promotes discussion of data problems at all levels. Shares lessons learned both internally and externally as appropriate. Communicates known data problems and lessons learned effectively across the organisation.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.5	Working with internal data users and meeting their needs.	Culture	Occasionally engages with some internal users of the organisations data for feedback on their needs. Does not act on this unless required to do so by external mandates.	Engages with some internal users of the organisation's data to know what their needs are. Beginning to act on this in some high profile areas.	Beginning to build relationships with a wide range of important internal users to learn about their needs. Acts on this in most high profile areas.	Establishes and maintains relationships with high impact internal users of data to understand their needs. Acts on this in all high profile areas and some other important areas. The approach to this is inconsistent across the organisation.	Has a clear understanding of the needs of all important internal users of the organisation's data. Consistently responds to internal user needs as appropriate.

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1. Engaging with others

Your engagement with others in the data ecosystem

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
1.6	Engaging with networks to develop data skills.	Skills	Sees little or no value in engaging with others to develop staff data literacy.	Beginning to engage internally to improve awareness of data groups and networks, but this is limited in scope to small groups of highly specialised staff. Individual staff working with data may engage with these informally and infrequently.	The organisation makes deliberate and planned engagements with data groups and networks to develop data literacy. Frequency of engagement is ad hoc, based on specific needs.	Embeds regular engagement with data groups and networks in working practices. Keeps up to date with developments in the field as part of ongoing commitment to data literacy.	Becoming experts that other organisations in the sector, partners and peers use as a resource.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.7	Recognising the importance of data in individual staff's work.	Culture	Awareness of data across the organisation is low or non-existent. Very few staff see how data relates to their work.	Most staff recognise data is part of the organisation's operation but are not aware of how it relates to their work.	People across the organisation are starting to talk about data and beginning to understand how it relates to their work.	Data advocacy may be present in high value data management or analytical areas of the organisation to support embedding of awareness of data. The approach to this may be unstructured and inconsistent across the organisation.	Data advocacy is present in each area of the organisation to actively promote and maintain embedded data awareness across the organisation. The organisation proactively embeds into networks of data knowledge and research in the context of its work.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.8	Understanding when data can be shared.	Data	Shares the wrong data, or avoids sharing or using data, because of inappropriate or incorrectly applied privacy assessments.	Routinely shares some appropriate data sets with appropriate assessments in place. Understands the legal and security concerns around sharing data and beginning to weigh business needs with privacy and security concerns appropriately in some data.	Has identified the data that can be shared. Has appropriate safeguards in place for all shared data sets.	Shares data with appropriate safeguards. Engages with internal and external stakeholders proactively. Challenges practices that limit data sharing.	Is seen as a leader in sharing data. Proactively works with cross-sector networks and communities of practice, and internal and external experts to ensure continuous improvement in this area. Ensures data sharing does not compromise ethical use of data.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.9	Linking data management practices to organisational outcomes.	Leadership	Leaders do not understand the link between poor data management and risks to operational outcomes.	Leaders are beginning to question how the organisation's data management practices support its operational outcomes. Data initiatives are carried out without explicitly linking to outcomes that the data supports.	Leaders understand how good data management supports operational outcomes. Data initiatives may not be consistently linked to all of the outcomes that the data supports.	Leaders consistently ask about the link between data management work and operational outcomes. They are beginning to explore how to ensure that data initiatives are connected to the outcomes that they support.	Leaders have a clear understanding of the link between data management and operational outcomes. They proactively work to ensure that data initiatives are connected to the outcomes that they support.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.10	Having data and analysis skills in senior leadership positions.	Leadership	Senior leaders have a very basic level of understanding or expertise in data or analytics but require specialist support to make use of these. This may be limited to interpreting data visualisations with specialist support.	Senior leaders have a basic level of knowledge or some experience of data and analytics. Some leaders are capable of making use of analyses and data with some specialist support.	Beginning to increase knowledge and experience of data and analytics amongst senior leaders. Most leaders are capable of making use of analyses and data with minimal specialist support. An advocate for data is present within the senior leadership.	Addressing data and analysis skills gap in leadership as a whole. All senior leaders are confident in making some use of analyses and data without support, and many are capable of making extensive use of analyses and data with some support.	Has many people with a range of data and analysis expertise in leadership positions including at most senior levels. All senior leaders are confident in making extensive use of analyses and data independently or with minimal support.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.11	Valuing and promoting data and analysis expertise in senior leadership roles.	Leadership	Sees data management and analytical skills as irrelevant for current and future strategic leaders.	Beginning to see value in data and analytical skills as a part of leadership responsibility. However, data and analytical literacy in senior leadership remains limited.	Sees value in data and analytical skills as a part of leadership responsibility. Beginning to increase data and analytical literacy among some staff in senior leadership positions.	Has people in leadership positions with a range of data and analysis expertise who are visible and demonstrate good practice.	Has many people with a range of data and analysis expertise in leadership positions at all levels of the organisation. Proactively works to ensure that these skills are maintained, visible, and encouraged across the organisation.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.12	Allocating appropriate resources to improving data literacy across the organisation.	Leadership	Allocates resources to provide training to improve data skills only where it is externally mandated by legal or policy requirements.	Provides training for to improve data skills in an ad hoc way or on a localised basis. This is limited to a small group of highly specialised staff.	Supports people whose work is heavily involved in data management to improve their data skills. This is generally done on an ad hoc basis.	Beginning to commit to upskilling all staff working with data. This occurs inconsistently across the organisation without coordinated senior oversight.	Invests appropriately and continuously in data skills across the organisation. Plans for improving data literacy are aligned with wider business plans. Coordination across the organisation ensures all areas have proportionate goals and plans for improving data skills.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.13	Having good data literacy among staff and defined responsibility for data within staff roles.	Skills	Limits training or expertise in data literacy to small groups of junior staff, usually in IT or administrative roles.	Data literacy is patchy, mostly low, amongst staff. Basic or adequate skills and training in using data for operational and administrative purposes.	Expects and provides for staff to have the skills to adequately understand and make use of data systems and tools.	Increased data literacy and responsibility across the organisation. Defines dedicated responsibilities for data management and data architecture within staff roles.	All staff trained with ongoing investment in developing data skills with high levels of data literacy across the organisation.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.14	Engaging with external communities of practice and learning networks to develop data skills.	Skills	Sees little or no value in engaging with external data learning networks or communities of practice to develop staff data literacy.		Sees engagement with external data communities of practice as valuable, but this is limited to specialist staff. Continues to engage on an ad hoc basis rather than a continuous basis.	Embeds structured engagement with data learning networks and communities of practice. Makes this visible to all staff.	Actively participating or leading within data learning networks and in communities of practice. Exploring new tools and skills.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.15	Defining responsibility for data within roles and committing to improving staff data literacy.	Skills	Has no interest in developing specialised data roles, or in upskilling or recruiting staff to fill knowledge gaps. Staff manage and use data as part of other roles without dedicated responsibilities for data.	Different staff collect, manage and use data as part of their roles without coordinated, consistent responsibilities assigned to roles. Beginning to consider some training or specialisation, but with minimal commitment to change.	Beginning to establish dedicated data responsibilities within staff roles in the organisation. Increasing commitment to improving data and analytical literacy within specialist teams.	Has established dedicated, consistent data responsibilities defined within staff roles with several people responsible for data in different roles or teams. Beginning to commit to improving data and analytical literacy across the organisation, but the approach is inconsistent in different areas.	Has established a dedicated, consistent approach to integrating data responsibilities in staff roles across the organisation. Has a strong, consistent, and visible commitment to improving data and analytical literacy across the organisation with clear routes into skilled data roles for all staff.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.16	Choosing appropriate way to address gaps in data skills.	Skills	Uses a single method for addressing skill gaps such as contracting, upskilling, recruitment, without considering or weighing the options.	Beginning to consider different options when addressing skill gaps but decisions are not always clearly linked to the organisation's long and short terms needs.	Consistently considers different options when addressing skill gaps. Beginning to link this to the organisation's long- and short-term data skill needs.	Carefully considers different options when addressing data skill gaps in most areas and clearly links these to the organisation's long- and short-term skill needs. However, the approach is not consistently embedded across the organisation.	Fully considers all options when addressing data skill gaps in line with the organisation's long- and short-term skill needs. Takes a consistent and joined-up approach across the organisation.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.17	Incorporating emerging technologies into staff training	Skills	Limited incorporation of emerging technologies into staff training initiatives.		Emerging technologies are actively integrated into staff training programs, enhancing skill development.	Staff training consistently incorporates emerging technologies, ensuring relevance to current industry trends.	Emerging technologies are systematically integrated into staff training, ensuring continuous skill development and innovation.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.18	Supporting development of specialist data staff.	Skills	Expects people to learn data skills 'on the job'. Does not provide specialist training for data skills.	Small groups of specialist staff working with data have access to specialised data training. The approach is ad hoc and uncoordinated. Awareness and documentation of specialist data skills amongst staff across the organisation is poor.	Specialist staff working with data have some support to improve their skills. The approach is somewhat organised but lacks centralised coordination. Beginning to document and improve awareness of specialist data skills in the organisation.	Specialist staff working with data have some support to improve their skills. The approach is organised and coordinated, but inconsistent across different areas of the organisation. Has a clear understanding of what specialist data skills are present in the organisation.	Specialist staff working with data have appropriate support to continuously improve their skills. The approach is consistently organised and coordinated across the organisation. Has a clear understanding of what specialist data skills are present in the organisation and proactively plans to fill gaps.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.19	Providing opportunities for staff to develop data and analysis skills.	Skills	Staff learn data skills only through experience, with no access to external knowledge or expertise around data or analytics.	Beginning to provide some limited, internal training for basic, 'adequate' data skills, though staff mostly learn through experience.	Provides training for data, analysis, and relevant systems and tools in-house or externally.	Individuals responsible for data have advanced training and skills and regularly engage in learning to develop and improve systems and embed these across the organisation.	Specialist staff regularly update skills and knowledge through training and conferences.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.20	Understanding the data and analysis skills that your organisation needs.	Skills	Struggles to understand the needs and skills required for building the organisation's data capabilities, due to a lack of interest in or information about in staff's current skills.	Beginning to understand needs around data skills and capabilities.	Exploring up-skilling and recruitment to fill skills gaps. Invested in developing analytical skills across the organisation.	Understands data and analytical skills needs and gaps in important output areas. Opportunities to develop data and analytical skills are visible and available to both specialist and non-specialist staff.	Has a clear understanding of data and analytical skills needed. Proactively seeks to upskill existing staff to meet upcoming needs.

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2. Having the right data skills and knowledge

Data and analytical literacy in your organisation

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
2.21	Making data available and interpretable for different users.	Uses	Manually reworks data for presentation. Makes all presentation of data and analysis the same regardless of audiences.	Manually reworks data for presentation in written reports for different internal and external audiences.	Enables some internal users to interactively explore and/or report on the organisation's data, however the user may need substantial technical expertise or support from data specialists to do so.	Enables most internal users to interactively explore, analyse and/or report on the organisation's data. Non data specialists are able to do so with minimal specialist support, if any.	Carefully considers different audiences from the beginning when planning data and analysis presentation. Uses interactive and static presentations of analyses as appropriate. Presents data and analyses in a way to be easily and quickly interpreted by non-specialists without support.

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3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.22	Allocating appropriate resources to improve tools for data.	Leadership	Leaders improve or replace tools only under external mandates.	Leaders reactively address insufficient tools, damaging outcomes.	Leaders allocate some resources ad hoc, with inconsistent links to needs.	Beginning to proactively allocate resources, linking changes to needs.	Continuously and proactively allocates appropriate resources for widespread tool improvement. Coordinated plans align with organisational needs.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.23	Having the right tools for analysing data.	Tools	Data tools are only used for operational requirements. Analysts frequently spend time on labour-intensive workarounds to meet user needs due to inadequate analytical capability of tools.	Tools mostly used operationally rather than analytically. May allow some basic inbuilt analysis and reporting but most often data has to be exported for analysis in another tool. Possible advanced analytical tool used for basic data processing or descriptive statistical analysis.	Tools support efficient and effective outputs for high impact analytical processes. Efficiency and effectiveness of some lower priority outputs are still reduced due to inadequate tooling resources. Some tools may be disproportionately complex for the needs of the organisation.	Tools for analysis are in line with the organisation's needs and enable analysts to produce effective, efficient outputs.	Tools that meet the peak of the organisation's analytical needs are in place and available across the organisation. Tools for delivering batch analytics and real-time streamed data are used.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.24	Having the right tools for organising and accessing data.	Tools	Uses tools for accessing and organising data that are highly disproportionate to the organisation's needs. Reviews tools when failures have had a substantial negative impact on outcomes.	Most tools for organising and accessing data allow for the organisation to meet its objectives. Some tools may be disproportionate to the organisation's needs.	Tools for organising and accessing data are proportionate to the organisation's needs and allow for registers of data assets to be maintained and updated.	Regularly reviews tools for organising and accessing data to ensure they are adequate and proportionate for current and short-term future needs. Some awareness of tools that might be relevant to the organisation in the future, but interest and buy-in at senior levels is limited.	Makes use of horizon scanning for emerging technology. Understands what future tools are relevant and proportionate to the organisation's needs.

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3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.25	Having tools that allow appropriate access to internal data.	Tools	Shares data mostly by emailing spreadsheets and documents as attachments with duplication, version control, and security issues.	Safeguards are in place to ensure that data sharing does not compromise data security.	Tools allow for data to be shared internally as live documents for improved version control. Non-experts may require support from specialist users.	Tools allow for effective, direct access to internal data for appropriate expert and non-expert users. Exploring tools to support secure, direct access to data for external users.	Tools able to access and utilise internal and external data directly, for both experts and non-experts.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.26	Planning effectively to ensure adequate tools for data.	Tools	Dedicates resources to tools, systems and infrastructure for data only when critical systems fail or when changes are legally required.	Acquires systems and tools on a 'needs-must' basis, eg for a specific, isolated purpose or project, or when the existing systems and tools fail.	Primarily acquires systems and tools as 'one-offs' for specific purposes with limited flexibility for change or improvement. Considers replacements for all critical systems and tools, and researches and costs this before they fail. Dedicates some resources to improving software tools and ad-hoc hardware replacement.	Commits resources to new and existing systems and tools across the organisation, but the approach is inconsistent. Proactively considers and costs replacements and upgrades for all critical and some important systems and tools.	Commits resources to new and existing systems and tools across the organisation, with a consistent, coordinated approach across the organisation. Proactively considers and costs replacements and upgrades for all critical and important systems and tools.

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3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.27	Sharing data internally.	Tools	Users are not able to find or access data that they need due to inadequate data storage tools. Access to stored data is not managed or is managed ad hoc without structured processes.	Some people or teams may use cloud-based document storage to share some data. Access is managed ad hoc on an individual level by staff who may not be specially trained in security and governance.	Data storage tools are beginning to be used that allow for broader, internal sharing across the organisation. Access to data for non-experts may require specialist support.	Data storage tools allow for internal sharing across the organisation, with access managed appropriately. Tools in use in some areas of the organisation are not proportionate to data and analytical needs. Non-experts are able to access most data without specialist support.	Data storage and sharing tools are proportionate to analytical capability and data needs. Storage tools allow for non-experts to access appropriate data without requiring specialist support. Access is managed appropriately.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.28	Sharing analytics internally.	Tools	Analytics tools in use are outdated and do not allow the organisation to consistently share analytics in ways that meet their users' needs.	Analytics tools are being updated and allow the organisation to share some analytics internally. Non-specialists are not able to meaningfully make use of analytics tools without extensive, direct support from expert users.	Available tools allow for effective internal sharing of analytics but may not be meaningfully usable by non-specialists without support.	Self-service analytics available to the organisation. Non-expert users may require support from data and analysis specialists in order to make effective use of analytics.	Self-service analytics available to the organisation. Non specialist users are able to extract meaning from analyses without support.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.29	Having the right tools and systems to collect and store data.	Tools	Mostly uses unstructured tools and systems to collect data such as emails, SMS messages, paper forms. Does not consistently transfer this data into a structured physical or digital storage system.	Mostly collects data manually and then enters it into an isolated database or spreadsheet for analysis and reporting.	Holds data in a range of systems and tools that are all separately managed. Interlinking between systems is restricted by default rather than by design.	Collects and automatically stores data digitally wherever possible eg online forms or apps directly into databases. Beginning to break down silos by increasing interlinking between systems and tools.	Has capacity to store, manage, and analyse increasingly large volumes of data from multiple sources. Breaks down silos by increasing interlinking between data storage systems and tools with appropriately managed access.

Funded by UK Government

3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.30	Scalability of data storage	Tools	Limited scalability in data storage solutions, hindering the ability to accommodate growing data volumes.	Some efforts to improve data storage scalability, but it is not consistently applied across the organisation or with a clear strategy.	Data storage scalability, is a strategic concern though not fully implemented but is now in progress. Growing data volumes are now handled better.	Highly scalable data storage solutions are in place, effectively handling large and growing datasets.	Cutting-edge and scalable data storage solutions are implemented, ensuring seamless handling of massive and growing datasets. Costs are clearly defined and understood.

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3. Having the right systems

Tools and systems for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
3.31	Developing effective integration strategies	Uses	Ineffective integration strategies, leading to data silos and reduced interoperability. Duplication across systems is commonplace.	Initial efforts to develop integration strategies have started, but the overall impact is limited. Duplication still exists but some areas have been addressed.	Integration strategies are actively developed, reducing data silos and improving interoperability.	Effective integration strategies are in place, supporting seamless data flow and interoperability. Integration of systems is identified prior to system selection and implementation.	Advanced integration strategies are implemented, ensuring efficient data flow and interoperability across the organisation. All procurement exercises involving systems have integration as a key line of enquiry prior to selection and implmentation.

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4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.32	Ensuring findability of data.	Data	Relies on individual staff member's knowledge to find data and make it available to those who need it.	Documents critical data sets in a central location, with a location of the data set. Relies on ad hoc processes or substantial specialist support to make data available to those who need it.	Documents all critical and some important data sets in a central location, with a location of the data set. The data is available to those who need it through efficient, structured routes. Some data requires specialist support to access.	Documents all critical and important data sets in a central location, with the location of the data set. The data is available to those who need it through efficient, structured, well-communicated routes. Most data can be accessed without specialist support.	Documents all critical and important data sets and makes them fully findable by all authorised users. Users are consistently able to access the data they need without specialist support.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.33	Documenting Data Sources and Metadata	Data	Data sources are inconsistently documented, and metadata is often missing.	Basic documentation exists for some data sources, with sporadic metadata inclusion.	Documentation for data sources is improving, with metadata consistently applied to critical datasets.	Comprehensive documentation for all data sources is maintained, with metadata consistently applied.	Metadata and documentation are systematically managed, regularly updated, and aligned with organisational needs.

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4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.34	Applying data quality assessments	Data	Data quality assessments are not conducted, leading to significant data inaccuracies.	Ad-hoc data quality assessments are performed, but inconsistencies often remain unaddressed.	Regular data quality assessments are conducted, addressing most inconsistencies in the data.	Systematic data quality assessments are part of routine procedures, enhancing data accuracy.	Continuous monitoring and improvement of data quality through automated assessments and proactive measures.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.35	Implementing data validation processes	Data	Data validation processes are not in place, leading to the acceptance of inaccurate or incomplete data.	Basic data validation processes exist but are not consistently applied, resulting in occasional inaccuracies.	Data validation processes are applied consistently, reducing instances of inaccurate or incomplete data.	Robust data validation processes are in place, minimising data inaccuracies.	Automated and comprehensive data validation processes are applied rigorously, ensuring high data accuracy.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.36	Handling data anomalies	Data	Anomalies in data are not addressed, leading to unreliable results and decision-making.	Some efforts are made to identify and address data anomalies, but the process is not systematic.	Processes to identify and handle data anomalies are improving, reducing their impact on results.	Systematic approaches to handle data anomalies are in place, ensuring reliable results.	Advanced techniques and automated systems are used to proactively identify and address data anomalies, maintaining consistently reliable data.

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4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.37	Understanding what data processes to automate	Tools	Little to no automation in data processing, resulting in time-consuming and error-prone manual tasks.	Some basic tasks in data processing are automated, reducing manual effort to some extent.	Efforts to identify and automate routine data processing tasks are increasing, enhancing efficiency.	Significant automation in routine data processing tasks, improving efficiency and reducing errors.	Advanced automation in data processing tasks, leading to highly efficient and error-free data workflows.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.38	Building reproducible data processing	Tools	Data processing steps are not well-documented or reproducible, hindering transparency and auditability.	Some efforts are made to document data processing steps, but reproducibility is inconsistent.	Documentation of data processing steps is improving, leading to increased reproducibility.	Data processing steps are well-documented, allowing for consistent reproducibility.	Comprehensive documentation and version control of data processing steps ensure reproducibility and transparency.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.39	Applying data standards in your organisation	Data	No standardised data formats or conventions, leading to inconsistencies and interoperability issues.	Some data standards are in place, but they are not consistently applied across the organization.	Efforts to establish and apply data standards are increasing, improving consistency.	Data standards are well-established and consistently applied, ensuring interoperability.	Advanced data standards are implemented, promoting seamless interoperability and alignment with industry best practices.

Funded by UK Government

4. Knowing the data you have

Recording, cataloguing, and preserving your data

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
4.40	Managing disposal of data in the right way.	Data	Complies with minimum legal requirements for archiving of data. Disposal of data is ad hoc and does not consider the value or retention needs of the data.	Plans for organised disposal of data but does not consider different value and sensitivity of data or retention needs for different data sets. Consistently records established processes for disposal of data and ownership of those processes.	Links the retention period for data in high profile data assets to the long-term value, sensitivity and context of the data. Records processes for disposal of the data alongside the data asset.	Automates disposal of data in line with legal requirements and the long-term value of the data. Documents processes for data disposal clearly and reviews them in tandem with changes to the data.	Proactively considers the requirements and processes for end-of-lifecycle disposal of data at the beginning of the data lifecycle. Consistently balances user needs with requirements for long-term preservation of data when implementing data initiatives.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.41	Basing decisions and organisational planning on data.	Leadership	Leaders rely on gut feeling, experience and what seems to work rather than data for decision making.	Typically uses data about what happened in the recent past and verbal accounts of what is happening now for decision-making.	Uses past and current data to understand trends and support some decision making.	Monitors what is happening in the present as well as past trends. Some exploratory forward-looking research and predictions.	Uses past, present and forward looking data for operational planning and decision making (this may include forecasting, modelling, prediction and optimisation).

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.42	Linking decisions that affect organisational outcomes to data.	Leadership	Links decisions that affect operational outcomes to data only when it is required for external reporting purposes. Does not consider the value of the organisation's data to internal and external users.	Beginning to link decisions that affect high profile organisational outcomes to data. Users are not considered when making changes based on data.	Links decisions that affect high profile organisational outcomes to data. Beginning to consider users when making changes based on data.	Links decisions that affect all critical and some important organisational outcomes to data. Considers the needs of users when making changes based on data. This is applied inconsistently across the organisation.	Consistently links decisions that affect all critical and important organisational outcomes to data. Takes an end-user focused approach, incorporating the value that the organisation's data has to its users into decision making.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.43	Using data to monitor and improve performance.	Leadership	Leaders use anecdotal accounts of what is happening rather than data to monitor and improve organisational performance.	Leaders make use of some existing data to monitor performance in some high-profile areas of the organisation. Decisions on how to improve are informed by both data and anecdotal accounts of what is happening.	Leaders make use of multiple data sources to monitor and improve organisational performance in all critical areas. Leaders are beginning to question what other data could be used for this. The approach is inconsistent across different areas of the organisation.	Leaders make use of data to monitor and improve performance in all critical areas and some important areas. Senior leaders actively question these data sources and support efforts to improve or broaden the data used for these purposes. The approach is somewhat inconsistent across different areas of the organisation.	Leaders use data to monitor and improve performance in all critical and important areas of the organisation. Leaders proactively encourage the use of new sources of data to better understand performance. The approach is consistent across different areas of the organisation.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.44	Adoption of machine learning	Skills	No adoption of machine learning techniques in data processes and limited capacity to develop skills further.	Some individuals have expressed an interest or have skills, but these are not being utilised or co-ordinated by the organisation.	Limited ad hoc adoption of machine learning, with sporadic integration into specific areas.	Efforts to adopt machine learning are increasing, but the scope is limited.	Machine learning techniques are integrated into some critical processes. Further development is a strategic objective of the organisation.

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5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.45	Using data for operational and strategic purposes.	Uses	Collects and uses data for requisite purposes eg basic financial management and legal or compliance reporting.	Captures data relating to internal activities and measuring outputs. Conducts basic financial analysis and forecasts.	Uses data for both operational and strategic purposes.	Actively exploring more ways to get more value out of data for operational and strategic purposes.	Uses data extensively for a wide range of strategic and operational purposes. Proactively looks for ways to get more value out of data to meet current and future needs.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.46	Influencing stakeholders with data.	Uses	Makes data available to stakeholders and partners only in line with legal or policy requirements. Does not see data as useful in conversation to influence stakeholders.	Starting to make some data available to stakeholders and partners but does not consistently use the data as part of conversation to influence them.	Starting to lead conversations with stakeholders and partners using data.	Can coherently make the case to stakeholders and budget holders using data.	Uses data to provide robust, credible evidence to influence decision makers at all levels.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.47	Using data for business planning and strategy.	Uses	Prioritises speculative, subjective or anecdotal information, over data, to inform decisions.	Starting to use data to inform efficiency savings. Does not frequently use data to influence strategic decisions.	Consistently uses data to inform initiatives to improve efficiency and resource management. Sometimes uses data to support strategic planning and decision making.	Consistently uses data to understand which approaches work and which do not. Strategic planning and decision making are consistently informed by data.	Uses data and analyses of past, present, and future as core elements for all strategic planning and decision making.

Funded by UK Government

5. Making decisions with data

Leveraging data for improved decision making

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
5.48	Monitoring product or service performance, and use of resources.	Uses	Does not use data to monitor and improve organisational performance except where legally required.	Uses existing data to improve some organisational performance and effectiveness.	Makes use of multiple data sources to monitor and improve all critical areas of organisational performance. Beginning to seek new data to do this.	Uses data to actively improve all critical areas of organisational performance, and some important areas. Actively seeks data and makes use of multiple data sources, including feedback from users.	Uses data to actively improve all critical and important areas of organisational performance. Actively seeks out new sources of data, including user feedback, to monitor and improve organisational performance. Routinely reviews these data sources to ensure effectiveness.

Funded by UK Government

6. Managing and using data ethically

Integrating data ethics into planning and use

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
6.49	Accounting for limitations in data and how this may introduce bias.	Culture	Only accounts for how limitations in data that may create bias and negatively affect particular groups where it is externally mandated by legal, policy, or service level agreement requirements.	Beginning to account for how limitations in some high profile data sets may introduce bias that can negatively affect any particular groups. This occurs inconsistently in small pockets of the organisation.	Accounts for limitations in all high profile data sets that may introduce bias and negatively affect any particular groups. This may be inconsistent across different areas of the organisation.	Accounts for limitations in all high profile data sets and some important data sets that may introduce bias. This occurs consistently for high profile areas, but pockets of the organisation still struggle to apply this consistently.	Proactively considers how limitations in all high profile and important data sets may introduce bias. A consistent approach is taken across the organisation to ensure that limitations to data do not negatively impact any particular groups.

Funded by UK Government

6. Managing and using data ethically

Integrating data ethics into planning and use

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
6.50	Having the skills to understand ethical management and use of data.	Skills	Staff consider ethics when working with data only in line with legal or policy requirements, due to a lack of availability or interest in relevant training.	Staff working with data have awareness and skills to identify and address bias in data.	Staff working with data have a firm understanding of the importance of ethical use of data and are beginning to see how this applies to their own work.	Staff have the skills to understand the unintended consequences of data collection and use, and how misuse of data can reinforce existing problems in the treatment of different societal groups.	Staff working with data are confident in proactively mitigating against negative impacts for particular societal groups in the way that they collect, process, store, and destroy data. They are able to identify areas where misuse could reinforce existing problems.

Funded by UK Government

6. Managing and using data ethically

Integrating data ethics into planning and use

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
6.51	Bias Mitigation	Culture	Limited awareness and mitigation of bias in data, leading to potential inaccuracies and unfair outcomes.	Some efforts to identify and mitigate bias in data, but it is not consistently applied.	Active efforts to identify and mitigate bias in data, improving accuracy and fairness.	Systematic approaches to identify and mitigate bias are in place, ensuring fair and accurate data.	Advanced techniques and automated systems are used to proactively identify and mitigate bias, maintaining consistently fair and accurate data.

Funded by UK Government

6. Managing and using data ethically

Integrating data ethics into planning and use

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
6.52	Ensuring tools for data are inclusive.	Tools	Considers accessibility and inclusivity for tools at the end of the acquisition or design process, and only when it is externally mandated by legal or policy requirements.	Data and analytics tools meet minimum accessibility requirements. Considers accessibility and inclusivity as an afterthought at a late stage when designing or acquiring tools.	Adapts tools for data collection, storage, and processing to improve inclusivity for different groups. Considers inclusivity and accessibility at a late stage in the process when designing or acquiring new tools.	Designs new tools with inclusivity and accessibility in mind for all users from the earliest stages of the design process.	Sees accessibility and inclusivity as high priority from the beginning when updating, designing or acquiring any tools.

Funded by UK Government

7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.53	Building a data quality culture.	Culture	Measures and addresses data quality at extremely late stages, and only when it is externally mandated by legal, policy or service level agreement requirements. Does not link data quality to operational outcomes.	Some interest in improving data quality, but does not consistently link these to damages to operational outcomes. Attempts to improve data quality are ad hoc and do not address root causes.	Beginning to understand data quality in terms of the risks it poses to operational outcomes. Addresses issues with data quality through tackling root causes not only through cleansing.	Consistently links data quality to the risks it poses to operational outcomes. Aware of trade-offs in data quality in line with the needs of users and the purposes of data.	Consistently frames all data quality issues in terms of their impact on operational outcomes. Everyone in the organisation is committed to ensuring quality data is available to support services and decision-making.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.54	Managing data disposal the right way.	Culture	Considers disposal of data only at a very late stage in the data lifecycle. Defines ownership of and responsibility for disposal of data only in line with minimum legal or policy requirements. Does not understand differences in types of disposal of data.	Staff responsible for data sets understand differences in types of disposal. Responsibilities for implementing appropriate disposal methods are beginning to be defined. Any considerations of how to dispose of data occur at a very late stage in the data lifecycle.	Beginning to give greater consideration to data disposal, but it is not seen as fundamental when planning data initiatives. Ownership and responsibility for disposal of data is recorded alongside all high profile data sets. Staff working with data have some understanding of expectations and requirements for data preservation and disposal.	All staff working with data understand their responsibilities to ensuring records are able to be created and preserved of all appropriate data. Responsibility for disposal of data is defined and recorded alongside all data assets, but implementation is inconsistent across the organisation.	Collaborates with archiving experts to ensure that data sets can be preserved appropriately. Proactively considers the end of the data lifecycle when planning new data initiatives. Ownership of and responsibility for disposal of data is clearly defined, recorded, and implemented for all data assets.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.55	Communicating limitations of data appropriately to users.	Culture	Communicates limitations of data only in line with externally mandated requirements. The style and method of this communication does not consider users' needs.	Beginning to understand limitations of data and communicates these in some high-profile areas. Some pockets of the organisation consider the needs of some important users and communicate in a way to meet these needs, through a limited range of routes.	Understands and communicates limitations of data in all high-profile areas. Understands the needs of some important users and communicates in a way that meets these needs, however the range of routes may be limited. The approach to this is inconsistent across different areas of the organisation.	Understands and communicates limitations of data. Understands the needs of most important users of the data and communicates in a way that meets these needs, using a range of appropriate routes. The approach to this is inconsistent across different areas of the organisation.	Understands and communicates limitations of data. Understands the needs of all important users of the data and communicates in a way that meets these needs, using a range of appropriate routes. The approach to this is consistent across the organisation.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.56	Linking data collection processes to organisational outcomes.	Data	Collects data meeting minimum requirements without operational understanding. Minimal awareness of collection methods, with no error recording.	Beginning to understand the need for operational data collection. Limited incorporation into practices. Some awareness of methods and errors, but inconsistent recording.	Understands the importance of operational data collection. Beginning to incorporate into planning, with consideration of methods and errors.	Consistently incorporates operational data collection in critical processes. Plans ahead, records methods and errors, addressing them in higher-profile initiatives.	Clear understanding of operational data collection importance. Consistently incorporates in critical processes. Embeds planning from start to finish. Full consideration of methods and errors, promptly addressed.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.57	Applying data users' needs to product design.	Data	Has a minimal awareness of who the users of the organisation's data are and what their needs are, driven only by legal or service level agreement requirements. Does not incorporate or apply information about data user needs in product design and development	Has some awareness of who the users of the organisation's data are and what their needs are, but does not incorporate this into product design and development.	Understands who the users of the organisation's data are and what their needs are. Beginning to incorporate and apply user needs into product design and development.	Has a good understanding of data users and their needs though this may be inconsistent across the organisation. Beginning to incorporate and apply data users' needs in product design and development, but this is not embedded from beginning to end.	Has a clear understanding of data users needs in all relevant areas of the organisation. Consistently incorporates and applies data users' needs in product design and development, and embeds this from beginning to end.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.58	Conducting data quality assessments.	Data	Assesses data quality only when it is externally mandated by legal, policy, or service level agreement requirements. Does not record or track data quality assessment results over time.	Assess data quality against generic standards. Does not update data quality assessments across the lifespan of the data.	Re-assesses data quality during the data's lifetime, but does not link the frequency of assessment to changes in the data. Beginning to conduct assessments that consider quality dimensions, measurements, and requirements in relation to the way in which the data is used.	Proactively monitors the quality of data in important data sets is in a way that is linked to purpose, documented and communicated. Conducts data quality assessments that are evidence-based and tracked over time.	Proactively monitors and fully understands the quality of the data it holds and hence has high levels of confidence and trust in its data.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.59	Managing data quality across the data lifecycle.	Data	Makes efforts to manage data quality only when it is externally mandated by legal, policy, or service level agreement requirements. Does not make dedicated resources available for this.	Manages data quality ad hoc and at a late stage in the data lifecycle. Where resources and processes are in place for managing data quality, they focus only on data cleaning.	Beginning to manage data quality for priority data at different stages of the data lifecycle.	Puts resources and processes in place for managing data quality at all stages of the data lifecycle, but does not apply this consistently across the organisation.	Proactively invests in resources to collect, maintain, and manage high quality data at all stages of the data lifecycle. Data quality is managed consistently across the organisation.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.60	Understanding the data quality needs of your users.	Data	Engages with a minimal number of internal users to understand data quality needs, based primarily on policy or service level agreement requirements.	Beginning to engage with some immediate users of the organisation's priority data to understand their data quality needs.	Accounts for the needs of immediate, internal users in data quality assessments and initiatives	Actively engages with a wide range of internal users to understand their data quality needs and reviews these needs regularly. Beginning to communicate data quality alongside high profile data sets.	Considers the data quality needs of all knowable users alongside immediate internal user needs when collecting, processing, and publishing data. Consistently communicates the quality of data alongside data sets.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.61	Understanding what data processing to automate.	Data	Does not understand what data processing can or should be automated. Where automation occurs, it does so without understanding or considering what is useful and proportionate in the long-term to achieve efficiency and quality.	Beginning to understand what data processing can and should be automated. Makes some consideration of what automation is useful and proportionate in the long-term to achieve efficiency and quality in high profile processes, though the approach is inconsistent and occurs as an afterthought.	Able to apply a good understanding of what data processing can and should be automated for high profile areas, but inconsistently elsewhere. Considers what automation is useful and proportionate in the long-term to achieve efficiency and quality, but somewhat inconsistently in different areas of the organisation.	Has a good understanding of what data processing can and should be automated for high profile areas, and is beginning to apply this consistently across the organisation. Considers what automation is useful and proportionate in the long-term to achieve efficiency and quality but with some inconsistency.	Has a clear understanding of what data processing can and should be automated. Carefully considers what automation is useful and proportionate in the long-term to achieve efficiency and quality.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.62	Extract, Transform and Load (ETL) Processes	Tools	Manual data ETL processes, leading to inefficiencies and errors.	Basic automation in some ETL processes, reducing manual effort for specific tasks.	Efforts to automate ETL processes are increasing, enhancing overall efficiency.	Significant automation in routine ETL processes, reducing errors and improving speed.	Advanced automation and optimisation in ETL processes, ensuring highly efficient and error-free data workflows.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.63	Building reproducible data processing.	Data	Designs data processing without considering adequate testing, transparency and documentation to ensure that processes can be reproduced for the same output. Does not document processes or changes to processes.	Some testing and documentation for important data processing. Aware of the importance of documentation or transparency to ensure good automation. Documentation that exists may not be appropriately available to those who need it, or may assume prior knowledge of the processes.	Tests and documents most important data processing and is able to reproduce the same outputs efficiently in most cases. Testing covers a range of data scenarios. Documentation of processes is sporadic, this may be done at a late stage. It may be poorly communicated or inaccessible. The approach is highly inconsistent across the organisation.	Designs, tests and documents all important data processing. Tests include typical changes that may occur. Testing strategy may be considered after processes are created. Most processes are clearly documented, documentation is communicated and available as appropriate. The approach is somewhat inconsistent across the organisation.	Proactively designs, tests, and documents all important data processing from the beginning to ensure that they can be efficiently reproduced with the same outputs and are resilient to change. Documentation and processes are transparent, communicated and available as appropriate. The approach is consistent across the organisation.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.64	Applying data standards in your organisation.	Data	Applies data standards only where they are externally mandated for compliance. Considers interoperability between data sets only to mitigate against critical failures.	Beginning to apply data standards on an ad hoc basis where interoperability between data sets is needed for a specific purpose.	Applies data standards in some areas but does so inconsistently. Some data is versatile and re-usable internally for limited purposes.	Beginning to apply data standards consistently enough to allow some data to be re-used internally for a range of purposes.	Applies data standards consistently across the organisation to ensure that data is versatile and re-usable for multiple purposes and audiences.

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7. Managing your data

Ensuring usability through effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
7.65	Engaging senior leaders with data and its value to the organisation.	Leadership	Leaders are not engaged with data or how it is used. They do not understand how difficult or complex it is to achieve their requests for data.	Leaders are aware of some uses for data in the organisation but do not see value in it for operational outcomes. Leaders do not see data as a priority in the organisation.	Leaders occasionally ask questions about the data they are given but are not entirely convinced about its value. Leaders have little or no interest in the full data lifecycle.	Leaders are beginning to engage with the value of data throughout the data lifecycle. They ask the right questions of data, are active in harnessing its value, and supportive of the organisation's data needs.	Leaders are fully engaged with the value of data at all stages of the data lifecycle. They proactively seek to understand the organisation's current and future data needs.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.66	Managing policies for data protection and data security.	Culture	Has basic policies for data protection and security in place, but does not have a method to monitor or enforce these.	Has policies in place to ensure data about identifiable individuals is deleted when no longer necessary and to respond to subject access requests.	Monitors and enforces policies for data protection and data security consistently. Reviews policies regularly to ensure they are fit for current needs.	Communicates and enforces policies for data protection and data security consistently. Beginning to embed policies across all levels of the organisation.	Thoroughly embeds positive attitudes to and understanding of data protection and data security at all levels of the organisation.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.67	Controlling access to data.	Culture	Data security in place only to meet minimum legal or policy requirements.	Most critical systems, processes, and data have limited security and security governance.	All critical data assets have at least limited security and security governance in place.	Consistent and comprehensive security and security governance policies are in place for all critical data assets. Access based on legitimate need only.	Communicates security governance clearly and openly throughout the organisation. Consistent and comprehensive security and security governance policies are in place for all data assets. Access based on legitimate need only.

Funded by UK Government

8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.68	Reviewing governance and security incident responses.	Culture	Reviews of data security incidents are limited in scope and responses to incidents are inconsistent. Very little, if any, review or assessment of governance takes place.	Reviews and assesses security controls, but this is inconsistent or limited in scope. Beginning to identify and review data security incidents and take appropriate responses.	Regularly reviews and assesses all critical governance and security controls for effectiveness, though recording of these may be inconsistent. Identifies and reviews data security incidents and takes appropriate responses.	Regularly reviews and assesses all governance and security controls regularly for effectiveness. Recording of reviews is clear and consistent, though not consistently available as appropriate. Reviews all security incidents promptly and takes appropriate, proportionate actions.	Regularly reviews and assesses all governance and security controls for effectiveness. Recording is clear, consistent and appropriately available both internally and externally to support continuous improvement. Reviews all security incidents quickly and takes appropriate, proportionate actions. Discusses lessons learned openly as appropriate.

Funded by UK Government

8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.69	Ensuring business continuity for data.	Culture	Business continuity plans exist for some critical activities, but nobody has full oversight of which activities are critical to the organisation's operation. No clear central record of the potential impact of critical failure on staff, students, services, products and reputations.	Has business continuity plans in place for all critical data activities, but these are not centralised. Does not have standardised risk assessments for activities.	Centrally coordinates oversight for business continuity as appropriate to ensure all critical activities are understood and calibrated. Standardises risk assessments for activities to promote parity across the organisation. Tests business continuity plans occasionally.	Has business continuity plans for data in place for all areas of the organisation with central oversight. There are clear lines of ownership for plans and they are regularly tested with actions planned for improvements.	Regularly reviews and tests business continuity plans with lessons learned and actions for improvement. Ties the frequency of reviews to the level of criticality of the activity and an understanding of threats to the organisation's operation. Business continuity plan owners have access to regular updates and refreshes on best practice.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.70	Measuring the effectiveness of your data protection processes.	Data	Assesses effectiveness of data protection measures only in line with minimum legal or policy requirements.	Regularly conducts data protection impact assessments.	Proactively reviews data protection impact assessments to ensure continuous improvement.	Actively engages internally to ensure that data protection impact assessments and improvements are understood and valued across the organisation.	Proactively engages internally and externally to promote good practice in data protection. Seen as a leader in assessing data protection impact and implementing data protection measures.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.71	Assessing risks to data assets.	Data	Only assesses or knows security risks to data in line with minimal legal or policy requirements. Does not assess data assets for their value.	Only assesses data assets for their value or sensitivity when it is externally mandated by legal, policy or service level agreement requirements. Assesses risks to critical data assets.	Routinely assess the value of the organisation's data assets. Assesses risks to all appropriately valuable individual data assets.	Routinely assesses data assets for their value to the organisation's outcomes and assigns appropriate levels of sensitivity. Assigns ownership of data assets but this may not be fully embedded or communicated.	Understands the value of data in terms of how it is used. Assesses risks to all data assets to implement cost-effective data security measures, matched to the value of the assets they protect. Defines ownership and responsibility for data assets clearly.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.72	Training staff to comply with and enforce data protection regulations.	Skills	Staff have basic data protection and compliance training though are not very confident in applying this.	Staff know how to respond to a data breach, potential breach, or near miss. Staff know how to respond to a subject access request.	All staff who work with data understand legal constraints around data e.g. computer misuse regulations, and data protection regulations. These staff are able to apply this understanding confidently.	Firmly embeds data protection and compliance with data regulations within staff training. Non-specialist staff are not fully confident in applying this training without support.	Firmly embeds data protection and compliance with data regulations within staff training. All staff are confident in applying this knowledge.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.73	Training staff to work with data securely.	Skills	Staff have basic data security training though are not very confident in applying this.	Staff are aware of security requirements and the need to operate securely in line with policy, procedures and processes.	Staff working with data are aware of the need to work securely. Reviews and updates to security training are limited in frequency or scope. Non-expert users may not be confident in applying policies without support.	Staff are confident in their understanding of data security requirements. The organisation is committed to embedding and instilling good security practice in people who work with data.	Uses training materials and internal communications to actively work to embed good data security practice and inform staff of risks and threats.

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8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.74	Protecting your data.	Tools	Does not design systems and tools to protect data. Users are able to access systems and data assets irrespective of having a legitimate business need to do so. Does not monitor systems usage.	The most critical data storage and processing systems and tools integrate data security by design, including some access control and monitoring of use. Assesses data security risks when changes are made to critical systems.	All data systems and tools integrate data security and are subject to risk assessments when changes are made. Bases access to systems and data on legitimate business needs.	Considers risks and security requirements throughout the development of new systems and tools. Monitors systems and data access for misuse or attack.	Tailors data security tools to the organisation's specific risks and threat patterns. Uses the development of new data storage and processing tools as an opportunity to improve data security tools. Routinely reviews access permissions to systems, tools, and data.

Funded by UK Government

8. Protecting your data

Ensuring data security through IT systems, skills, and policies

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
8.75	Recording and securing your data tools and systems.	Tools	Records minimal or no information regarding IT assets that the organisation holds to store and process data. Any records are usually collected indirectly without organisation or coherent structure. Considers physical security measures to protect data held on IT assets only in line with minimal legal requirements.	Has a basic IT asset register. The process for how to record tools is not described, supported or monitored. The register captures only high-profile assets. Some security risks to high value assets have been identified and addressed. No monitoring and review of risks and physical data security measures.	Standardised processes for recording IT assets are in place. Value and sensitivity of data stored in these assets is not consistently recorded. Security risks to all known IT assets are assessed and addressed. Physical security for high priority assets is reviewed regularly, however the security implemented is not measured in relation to the value or sensitivity of the data.	Standardised processes for recording IT assets are embedded. The value and sensitivity of data is a priority element of recording physical IT assets. Physical security measures for all recorded IT assets are regularly reviewed and linked to the value and sensitivity of the data they hold.	The IT asset register is thorough and ownership and accountability for these assets is defined, implemented, and transparent. Physical security measures are reviewed and tested proactively to ensure the security of data.

Funded by UK Government

9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.76	Creating and embedding data principles and policies.	Culture	Only creates structures for responsibility, accountability and oversight for data policies and data principles by default rather than by design.	Data principles and policies exist but are not supported or understood.	Some awareness of Data Principles and Policies as they are developed in line with the needs of the organisation.	People are aware of Data Principles and policies and they are supported by senior leaders.	Data principles and policies embedded and governed with clear visibility across the organisation.

Funded by UK Government

9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.77	Linking data principles and policies to organisational objectives.	Leadership	Links data objectives, data principles, and data policies to organisational objectives only to minimum degrees required by externally enforced mandates.	Beginning to see value in linking data objectives to organisational objectives. Attempts to do so are limited in scope and do not consistently surface in data policies or data principles.	Beginning to consistently link data objectives to organisational objectives, though this may not always be made clear in organisational plans. Some of this may surface in data policies or data principles, but the links are not explicit.	Leaders have clear sight of how and why data objectives, data principles and data policies link to organisational objectives. These links surface in data policies and data principles, but the approach is somewhat inconsistent.	Leaders proactively work to ensure that data objectives are aligned with organisational objectives. Clearly and consistently aligned data principles, data policies, and data strategy with organisational strategy.

Funded by UK Government

9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.78	Seeing data as an organisational priority.	Leadership	Senior leaders do not see data as important or valuable.	Leaders show some recognition of the importance of data to the organisation, but they do not see the value of engaging with it.	Leaders know data is important and are curious to learn about its potential uses and benefits. Some leaders are beginning to model good data culture.	Leaders see data as an organisational priority, and especially so in high impact projects or work. Senior leadership teams model good data culture and are working to embed this culture throughout the organisation.	Leaders see data as a major organisational priority, with value for all business areas. Senior leadership teams model good data culture and continuously support a well-embedded, strong data culture throughout the organisation.

Funded by UK Government

9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.79	Linking data strategy to organisational strategy.	Leadership	Links data strategy to organisational strategy only where it is required for external reporting purposes. Any connections are not acted on internally. Leaders do not see data as a priority.	Beginning to see the relevance of data strategy to organisational strategy, but does not attempt to connect these for internal action. Sees data as useful, but not a high priority.	Leaders see data as important to organisational outcomes. Beginning to incorporate data strategy in organisational strategies but this may be inconsistent or disjointed.	Leaders see data as a priority. Prioritises and plans data strategy as part of organisational strategy, though application may not be consistent across the organisation. Data strategy has sponsorship at a senior level.	Consistently sees data as a vital resource for the organisation. Plans and prioritises data strategy as a core element of organisational strategy. Sponsorship and promotion of this by senior leaders is visible and communicated.

Funded by UK Government

9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.80	Aligning data goals with organisational needs and outcomes.	Leadership	Aligns data practices with work plans only where it is externally mandated or by chance rather than by design. Rarely aligns data goals with the organisation's needs, outcomes or strategies.	Beginning to consider how to link data practices to work plans. Considers some of the organisation's current needs, outcomes or strategies when setting goals for data in some areas the organisation.	Consistently links data practices to work plans and considers the organisation's current needs when setting goals for data in most areas of the organisation. Beginning to align some data goals with the organisation's outcomes and strategies in some areas of the organisation.	Aligns data practices with work plans, though communication of this may not be clear outside of data specialists. Aligns data goals with the organisation's current needs, outcomes, and strategies, though application of this may be inconsistent across the organisation.	Aligns data practices and data goals clearly with work plans based on outcomes, desired impact, and the organisation's current and future needs.

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9. Setting your data direction

Defining and embedding data policies, strategies, and principles

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
9.81	Understanding the value of your data to your organisation.	Uses	Relies on external impetus to see value of data that the organisation holds or how to make use of it.	Understands at a basic level how data is useful through time. Reflects on the value of the data the organisation holds.	Has a reasonable understanding of the value of the data the organisation holds and potential uses of this data.	Has a good understanding of the value of most of the data the organisation holds and making attempts to quantify this.	Has a deep understanding of the value of the data the organisation holds, and takes steps to maximise this value. Actively and regularly measuring the value of its data.

Funded by UK Government

10. Taking responsibility for data

Establishing accountability and responsibility for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
10.82	Defining and recording accountability and ownership for data.	Culture	Consistent structures for ownership of data are not in place. Where ownership exists, this is assigned by default not by design. Documents responsibility and ownership of data only where externally mandated.	Beginning to assign ownership of critical data. Documents and communicates ownership sporadically or inconsistently.	Assigns ownership to all critical data. Documents ownership clearly and beginning to document responsibilities of data owners. Staff require specialist support to find or access this documentation.	Assigns ownership to all critical data. Beginning to assign ownership to other important data. Clearly documents data ownership and data owners' responsibilities in a way that is findable for all staff. Processes around this are inconsistently applied across the organisation.	Assigns ownership to all important data. Clearly and consistently documents data ownership and data owners' responsibilities. Ensures that this documentation is available and findable for all relevant stakeholders.

Funded by UK Government

10. Taking responsibility for data

Establishing accountability and responsibility for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
10.83	Creating and embedding data governance.	Culture	Only has governance systems in place for sharing and use of data in line with externally driven requirements. Struggles to use or share data within the organisation due to lack of clarity on what is possible.	There is a policy or framework for governance of data in place, but this is not understood, known or possible to implement.	People are aware of governance frameworks, systems and accountabilities. These have been developed with the needs of the organisation in mind.	Robust, needs-based governance frameworks are embedded in the organisation.	Governance for use and sharing of data is fully embedded. Governance, ownership and accountability for analysis are well documented and enforced, and clearly visible across the organisation. Analysts understand how their work relates to these structures.

Funded by UK Government

10. Taking responsibility for data

Establishing accountability and responsibility for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
10.84	Defining who should have responsibility for data.	Culture	Sees data as a chore with questions and requirements mostly externally driven. Assigns responsibility for data by defaults rather than by design, usually to staff in IT or administrative roles.	Places responsibility for data purely with administration or IT roles. Staff working with data do not understand how data management relates to the business' objectives and see data as the responsibility of 'someone else'.	Beginning to define and implement roles, responsibilities, and accountabilities for maintenance and improvement of data. Most staff working with data understand the importance of good data management, but may not be aware of how this relates to the organisation's objectives and outcomes.	Clearly defines and implements roles, responsibilities, and accountabilities for data management across the organisation, with good visibility.	Sees data as a team effort and critical asset for every part of the organisation. All staff working with data understand the importance of good data management and feel empowered to challenge each other when this does not happen. Staff understand how data management links to the organisation's outcomes.

Funded by UK Government

10. Taking responsibility for data

Establishing accountability and responsibility for effective data management

Aspect	Element	Theme	Level 1 :: **Beginning**	Level 2 :: **Emerging**	Level 3 :: **Learning**	Level 4 :: **Developing**	Level 5 :: **Mastering**
10.85	Maintaining awareness of data legislation within senior leadership.	Leadership	Senior leadership are aware of relevant legislation but may not be confident in applying this to their organisation.	Senior leadership are up to date on legislation. They are able to respond to this somewhat consistently in their organisation.	Senior leadership are up to date on legislation and have some awareness of future changes. There is some degree of planning for the future.	Senior leadership keep abreast of future changes in legislation and best practice. They plan for changes across their organisation, but implementation is inconsistent or incomplete.	Senior leadership keep abreast of future changes in legislation and best practice. The organisation is fully prepared for future changes.

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10.86	Creating and enforcing structured responsibility and accountability for data.	Leadership	Only creates structures for responsibility, accountability and oversight for data by default rather than by design. Does not make these structures visible or support staff in understanding their responsibilities for data.	Has structures for responsibility, accountability and oversight for data in place, however the implementation of this is not well understood. Monitoring and enforcement of policy is inconsistent.	Leaders monitor adherence to data and analysis policies and processes and enforce where necessary.	Leaders are invested in ensuring that responsibility, accountability and oversight for data is structured, maintained, and enforced.	Has transparent and well-communicated structures for responsibility, accountability and oversight for data across the organisation. Leaders ensure that staff have a clear understanding of how this relates to their own work.

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10.87	Defining oversight and responsibility for ensuring staff have necessary data skills.	Skills	Does not have structures of responsibility for developing data and analytical literacy in the organisation. There is no oversight from leadership to develop data and analytical skills in the organisation.	Skills to be responsible for data are being developed in specific areas. Some interest in developing data and analytical literacy skills, but oversight and organisation of this is limited.	Defines and enforces responsibility within senior leadership for development of data skills across the organisation. Some skilled data people in other roles, though perhaps with limited capacity to fulfil the task.	A senior person or team brings organisation-wide data together. Development of data and analytical skills has oversight and sponsorship at a senior level.	High levels of commitment to developing data and analytical skills from staff at senior, specialist, technical, and administrative levels.

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10.88	Assigning ownership and responsibility for data tools and systems.	Tools	Holds a minimal record of some tools used or owned by the organisation. Any records are usually collected indirectly without organisation or coherent structure. Only creates structures of responsibility for maintaining and updating tools by default rather than by design.	An inventory of tools and systems (including hardware, software, licence, passwords and access) is managed and maintained. Ownership and responsibility for tools and systems is not consistently recorded.	Formal responsibility for data and analytics tools is established, however this is not well monitored or visible across the organisation. Staff do not understand how these structures relate to their work.	People are formally responsible for managing the storage, cleaning and maintenance, security, and backup of all data. Where possible this is becoming routine and/or automated.	Ownership, oversight and support for all tools is documented. Accountability and responsibility for tools is transparent and visible across the organisation. Staff understand how these structures relate to their work.