

State of the Sector Data Maturity

In the Not-for-Profit Sector
2021



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ACKNOWLEDGEMENTS

Our thanks to all the users of our Data Maturity Assessment tool (both the free individual version and premium organisational version) for agreeing to share your organisation's data for the benefit of research and understanding about data maturity in the not-for-profit sector.

Appreciation also to the many users who have shared their organisations' journeys towards data maturity and contributed to our [tools and resources](#) for the sector.

You can read this report online at: www.dataorchard.org.uk/sots2021

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EXECUTIVE SUMMARY

Data maturity is the organisational journey towards improvement and increased capability in using data. Data Orchard created a framework model which describes data maturity on a five-stage journey. This progresses from 'Unaware' through to 'Mastering' across seven key themes: Uses, Data, Analysis, Leadership, Culture, Tools, and Skills.

In October 2019 we launched an online Data Maturity Assessment tool which enables organisations to measure where they are on the five-stage journey to data maturity. The free version for individual users was followed in 2020 by the premium version, which is designed for multiple users within an organisation. Our first report shared what the data from 2019 and 2020 told us about data maturity in the not-for-profit sector. This report focuses on users in 2021.

ABOUT THE DATA

Data Orchard's Data Maturity Assessment tool has been used by thousands of people from all kinds of organisations and sectors, and from all over the world. This report focuses only on data from validated non-commercial organisations who used the tool between 1 January and 31 December 2021: a total of 937 respondents from 162 organisations.

For the purposes of this report, we defined the not-for-profit sector to essentially mean non-commercial organisations, including non-governmental organisations like charities and social enterprises, public sector organisations, and universities.

Those organisations:

- operate in a broad range of activity areas, with highest numbers in health, social services, local government, and education.
- primarily come from the UK (including representation from every UK nation and region), but there were also users from over 30 countries around the world.
- vary in size and turnover, with income ranging from less than £100k to more than £100m.

The people completing the assessment on behalf of their organisation work in many different roles. The most common job roles are 'strategy/planning' and 'leadership and management'. There were also many respondents in data management and analysis roles, and in service delivery roles.

KEY INSIGHTS

Based on the analysis on overall data maturity and exploration of the seven key themes, we have drawn seven key insights from this research. These are:

1. **The not-for-profit sector is still learning about data.**

2021 data shows most not-for-profit organisations to be at the 'Learning' stage (50%) in their journey to data maturity. A good proportion have progressed into 'Developing' (37%), though barely any have made it to the 'Mastering' stage. Around one in ten are still lagging in the 'Emerging' stage (11%). Average (median) scores for all the key themes (Uses, Data,

Analysis, Leadership, Culture, Tools, and Skills) were all in the 'Learning' stage, ranging from 2.66 to 2.91 out of 5.

2. **A lack of data skills remains a major weakness for not-for-profits.**

Skills is the weakest area for not-for-profits. The range of skills, knowledge and experience around data and analytics, and the types of roles and responsibilities are many and varied. A major obstacle is people not knowing what skills and capabilities they need, nor where they can access trustworthy advice and support.

3. **Not-for-profit leaders aren't making data-informed decisions.**

While almost all organisations say their leadership think data is important, just 6% think leaders actually prioritise data as a vital resource and understand how to use it. Organisations have lots of data, but only 2% feel their leadership are actually using that data to make data-informed decision. This could be due to a lack of data skills in leadership teams – many (53%) say that there is no one with data analytics expertise within their leadership. It may also be due to barriers accessing meaningful insights from disparate data sources.

4. **Not-for-profits would gain more from focusing on their culture, rather than tools.**

Our research has repeatedly found that all seven key themes have a positive correlation with an organisation's data maturity. But, some relationships are stronger than others. The strongest and most significant correlations all involve the culture of an organisation – issues around behaviours, policies and practices, relating to team approach, self-questioning, openness and protection. The weakest correlations all involve tools. So, while databases and relationship management systems are important for holding data, organisations that really want to advance their data maturity would do well to focus on their culture first.

5. **Data maturity takes time and effort, but the rewards are worth it.**

Staff spend a lot of time working with data, whatever the data maturity of the organisation, suggesting the hidden cost of data is high for all organisations. Organisations that are less data mature, however, see very little reward for all this time and effort. As data maturity advances, organisations do invest more time in data, but proportionally, the rewards and benefits grow at a much faster rate. For example, compared to an organisation at 'Learning' stage, a 'Developing' organisation increases its average time spent on data by 7%, but increases its ability to use data to evidence the need and problems they are addressing by almost 30%.

6. **Data maturity isn't...and is... about the money.**

Organisations with greater income are not inherently more data mature than those with lower incomes. However, those that invest in data related resources i.e. people, skills, training, and tools, are more advanced.

7. **Organisations aren't taking advantage of digital tools to make data work for their cause.**

Much was made of the need to digitise during the pandemic but, while some gains have been made, in many cases there hasn't been as much progress as you might think. A lot of data is still on paper (40% collect data on paper moderately or extensively - 14% less than in

2020, but still a high proportion). When it comes to tools for analysing and reporting data, spreadsheets still dominate, but databases and CRMs are fairly common (60%). Business intelligence tools are used by 30%, and 20% are using more advanced and specialist data science tools (up from 15% in 2020).

REFLECTIONS

Results for data maturity assessments in 2021 compared with 2020 shows there's little difference in the scores. This is positive in that it confirms and validates the findings in our previous analysis and means we can be more confident in how authoritatively the results describe the reality of data maturity in the not-for-profit sector.

We encourage policy makers, leaders, and decision makers with an interest in strengthening the sector to invest more in building the knowledge and skills to advance data maturity. There's a need for more data career and learning pathways in education and training spheres.

1. INTRODUCTION

Data Orchard has been researching data maturity since 2015. We define data maturity as an organisation's journey towards improvement and increased capability in using data. [You can read a brief history of our work on Data Maturity here.](#)

In October 2019 we launched an online Data Maturity Assessment tool which enables organisations to measure where they are on the five-stage journey to data maturity. The free version for individual users was followed in 2020 by the premium version, which is designed for multiple users within an organisation. Our first report shared what the data from 2019 and 2020 told us about data maturity in the not-for-profit sector. This report focuses on users in 2021.

To provide an organisation level analysis we have matched multiple respondents to organisations and calculated organisation data maturity scores from there. We have also been through a validation process to ensure our analysis only focuses on the results for organisations that legitimately exist and are from non-commercial sectors. Hence from our initial dataset of 1,221 respondents, matched to 369 organisations, we extracted 937 responses from 162 not-for-profit organisations.

We define the not-for-profit sector as non-commercial organisations. In this research we include non-governmental organisations, public sector organisations, and universities (see Annex 2 for details of how we categorise organisations).

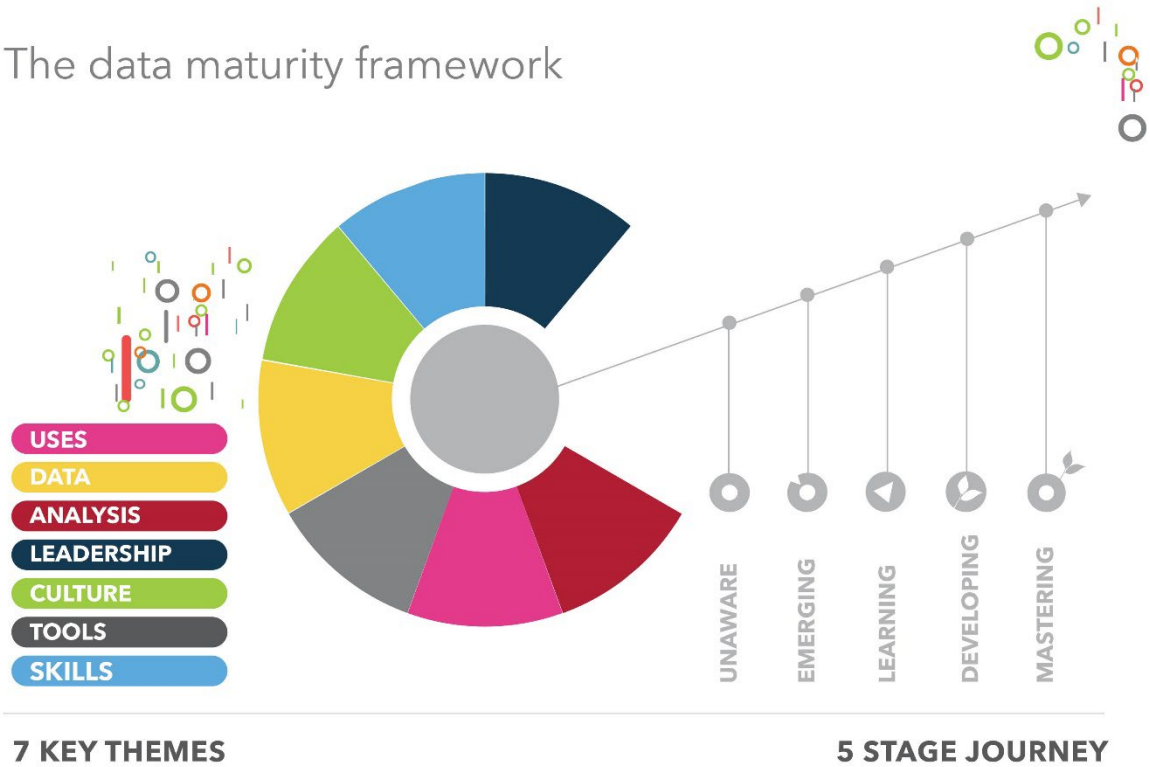
1.1 What is data maturity?

Data maturity is defined as the journey towards improvement and increased capability in using data.

We've created a framework model which describes data maturity on a five-stage journey. This progresses from 'Unaware' through to 'Mastering' across seven key themes: Uses, Data, Analysis, Leadership, Culture, Tools, and Skills.

The framework is available for non-commercial use, licensed under Creative Commons Licence CC BY-NC-SA 4.0, and can be downloaded here dataorchard.org.uk/resources/data-maturity-framework

The data maturity framework



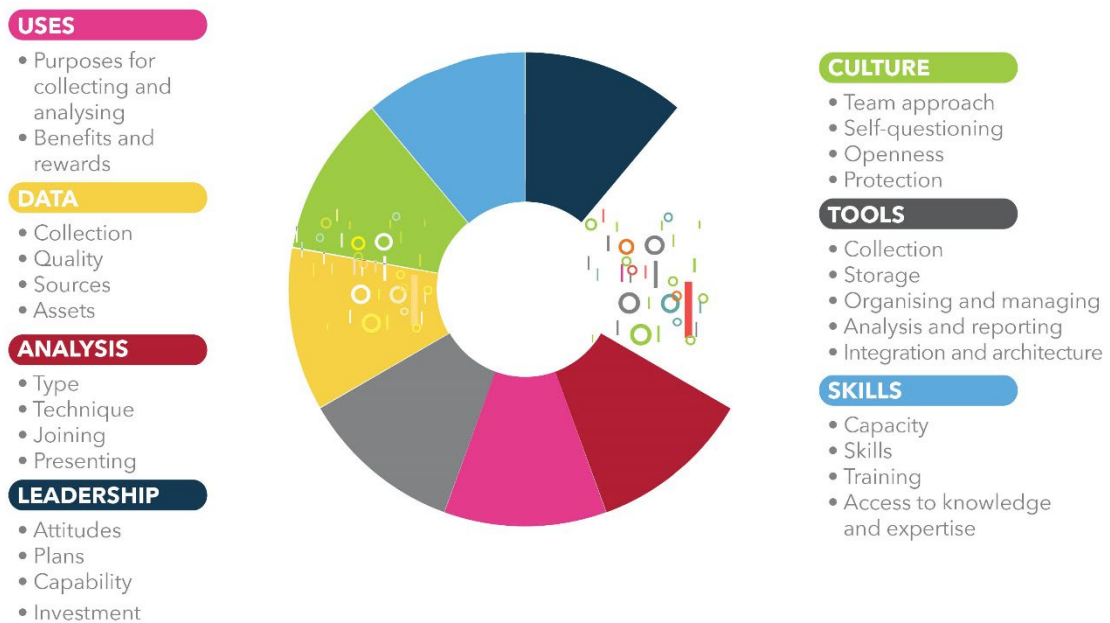
7 KEY THEMES

5 STAGE JOURNEY

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The online Data Maturity Assessment involves users answering a series of questions related to each of the seven themes described in the chart below.

The seven data maturity themes



USES

- Purposes for collecting and analysing
- Benefits and rewards

DATA

- Collection
- Quality
- Sources
- Assets

ANALYSIS

- Type
- Technique
- Joining
- Presenting

LEADERSHIP

- Attitudes
- Plans
- Capability
- Investment

CULTURE

- Team approach
- Self-questioning
- Openness
- Protection

TOOLS

- Collection
- Storage
- Organising and managing
- Analysis and reporting
- Integration and architecture

SKILLS

- Capacity
- Skills
- Training
- Access to knowledge and expertise

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At the end of the assessment users receive a report with their results. The report identifies:

- where their organisation is on the five-stage journey
- how they score in each of the seven themes
- where their strengths are
- priority areas to focus on.

In addition, users can:

- compare how they're doing with the sector through benchmarks
- explore more about their current and next stage for each theme.

A sample Data Maturity Assessment report is shown on the next page ([and online here](#)). You can drill into each theme to find out more about your score and current/next stages).

1.2 Scoring and benchmarking

Essentially the measurement in our Data Maturity Assessment tool works by: scoring questions; weighting questions; grouping the weighted scored questions by theme and taking an average of these to give an overall theme score; and averaging the seven theme scores to give a data maturity stage (based on a scale of 0 to 5 for Unaware through to Mastering).

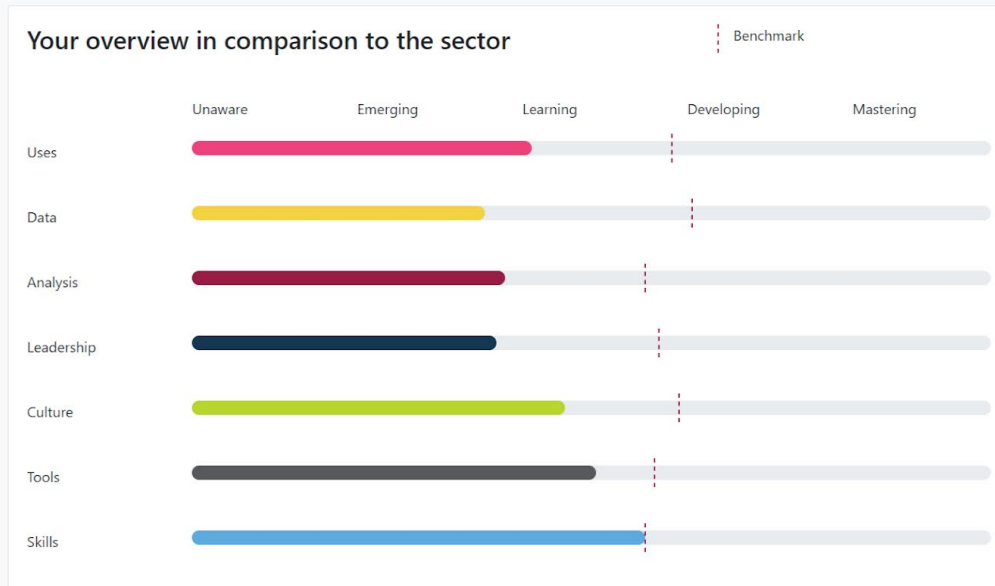
All questions are normalised so that before weighting they contribute equally to the relevant theme and themes are normalised so that they contribute equally to the overall score for an individual organisation. Each question is assigned a weight: standard, high, or very high based on how important responses will be in determining important features or behaviours of data maturity.

Benchmarking enables comparison between one organisation and a number of others. For the benchmarking in this report, we use the organisation level score for all questions, themes, and stages. Further information on [scoring, weighting, and benchmarking is available here](#).

SUMMARY

You scored your organisation in the Learning Stage

Your overall score, based on the average across the seven themes, was **2.2** out of **5**. You have scored your organisation strongest in **Skills, Tools, Culture**. Your responses indicate priority areas to focus on are likely to be **Data, Leadership, Analysis**.



Overview by theme

Uses

2.1 out of 5
Learning

Purposes for collecting and analysing.
Benefits and rewards.

[FIND OUT MORE](#)

Data

1.8 out of 5
Emerging

Collection. Quality. Sources. Assets.

[FIND OUT MORE](#)

Analysis

2 out of 5
Emerging

Type. Technique. Joining. Presenting.

[FIND OUT MORE](#)

Leadership

1.9 out of 5
Emerging

Attitudes. Plans. Capability. Investment.

[FIND OUT MORE](#)

Culture

2.3 out of 5
Learning

Team Approach. Self-questioning.
Openness. Protection.

[FIND OUT MORE](#)

Tools

2.5 out of 5
Learning

Storage. Type. Quality. Sharing.
Integration.

[FIND OUT MORE](#)

Skills

2.8 out of 5
Learning

Capacity. Skills. Training. Access to
Knowledge and Expertise.

[FIND OUT MORE](#)

Invite your colleagues

The Data Maturity Assessment is more accurate if it's completed by multiple people in your organisation. You can share the link for colleagues to complete individually, complete the free version again together as a small group, or consider our paid organisational version, which allows all staff to take an assessment and provides you with a collated report.

[FIND OUT MORE](#)

2. ABOUT THE DATA IN THIS REPORT

The source data for this report comes from users of the online Data Maturity Assessment. The raw dataset for users between 1 January and 31 December 2021 included 1,221 responses.

It should be emphasized that Data Orchard’s Data Maturity Assessment tool is a self-assessment tool. The results reflect what users say about data in their organisations. Users are self-selecting. Whilst we can make no claims about it being precisely representative of the sector, we do monitor the profile of users to see how representative they are.

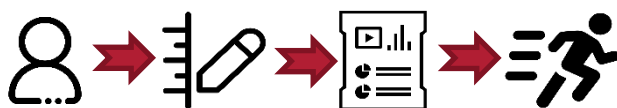
2.1 Individual and multiple users

The Data Maturity Assessment was specifically designed to encourage and enable multiple people from the same organisation to take the assessment. This is in part to develop and share learning and understanding, to create a common language, and to mobilise people into thinking collectively about planning and action towards future improvements. Critically though it’s about recognising that data is used, understood, and applied in different ways by different people in different parts of an organisation. So, to shift the whole organisation forward it is sensible to involve all those people and perspectives in the assessment process. There are two main versions of the Data Maturity Assessment: the individual version and the organisational version.

Individual version

The individual version of the assessment is designed for one person to complete. This version is available for free. It is suitable for very small organisations. Sometimes the assessment is completed together by a group, sometimes several people take the individual assessment separately and discuss their individual results together.

Individual Free Assessment



One user takes an assessment,
receives a self assessment report,
and takes action

Organisational version

The whole organisation version of the assessment is designed for multiple users to complete. This version is customisable and available on a tiered pricing basis. Notably many of those using the organisational version invite large numbers of staff (sometimes all of them) to take part in the

assessment. For simplicity we have illustrated in the graphic below how the process works for three users.

Multiple User Organisation Assessment



Multiple users take the assessment and receive a personal report on how they scored the organisation

All the individual users' results are combined in an overall organisation report

The whole organisation takes action

2.2 The taster assessment

In addition to our full assessment (which includes standard questions for both the individual and organisational versions) we also have 'taster assessment'. This is a cut-down version of the full assessment and takes around 5 minutes rather than the full 20 minutes to complete. Around 15% of the validated users have completed the taster without going on to take the fuller assessment.

For most of the analysis in this report we focus only on organisations completing the full assessment. However, in Annex 1 where we explore individual questions in more detail, we also include 52 not-for-profit organisations that took the taster for the questions that appear in both the taster and full assessment.

2.3 Cleaning and validation

We excluded users using apparently personal email addresses (such as gmail or yahoo) or where the email address provided was not valid. Where users provided organisational addresses, we sought to confirm that the organisation existed. For UK organisations we accessed public registers such as Companies Houses, the Charity Commissions for the different parts of the UK, and the FCA Mutuals Register. For organisations apparently based outside of the UK or where we could not identify them on a UK register, we relied on information provided on their public website.

After cleaning and validation, the dataset used for this report included 1,007 complete unique responses (of either the taster or full assessment). Where respondents completed both a taster and full assessment, we used only the full assessment data to avoid duplication.

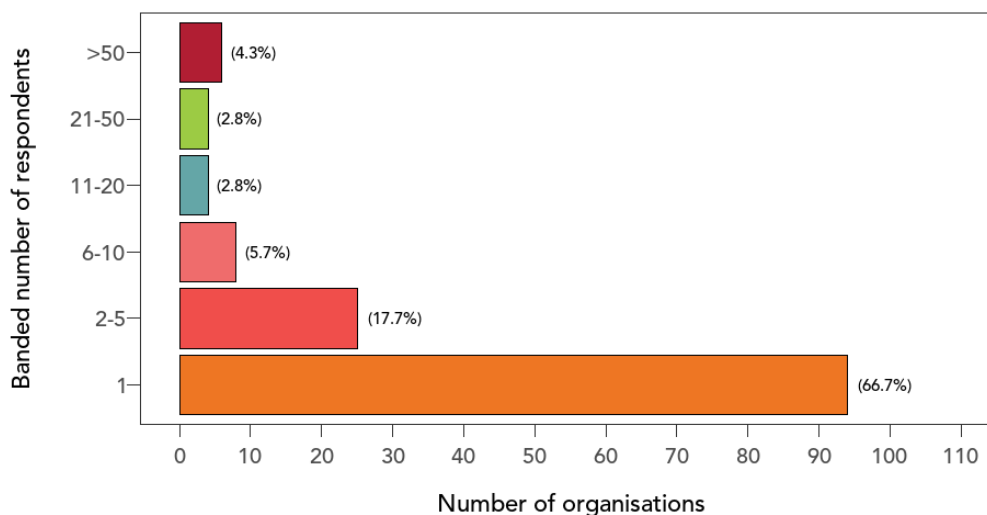
In total the number of validated organisations using the tool during this period was 220. For UK based charities and companies, we identified the sector, type, age, turnover, location, and number of employees from the aforementioned publicly available records.

Data preparation	Respondents	Organisations
All responses	1,221	369
After cleaning, matching and validation	1,007	220
After excluding commercial organisations	937	162
Not-for-profits taking the taster assessment only	52	21
Not-for-profits taking the full assessment	885	141

2.4 Organisation versus respondent level analysis

At a sector level we are interested in understanding the data maturity of whole organisations. In most cases (around two thirds) a single response has been recorded for the organisation. Usually this is a single person on behalf of the organisation, though we know from our [2022 impact evaluation](#) that it is not uncommon for multiple people to complete the assessment together as a group, especially in smaller organisations.

Banded number of respondents per organisation



Total number of organisations: 141
Total respondents: 885

Over a third of organisations have had multiple users complete the assessment, and in some cases in large numbers. Where there have been multiple respondents from the same organisation, the respondents' scores for each question have been calculated, combined and averaged to give a single organisational score.

2.5 Defining the not-for-profit sector

As part of our data preparation process, we needed to be quite specific about how we defined the not-for-profit sector. This is a well-known challenge to data people trying to describe sectors. A full list of the legal types included in each category is included in Annex 2.

In summary all validated organisations were grouped in four broad sectors based on their legal type as follows:

1. **NGO (non-governmental organisations)** – Trusts, charities, social enterprises, charitable incorporated organisations, constituted non-governmental organisations with a social mission.
2. **Public sector** – local, regional, national government, education, health.
3. **University**
4. **Commercial** – public and private limited companies.

We defined the not-for-profit sector to essentially mean non-commercial organisations and included the first three on the above list: NGO, public sector, and university.

2.6 Important terminology

Clients

This term refers to the people the organisation serves. We acknowledge different organisations may have different names for this e.g. service users, beneficiaries, customers, residents, members, participants, stakeholders, and students. They may serve other organisations or communities. It's possible the organisation works for the benefit of the environment or creatures e.g. natural habitats, birds, or animals.

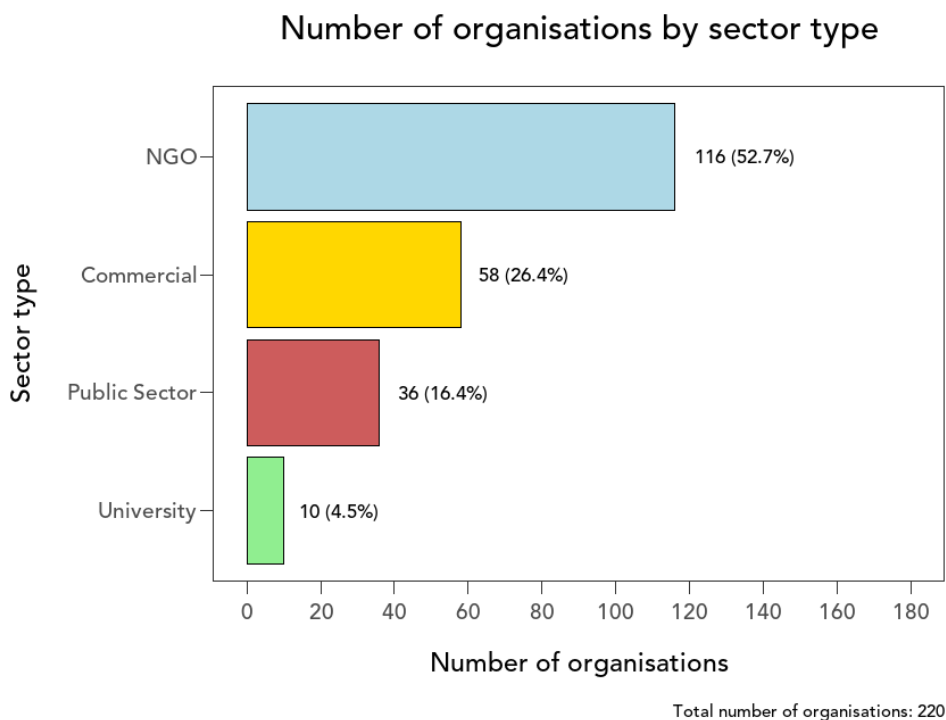
Staff

This term refers to the people who work for the organisation. It includes employees and volunteers. In some cases, it may also include freelancers, associates or contractors who work to deliver the organisation's services and products to clients.

3. PROFILE AND CHARACTERISTICS OF USERS

3.1 About all the organisations using the tool

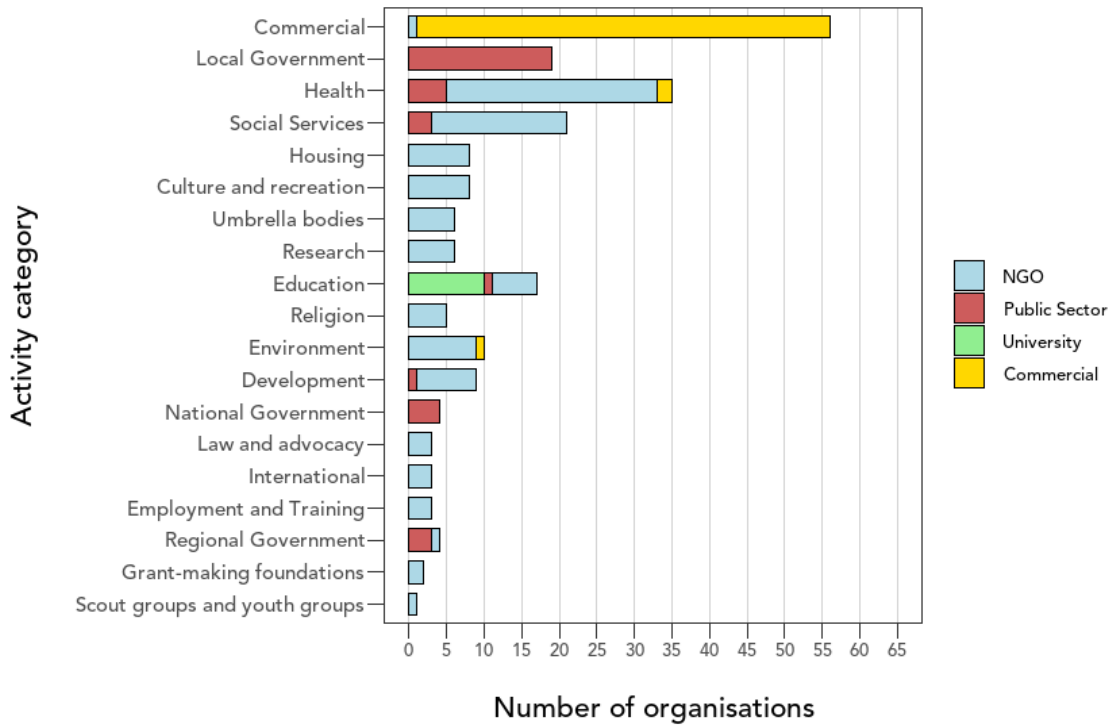
The tool is being used primarily by the sector for which it was designed i.e. non-governmental organisations (NGOs). We know from our [2022 impact analysis](#) that many private sector consultancies also use the tool in their work with clients (some of which are in the not-for-profit sector). It also continues to be used by other non-commercial organisations including a range of public sector bodies and universities.



Activity type

The profile of organisations by type of activity were many and varied. In the not-for-profit sector the numbers were highest for health, social services, local government, and education sub-sectors.

Number of organisations by activity category

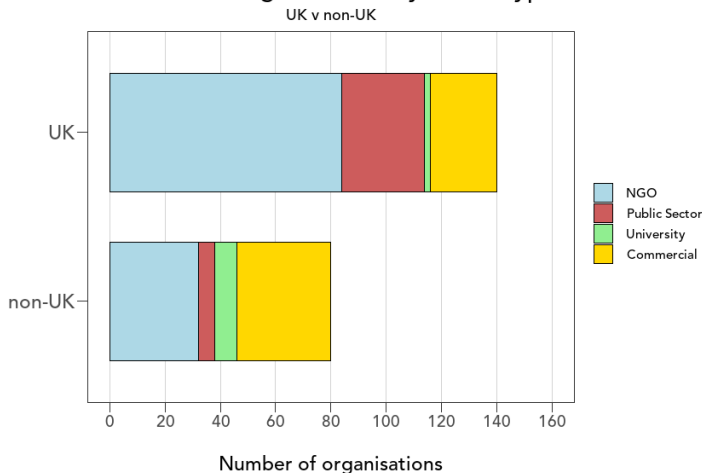


Total number of organisations: 220

UK v international profile

The organisations using the tool in 2021 came from over 30 countries around the world. Most of the not-for-profit users were from the UK. Internationally organisations that used the tool most were from Canada, USA and Australia.

Number of organisations by sector type

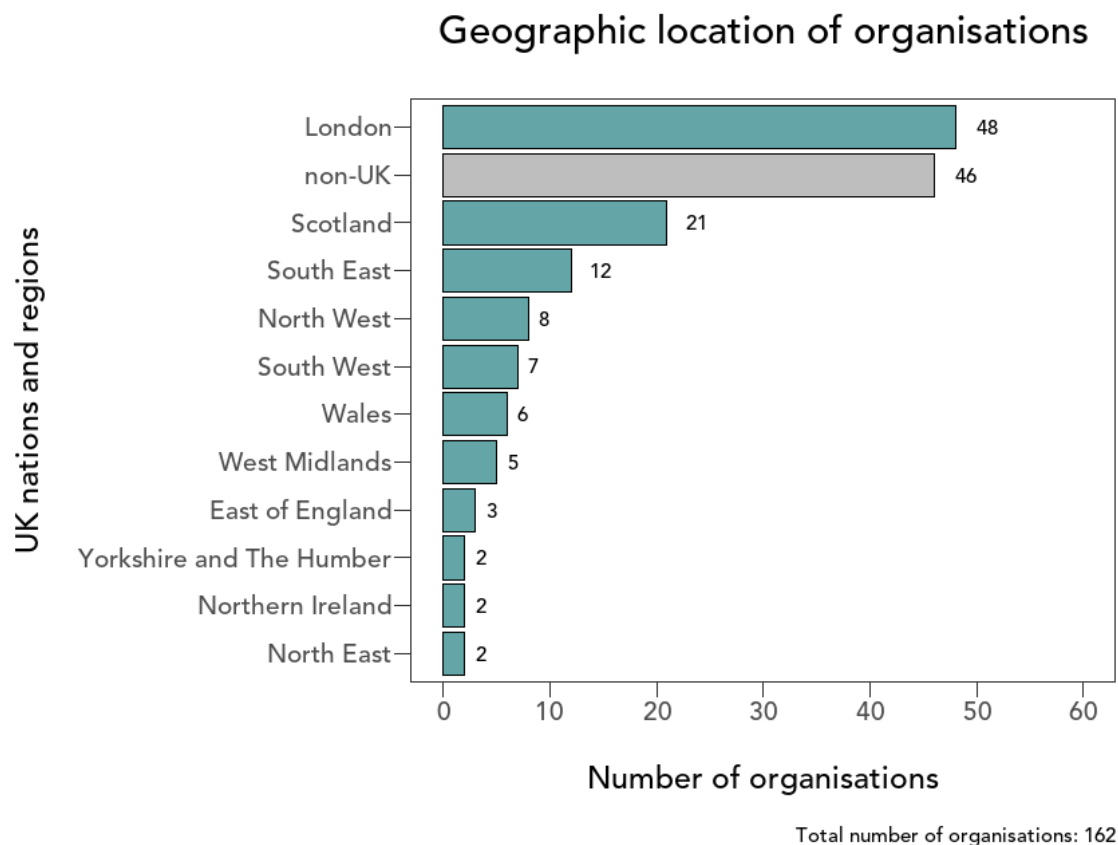


Total organisation responses: 220

3.2 About the not-for-profit organisations using the tool

UK geographic profile

Focusing just on the not-for-profit sector organisations, and more specifically those in the UK, we can see users came from every UK nation and region.

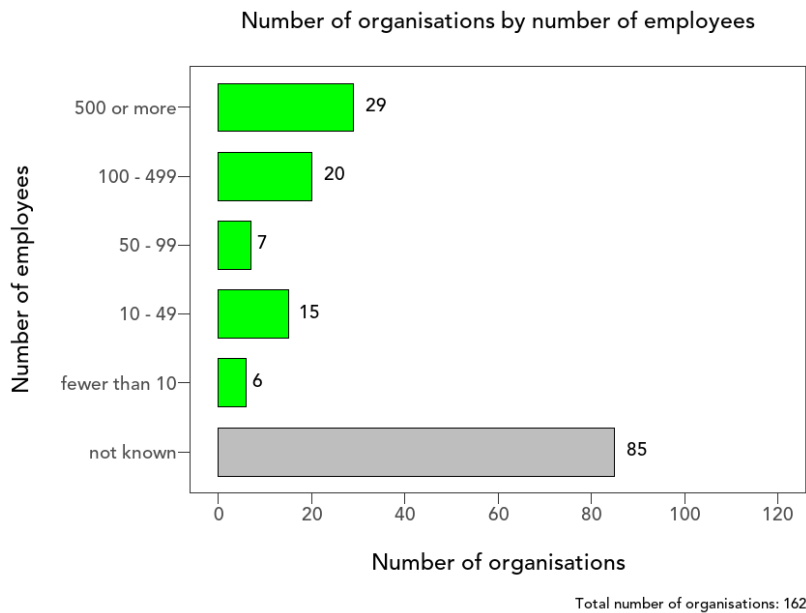


Income and employees

Based on what we know about income, the data suggests most not-for-profit sector users are medium (£100,000–£1M), large (£1M–£10M), or major (£10M–£100M) with a few super-major sized (£100M+) ([using the NCVO sector definitions](#)). For many it was not possible to find income data. Small charities may be among these or the many we were unable to validate (i.e. if they were using a personal rather than organisational email address).

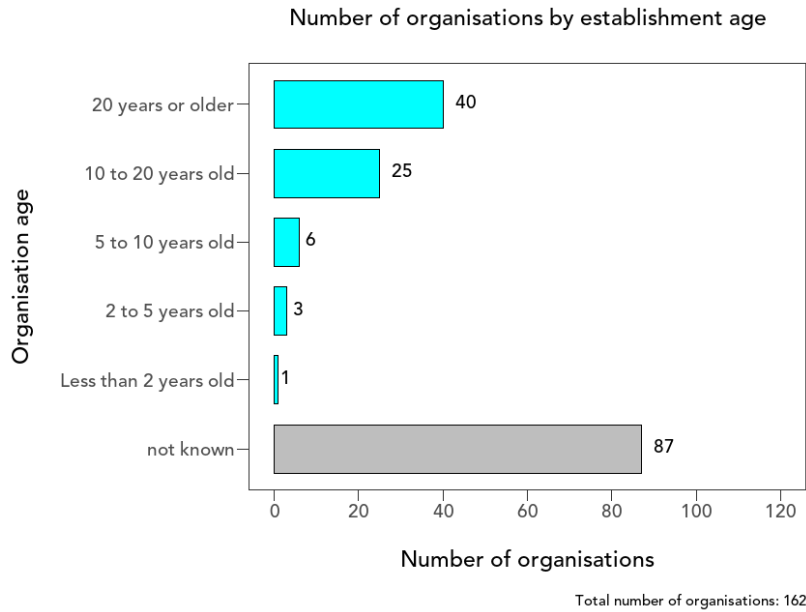


Again, there is a lot of missing data on the numbers of employees for organisations using the tool. The data we have suggests users are of all different sizes with those with 100+ staff being the largest groups.



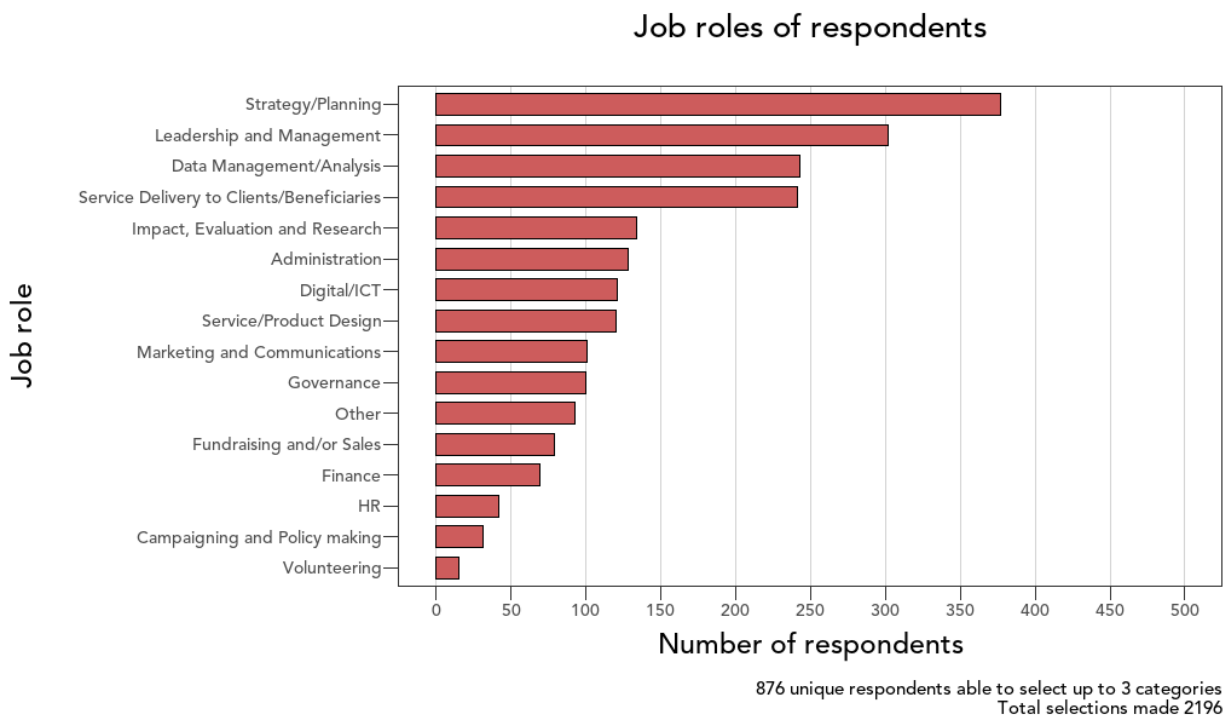
Age of organisation

The available data suggests the kinds of organisations taking a data maturity assessment tend to be more established. Start-ups and younger organisations may well have other priorities as they are at an earlier stage of development, and perhaps might not have accumulated so much data either.



3.3 About the people using the tool

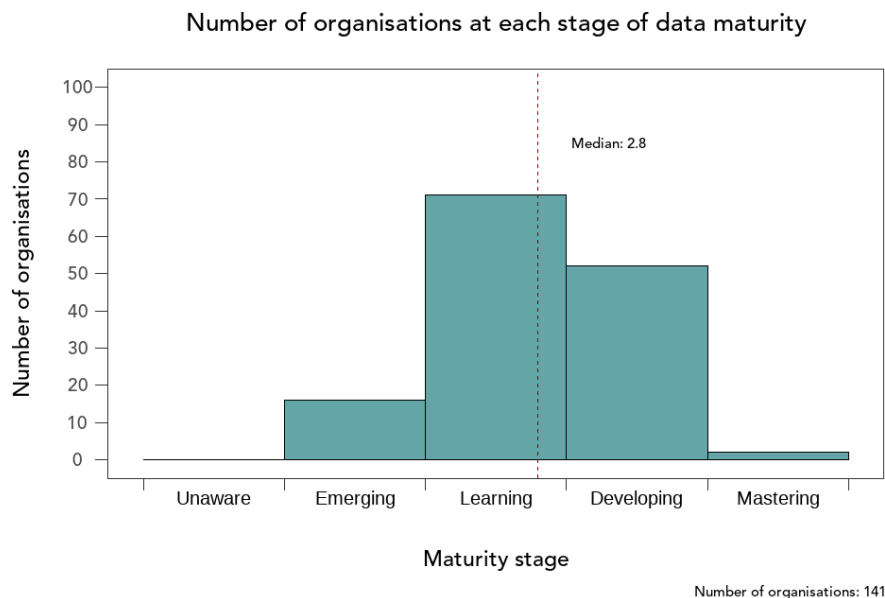
The top job roles of not-for-profit sector people using the tool are in ‘strategy/planning’ and ‘leadership and management’. Unsurprisingly there are also many users in data management and analysis roles. A similar number describe themselves as being in service delivery roles. We note it is common, especially in smaller organisations, for people to have multiple roles and for there to be no dedicated responsibility for data. Meanwhile in large/major/super major organisations there may be whole analytics departments.



4. OVERALL FINDINGS ABOUT DATA MATURITY

4.1 How data mature is the not-for-profit sector?

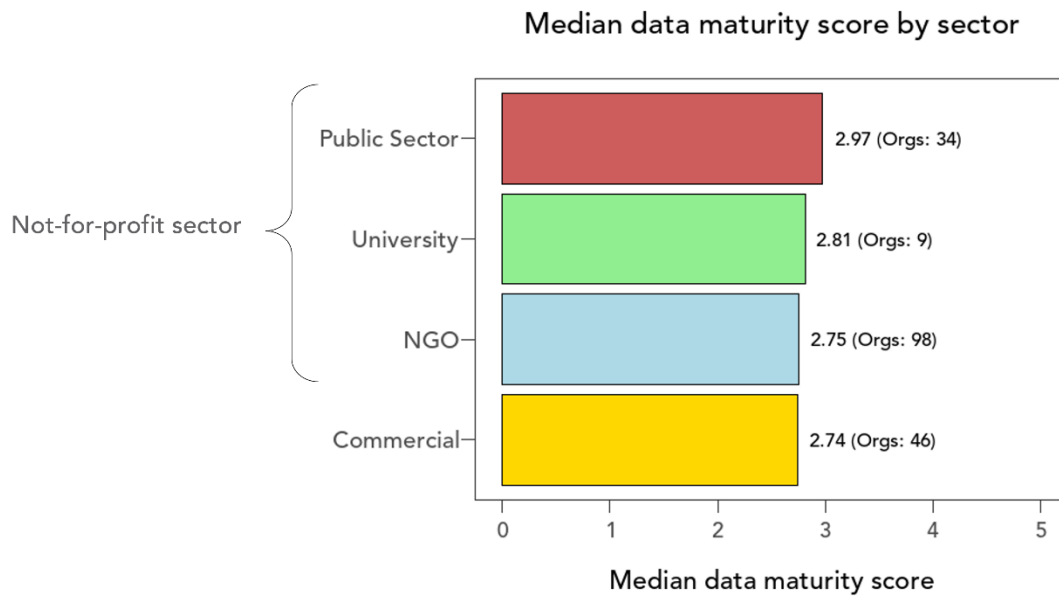
Based on the not-for-profit organisations completing the full Data Maturity Assessment, most organisations are at the 'Learning' stage (50%). A good proportion have progressed into 'Developing' (37%), though barely any have made it to the 'Mastering' stage. Around one in ten are lagging in the 'Emerging' stage (11%).



There were none that scored overall at the 'Unaware' stage. To some extent this is unsurprising given users are self-selecting and data unaware organisations are unlikely to search for a tool to help them self-assess where they are. However, it should be noted at theme level many organisations do score in the unaware stage.

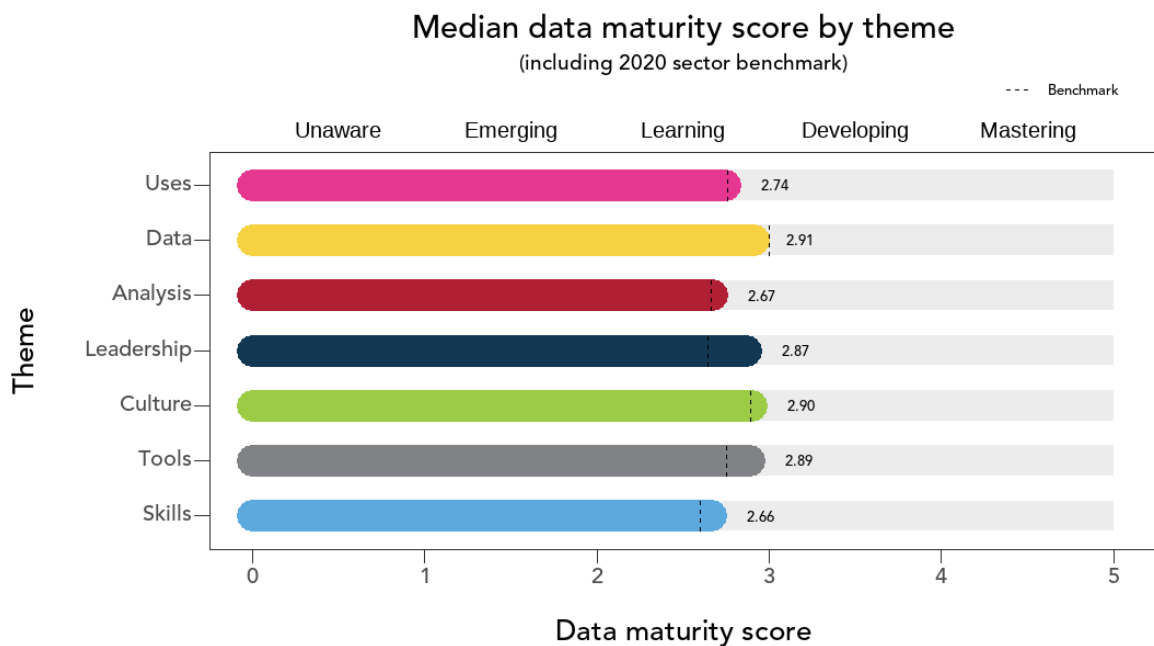
4.2 How does data maturity compare across sectors and sub-sectors?

Based on the users of our tool in 2021, our analysis suggests there's little difference in data maturity across the sectors and sub-sectors. Averages (medians) suggest organisations are typically at the 'Learning' stage whatever sector they operate in. However, averages hide the wide variation in scores which shows there are leaders and laggards in all sectors.



4.3 Strengths and weaknesses

Overall, across the not-for-profit sector there's not much difference between the themes. The average (median) scores range from 2.66 to 2.91 out of 5 across the seven key themes: Uses, Data, Analysis, Leadership, Culture, Tools, and Skills.



Number of organisations = 141

The sector's strongest themes were:

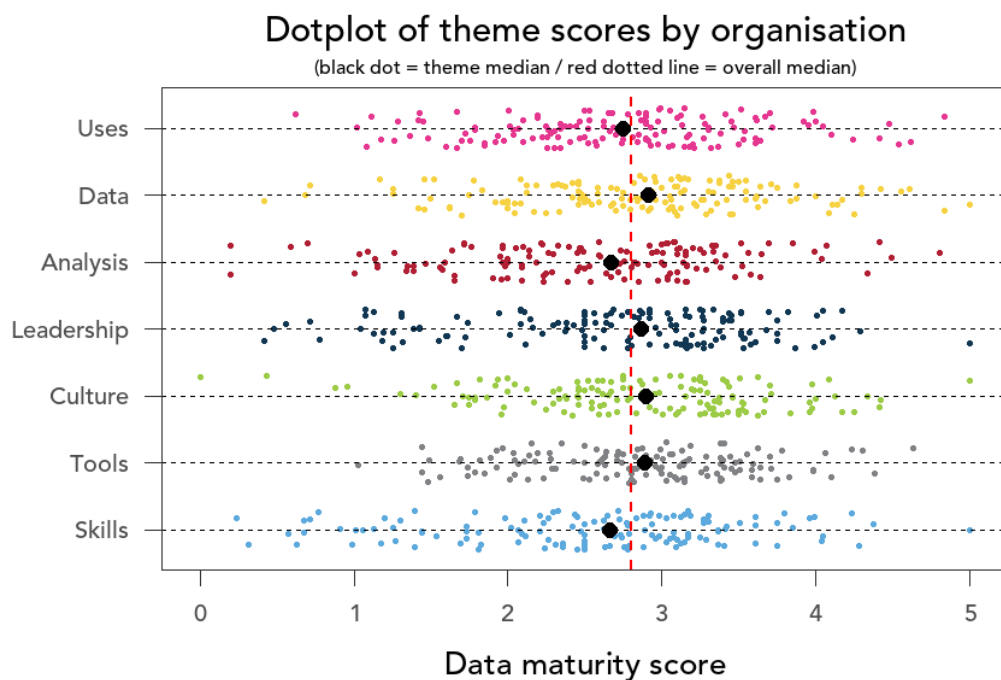
- Data (2.91 out of 5)

- Culture (2.9 out of 5)
- Tools (2.89 out of 5)
- Leadership (2.87 out of 5)

The three weakest themes were:

- Skills (2.66 out of 5)
- Analysis (2.67 out of 5)
- Uses (2.74 out of 5)

Again, the averages hide much of the variation in the scores. In the chart below each dot represents a score for an organisation on each of the themes. It illustrates how widely the scores vary for all seven themes.



Number of organisations = 141

4.4 Relationships between the seven themes

Our [early research into data maturity](#) identified that it was a combination of the seven key themes that enabled organisations to advance their data maturity. In this research we have tested this by looking at correlations. Correlations, which are measured on a scale of -1 to +1, measure the strength of a relationship between two variables. They can either be positive (where they increase or decrease together) or negative (where as one increases the other decreases). The findings show there are positive correlations between all the data maturity themes so a low or high score in one will predict a low or high score in another, though some relationships are much stronger than others. The three strongest and most significant correlations all involve 'Culture':

- Culture and Leadership
- Culture and Data

- Culture and Skills.

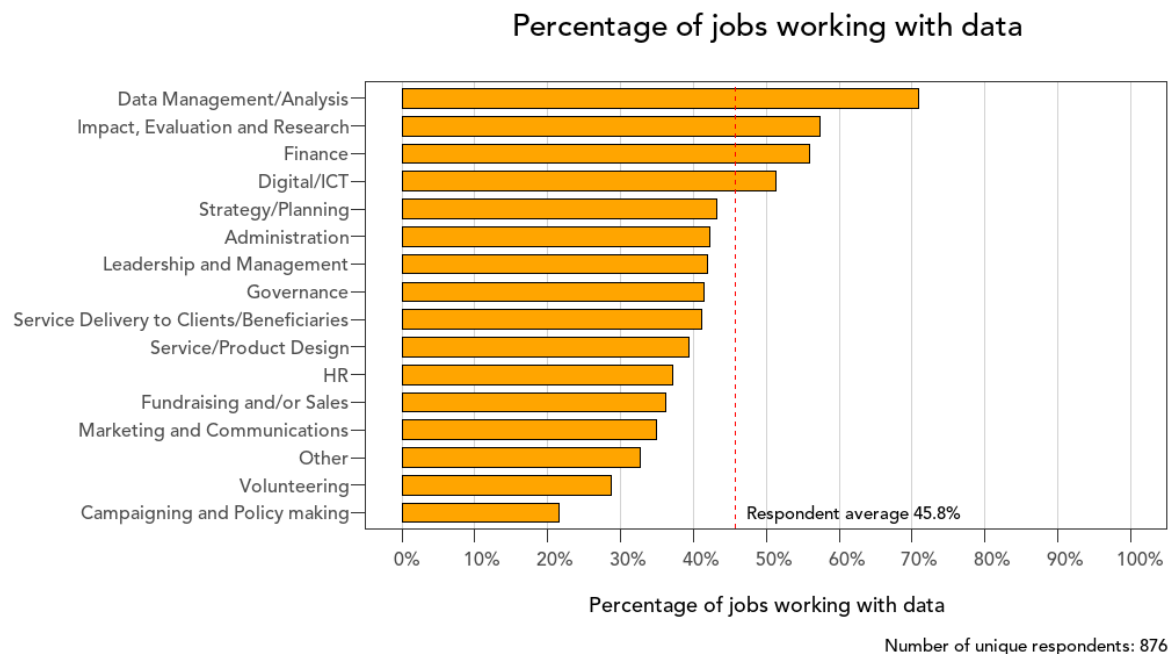
Meanwhile the three least significantly correlated themes all involved ‘Tools’:

- Tools and Analysis
- Tools and Leadership
- Tools and Data.

Correlation demonstrates the strength of a relationship but does explain what’s causing it. For more detail about the correlations analysis see Annex 4.

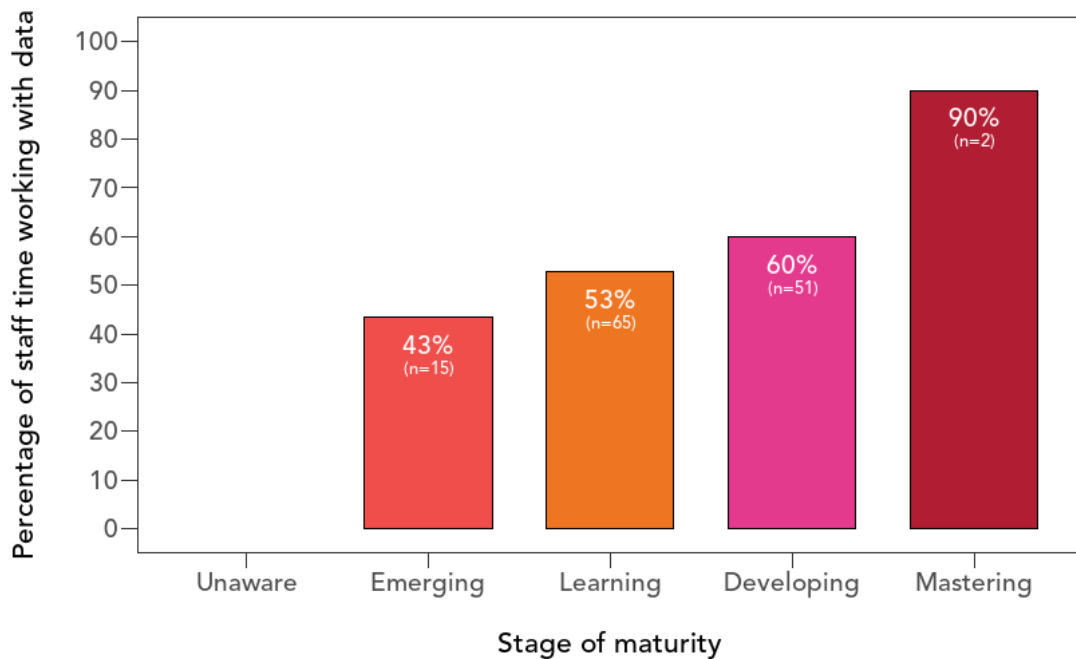
4.5 Staff time spent on data as organisations mature

We know from this research (and from the 2020 results) that staff spend a lot of time working with data. Even without the costs of tools, staff report on average 46% of their time goes into collecting, managing, and reporting data. Obviously, this varies. In data management and analysis roles higher rates would be expected, however the findings show data is part of almost everyone’s job whatever their role.



At an organisational level we wanted to explore whether staff in more data mature organisations spent more, less, or the same amount of time as less mature organisations. Where there were multiple respondents for an organisation we took an average. The results show the percentage of time increases as the level of data maturity increases, though since there are only two organisations at the ‘Mastering’ stage it’s best to focus on those at Emerging, Learning and Developing stages.

Average percentage of staff time working with data by stage of maturity



Number of organisations: 133

The data suggests more mature organisations reap greater rewards and benefits, both in the delivery of services and products and their internal capabilities, than less mature organisations (see section 5.1 on uses and Annex 3). However, it appears the average percentage of staff time spent working with data also increases by data maturity stage. Excluding 'Mastering' due to there being only two organisations, there are sufficient numbers in the remaining three categories to show a significant increase.

4.6 Organisation income as an indicator of data maturity

We have found no relationship between an organisation's income level and its data maturity. This concurs with findings from earlier rounds of analysis exploring this. Based on the data we have; higher income charities are no more data mature than lower income charities. See Annex 5 for more detailed analysis by income.

Median organisation score by annual income banding



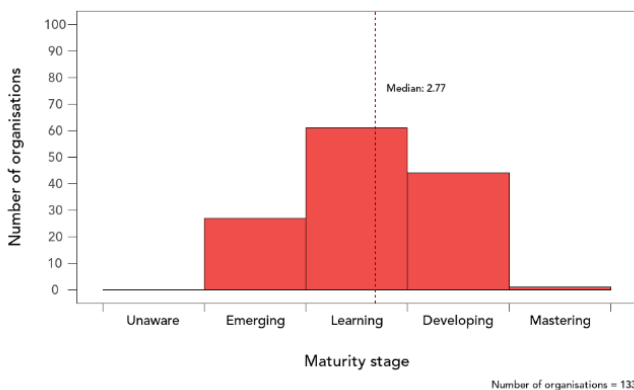
Number of organisations: 141

4.7 Comparing 2021 results with 2020

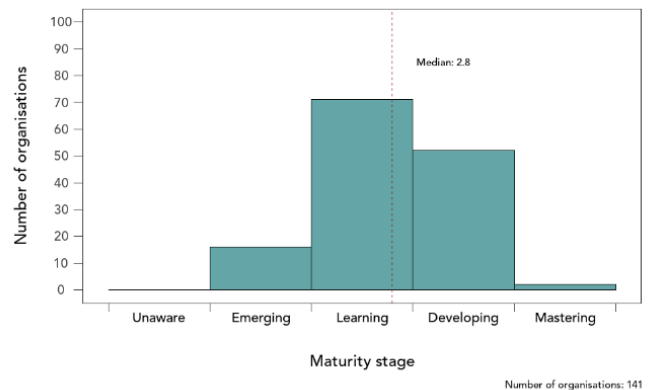
The set of 141 not-for-profit organisations that took a data maturity assessment in 2021 are, except for 10 cases, a completely different set of organisations to the 133 we analysed in 2020. A growing number of organisations are taking repeat assessments to see whether they have progressed on their data maturity journeys hence the 10 cases. A separate research project is underway tracking these journeys.

Comparing organisational data maturity in 2021 with 2020 shows there's little overall difference in the median scores for those taking the assessment. This is positive in that it confirms and validates the findings in our previous analysis. A closer comparison across the range shows there were fewer in the 'Emerging' stage than previously.

Number of organisations at each stage of data maturity 2020

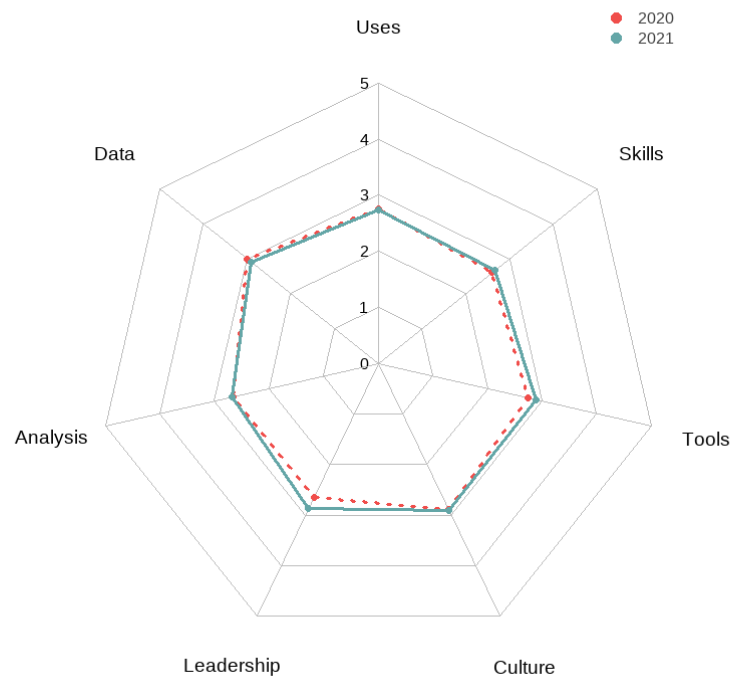


Number of organisations at each stage of data maturity 2021



Comparing across themes also confirms there is little difference between the two groups of not-for-profit organisations.

State of the Sector Benchmarks 2020 v 2021



5. KEY THEME FINDINGS

This section provides an overview of the findings for each of the seven key themes: Uses, Data, Analysis, Leadership, Culture, Tools, and Skills. More detailed analysis is provided in Annex 1.

5.1 Uses

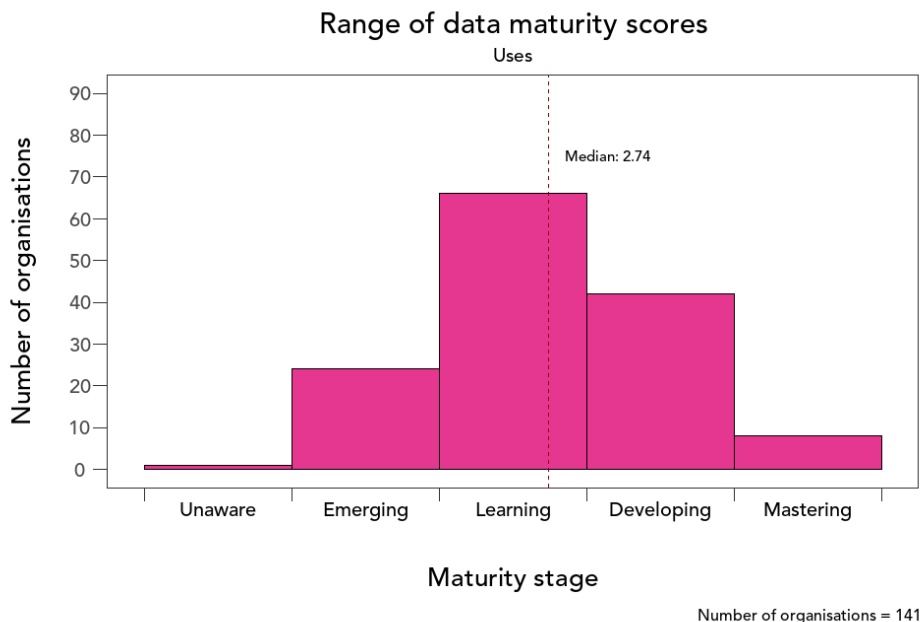
The 'Uses' theme explores the:

- purposes for which organisations use data, and the
- benefits and rewards reaped from doing so.

These are considered in two contexts:

- how an organisation applies the use of data in its delivery of products and services to clients
- how data is used in 'running and driving the business', i.e its internal capabilities.

The average (median) score for the 'Uses' theme is 2.74 out of 5. Overall, most organisations are at the 'Learning' stage, though a good proportion have progressed to the 'Developing' stage and a few even into 'Mastering'.



Most organisations are not using data to its full potential, though the rewards and benefits are more extensive as organisations mature. See Annex 3 for more detailed analysis.

Using data to support services

In relation to services the primary purpose is for capturing and recording activities with clients (86% do this moderately or extensively). Just under half, 49% are using data for monitoring service quality and performance. Far fewer are using it to any real extent for targeting services, supporting reach and engagement, design and delivery of services and products, and measuring the difference they make in terms of client outcomes.

For the 16 organisations at the 'Emerging' stage, there are no extensive rewards and benefits reported. The three areas where data has **moderate** influence on services are.

- Evidencing needs/problems the organisation seeks to address (20%)
- Evidencing impact to stakeholders (13%)
- Design and delivery of services and products (6%).

For the 71 organisations at the 'Learning' stage, there are six areas where data has influence on services. These rewards and benefits are reported to be **both extensive and moderate** as follows:

- Evidencing needs/problems the organisation seeks to address (34%)
- Evidencing impact to stakeholders (39%)
- Design and delivery of services and products (39%)
- Reach/engagement with clients (38%)
- Targeting of services/interventions to clients (30%)
- Client/environmental outcomes (23%).

For the 52 organisations at the 'Developing' stage, the rewards and benefits are much more extensive across the six areas where data has influence on services. These organisations report **extensive and moderate** benefits as follows

- Evidencing needs/problems the organisation seeks to address (62%)
- Evidencing impact to stakeholders (53%)
- Design and delivery of services and products (49%)
- Reach/engagement with clients (51%)
- Targeting of services/interventions to clients (61%)
- Client/environmental outcomes (47%).

Using data to strengthen internal capabilities

In relation to internal capabilities around running and driving the organisation, the primary purpose for using data is for compliance reporting. 63% say they use data moderately or extensively for regulator/funder/contract reporting.

Over half say they use data for strategic planning and decision making (54% moderately or extensively). However fewer than 40% see any meaningful benefits in areas like learning and evaluating what they do, improving service and product design, raising income, and influencing external policy and decision makers. Again, the rewards and benefits are considerably different depending on which stage of data maturity organisations are at.

For the 16 organisations at the 'Emerging' stage, there are no extensive rewards and benefits reported. The five areas where data has **moderate** influence on internal capabilities are.

- Strategic planning and decision making (13%)
- Income generation (fundraising, sales, contracts) (13%)
- Levels of knowledge and expertise (13%)
- Credibility and influence (13%)
- Strength of partnerships (7%).

For the 71 organisations at the ‘Learning’ stage, there are seven areas where data has influence on internal capabilities. Additional areas where data is influencing the organisation include ‘Improving Impact’ and ‘Efficiency savings’. Rewards and benefits are reported to be **both extensive and moderate** as follows:

- Strategic planning and decision making (35%)
- Income generation (fundraising, sales, contracts) (31%)
- Levels of knowledge and expertise (22%)
- Credibility and influence (24%)
- Improving impact (20%)
- Strength of partnerships (18%)
- Efficiency savings (resources, processes, service/product design) (18%).

For the 52 organisations at the ‘Developing’ stage, the rewards and benefits are much more extensive across the seven areas where data has influence on internal capabilities. These organisations report **extensive and moderate** benefits as follows:

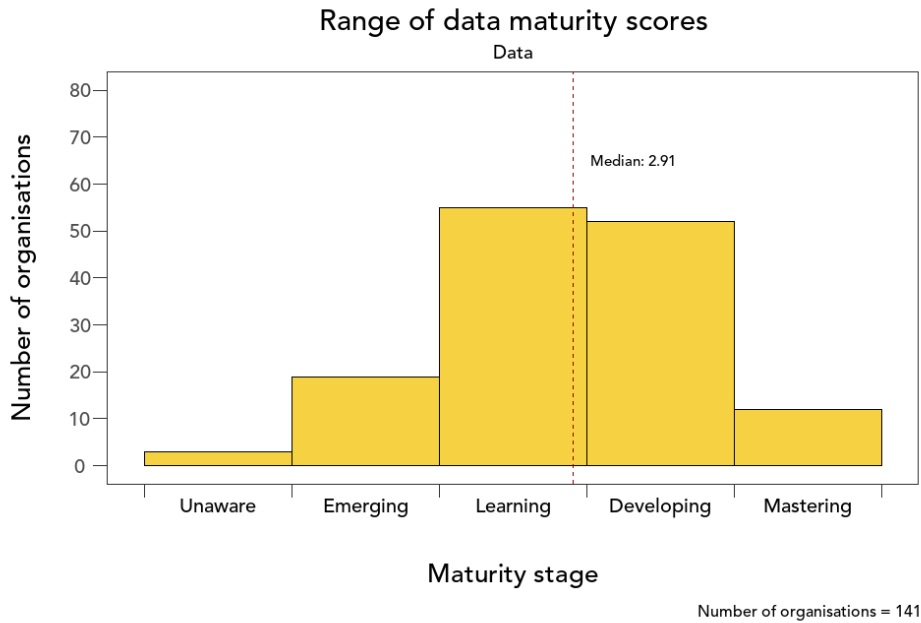
- Strategic planning and decision making (58%)
- Income generation (fundraising, sales, contracts) (47%)
- Levels of knowledge and expertise (55%)
- Credibility and influence (51%)
- Improving impact (56%)
- Strength of partnerships (55%)
- Efficiency savings (resources, processes, service/product design) (35%).

5.2 Data

The data theme explores four key subthemes:

- Collection
- Quality
- Sources
- Assets

The average (median) score for the ‘Data’ theme is 2.91 out of 5. This is the theme where the sector scored strongest overall with almost half scoring in the developing and even mastering stages.



Many organisations don't know what data assets they have, who looks after them, or what state they are in. Just over a quarter maintain a record of data assets and who's responsible for them.

Three in five say they collect the right data. A third say they collect it in consistent and efficient ways. When it comes to data quality there's a very mixed picture. Only 30% say their data is complete, accurate and, where necessary, kept up to date. Of these hardly any, fewer than 4%, are very confident about the quality of their data. Less than half say they know the quality of the data they collect.

The sector makes fairly good use of data available from external sources. 70% use publicly available external research (e.g. government or academic) either regularly or occasionally. A good proportion (63%) commission their own research and evaluation, and half use shared measures and benchmarks with other organisations.

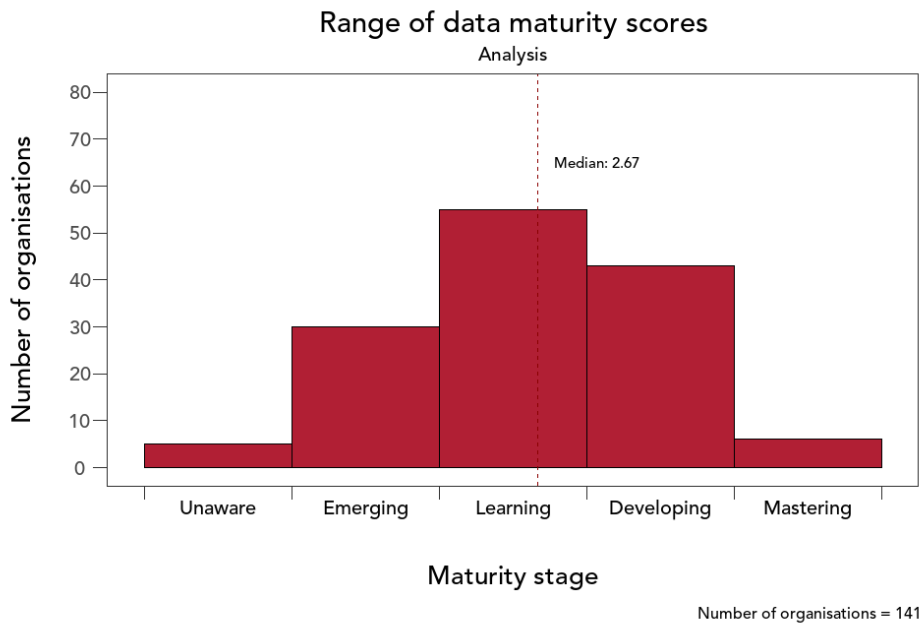
Data versatility, where the same data can be used and re-used for many different purposes, remains out of reach for many. This suggests data is often being collected for a single purpose, project, or team. 42% have rich data they can use and re-use for different internal and external stakeholders.

5.3 Analysis

The analysis theme explores four key subthemes:

- Type
- Technique
- Joining
- Presenting

The average (median) score for analysis is 2.67 out of 5. Most organisations are at the 'Learning' stage. Many have progressed into the 'Developing' stage and a handful are beginning the 'Mastering' stage.



Just under half say they analyse data in meaningful and useful ways. Most organisations are doing basic counts and charts (91%), some of which may include manual/visual approaches (over half say they do this moderately or extensively). This would align with the use of paper forms and questionnaires to collect data (40% moderately or extensively). Analysis of historic data is also widespread with 88% using descriptive analysis to summarise averages and past trends.

Deeper analysis around causes, patterns, differences, and correlations are used by 54%. More advanced predictive and prescriptive types of analytics are even less common, used by 29% and 22% respectively.

Self-questioning and experimental analysis are also relatively rare. Less than a third say they use data to explore and test assumptions about the difference their organisation makes or run pilots or trials to explore how best to act in the future.

Bringing data together to provide a strategic overview is a challenge for most. More than a quarter say they either don't bring their data together at all or people verbally report on it. Most commonly data is manually collated in reports from different sources (43%). Those slightly more advanced use a mixture of manual and partially automated approaches (26%). Around 1 in 20 do this in a fully automated way.

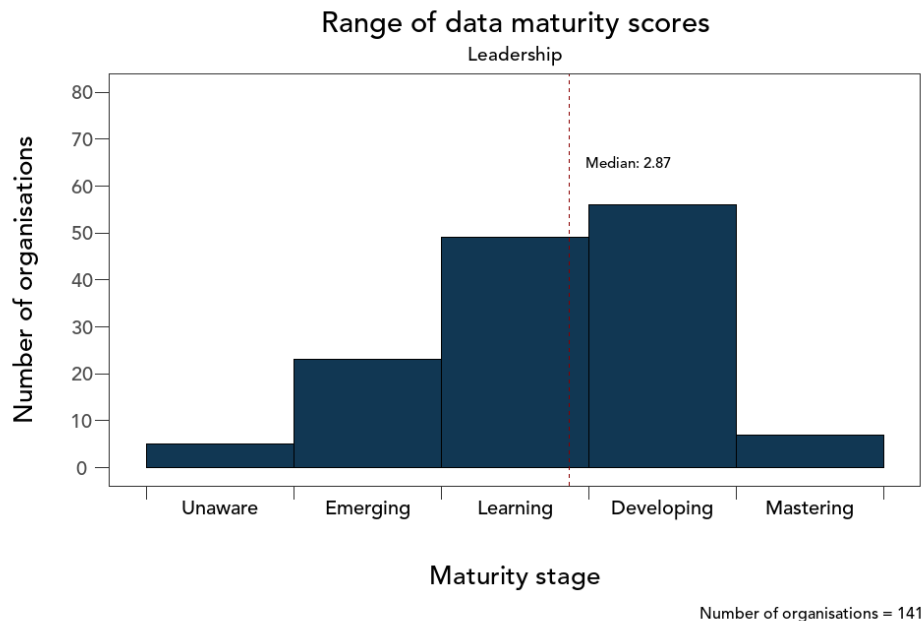
5.4 Leadership

The leadership theme explores four key subthemes

- Attitudes
- Plans

- Capability
- Investment

The average (median) score is 2.87 out of 5, with this theme showing the widest range of responses overall. Most are in the 'Learning' and 'Developing' stages though there are almost as many in the 'Unaware' stage as there are in 'Mastering'.



Almost all organisations say their leadership knows data is important. Less than 1% say their leadership is not interested in data at all. Despite this, 63% say their leadership is not convinced about its value. Just 6% say their leadership plans and prioritises data as a vital resource and understands how to use it to improve what the organisation does.

When it comes to data informed decision making hardly any (2%) are using past, present, and forward-looking data to support this. 9% say leadership don't use data for decision making at all.

Across the board, the results suggest most organisations are at least 'thinking' they should have a plan for improvement with data. Just 5% say there's no plan and no intention to make one. At the other end of the spectrum one in twenty have a regular cycle of data planning, implementation, and review. Most of those using the Data Maturity Assessment tool are actively creating a plan or intending to.

Planning around data is closely related to business planning more generally. 40% say their organisation has an overarching business plan with defined, measurable goals. Of those with a business plan three-quarters say data and analytics is a major organisational priority.

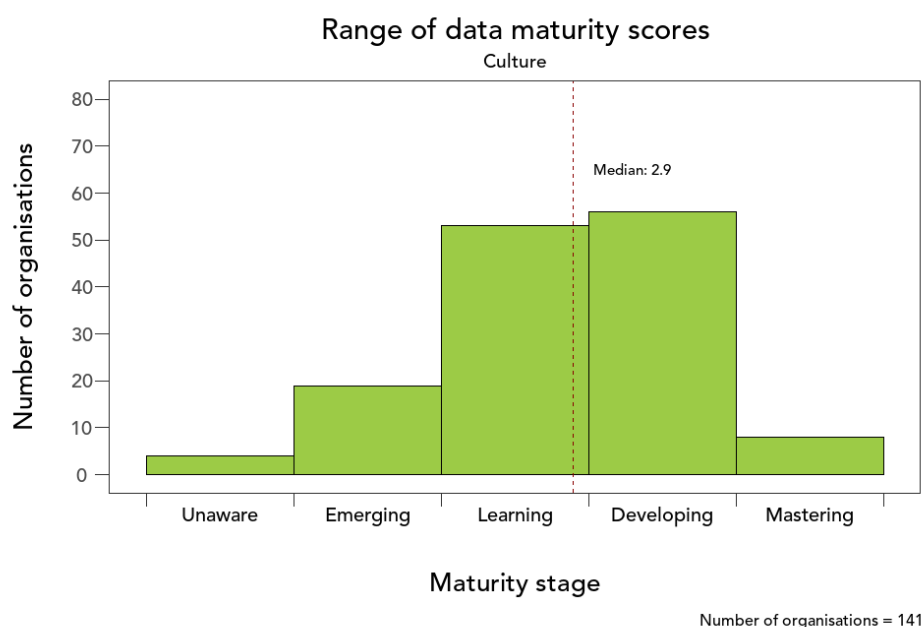
Leadership skills and investment remain a weakness. Over half say they don't have people with data analytics expertise within their leadership (53%). Only a quarter say leaders invest enough in data related resources: people, skills, learning and tools.

5.5 Culture

The Culture theme explores four key subthemes:

- Team approach
- Self-questioning
- Openness
- Protection

For 'Culture', the sector is at the upper end of the 'Learning' stage with a large proportion already in the 'Developing' stage. The average (median) score for culture is 2.9 out of 5. This is overall the second strongest data maturity theme after 'Data'.



Almost all organisations say they share data internally (88%), though less than a quarter say data is easily available and accessible to staff when they need it. Moreover, just because data is shared doesn't mean it's actually used by intended audiences e.g. only 36% say people in different teams/levels of seniority regularly discuss data and how to act on it. Presentation and communication of data is likely to be an issue also. Less than one in three agree they present and communicate data in accessible ways to different audiences.

Opinions are divided when it comes to using data internally to ask difficult questions and challenge practices. 33% say their organisation is comfortable with this, though 47% say they are not.

There is quite a lot of data sharing externally. 69% share data with partners, networks, and stakeholders; 59% share data with clients; and 53% openly publish their own data and analysis. Note these practices tend to be more occasional than regular and the same question remains about whether it is being used and acted upon.

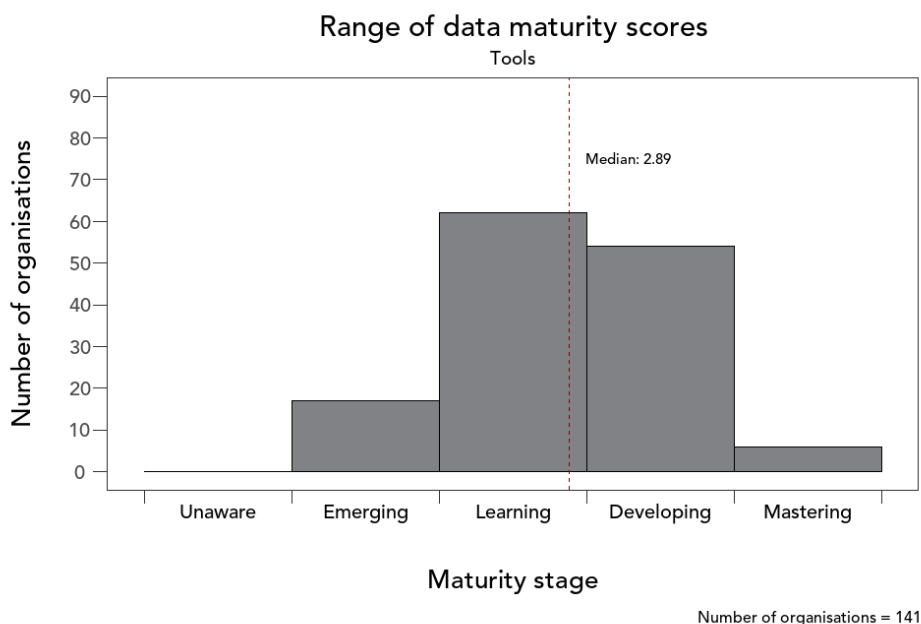
Despite the introduction of the new data protection legislation in 2018 (including GDPR), there's a mixed picture around policies and practices for security and protection. Whilst 70% say they specify and manage access to sensitive and personal data, less than two-thirds (62%) say their policies and practices are robust to ensure data is safeguarded. In addition, less than half (43%) monitor and test potential risks to improve their data security and protection.

5.6 Tools

The tools theme explores five key subthemes:

- Collection
- Storage
- Organising and managing
- Analysis and reporting
- Integration and architecture

The average (median) score for tools is 2.89 out of 5 with most in the 'Learning' stage, a good proportion in the 'Developing' stage and a few reaching 'Mastering'. Curiously this is the only theme where no organisations scored themselves at the 'Unaware' stage.



Organisations use a wide range of tools for collecting, storing, analysing, and reporting data. However more than half don't think their tools are very good, especially when it comes to enabling them to bring together, analyse and report data.

Just under half say they have good tools for collecting data, yet only one in three say their organisation collects data in consistent and efficient ways. Databases/CRM systems, websites, and online surveys feature most strongly among the digital tools for collecting data. However, it's notable that non-digital approaches (i.e. the use of paper forms and questionnaires) remain

widespread. 40% say they collect data from clients and stakeholders on paper either moderately or extensively.

Centralised and cloud-based tools for physically storing and managing data are widespread (used by 82% and 74% respectively). Yet less than two thirds (62%) say their files and documents are centrally and securely stored. Meanwhile, just one in three say their digital files and documents are well organised and managed. This aligns with the finding that only 27% organisations say staff can easily search for and find the information they need.

Two in five say they have good tools for analysing data. Whilst a wide range of tools are used, spreadsheets are the most universal of all (87% use spreadsheets moderately or extensively). Database/CRM's, finance software and survey tools are quite common (58%, 53% and 47% respectively). More advanced business intelligence tools less so (30%), and advanced specialist data science tools least of all (20%).

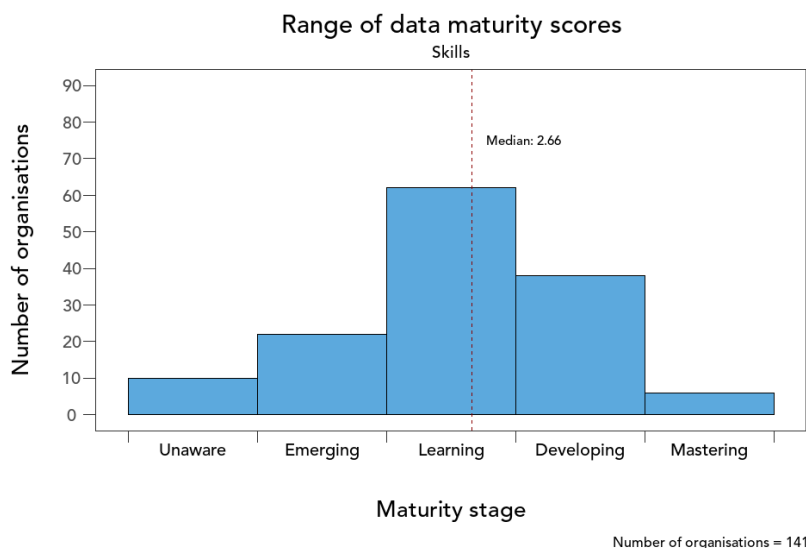
When it comes to integration and architecture just 25% of organisations say they have good tools for joining and relating data from various sources. One in three say they don't think about integration between tools when purchasing new products.

5.7 Skills

The skills theme explores four key subthemes:

- Capacity
- Skills
- Training
- Access to knowledge and expertise

The sector average (median) for skills is 2.7 out of 5. It is the weakest theme overall. Most organisations are at the 'Learning' stage with some promising numbers shifting into 'Developing' and even 'Mastering'.



A key finding around skills is that people don't know what they don't know, and don't feel they have access to trustworthy support and advice. 38% say they understand their needs around data skills and capabilities. Only one in four say they have access to external data and analytics support and advice from experts they trust.

The range of skills is complex and most don't think they have the right skills to maximise their use of data (just 21% say they do). One aspect many do tend to focus on is data protection. 58% say their staff receive induction and regular training on data protection and security. Though this suggests a fair proportion (over 40%) could be vulnerable in this respect.

More broadly, fewer than one in five say staff are data literate, over half lack data analytics skills at leadership level, and less than a quarter say they have enough capacity to manage and develop their organisation's data capabilities.

6. CONCLUSIONS

Based on the analysis on overall data maturity and exploration of the seven key themes, we have drawn seven key insights from this research. These are:

1. The not-for-profit sector is still learning about data.
2. A lack of data skills remains a major weakness for not-for-profits.
3. Not-for-profit leaders aren't making data-informed decisions.
4. Not-for-profits would gain more from focusing on their culture, rather than tools.
5. Data maturity takes time and effort, but the rewards are worth it.
6. Data maturity isn't...and is... about the money.
7. Organisations aren't taking advantage of digital tools to make data work for their cause.

6.1 Key insights

1. The not-for-profit sector is still learning about data.

2021 data shows most not-for-profit organisations to be at the 'Learning' stage (50%) in their journey to data maturity. A good proportion have progressed into 'Developing' (37%), though barely any have made it to the 'Mastering' stage. Around one in ten are still lagging in the 'Emerging' stage (11%). Average (median) scores for all the key themes (Uses, Data, Analysis, Leadership, Culture, Tools, and Skills) were all in the 'Learning' stage, ranging from 2.66 to 2.91 out of 5.

2. A lack of data skills remains a major weakness for not-for-profits.

Skills is the weakest area for not-for-profits. The range of skills, knowledge and experience around data and analytics, and the types of roles and responsibilities are many and varied. A major obstacle is people not knowing what skills and capabilities they need, nor where they can access trustworthy advice and support.

3. Not-for-profit leaders aren't making data-informed decisions.

While almost all organisations say their leadership think data is important, just 6% think leaders actually prioritise data as a vital resource and understand how to use it. Organisations have lots of data, but only 2% feel their leadership are actually using that data to make data-informed decision. This could be due to a lack of data skills in leadership teams – many (53%) say that there is no one with data analytics expertise within their leadership. It may also be due to barriers accessing meaningful insights from disparate data sources.

4. Not-for-profits would gain more from focusing on their culture, rather than tools.

Our research has repeatedly found that all seven key themes have a positive correlation with an organisation's data maturity. But, some relationships are stronger than others. The strongest and most significant correlations all involve the culture of an organisation – issues around behaviours, policies and practices, relating to team approach, self-questioning, openness and protection. The weakest correlations all involve tools. So, while databases and relationship management systems are

important for holding data, organisations that really want to advance their data maturity would do well to focus on their culture first.

5. Data maturity takes time and effort, but the rewards are worth it.

Staff spend a lot of time working with data, whatever the data maturity of the organisation, suggesting the hidden cost of data is high for all organisations. Organisations that are less data mature, however, see very little reward for all this time and effort. As data maturity advances, organisations do invest more time in data, but proportionally, the rewards and benefits grow at a much faster rate. For example, compared to an organisation at 'Learning' stage, a 'Developing' organisation increases its average time spent on data by 7%, but increases its ability to use data to evidence the need and problems they are addressing by almost 30%.

6. Data maturity isn't...and it is... about the money.

Organisations with greater income are not inherently more data mature than those with lower incomes. However, those that invest in data related resources i.e. people, skills, training, and tools, are more advanced.

7. Organisations aren't taking advantage of digital tools to make data work for their cause.

Much was made of the need to digitise during the pandemic but, while some gains have been made, in many cases there hasn't been as much progress as you might think. A lot of data is still on paper (40% collect data on paper moderately or extensively - 14% less than in 2020, but still a high proportion). When it comes to tools for analysing and reporting data, spreadsheets still dominate, but databases and CRMs are fairly common (60%). Business intelligence tools are used by 30%, and 20% are using more advanced and specialist data science tools (up from 15% in 2020).

6.2 Reflections

Since this is the second report of its kind, and the results validate the findings from 2020, we can be more confident about how authoritatively the results describe the reality of data maturity in the not-for-profit sector.

The number of validated users is still small, though cumulatively our dataset now exceeds 500 organisations since the launch of the assessment tool in October 2019.

The results illustrate the range of different stages of data maturity across the sector. There are a few pioneers at the forefront, edging into 'Mastering'. Most are still 'Learning' and an encouraging proportion, over a third, are at the more advanced 'Developing' stage. Around one in ten are lagging in the 'Emerging' stage.

Perhaps the most important finding is that the sector is already investing so much of its precious resource (people time) in data with such differing degrees of reward and benefit. For the first time we've been able to illustrate how few the rewards for low data maturity organisations and how great they are for those with higher data maturity.

Skills remain the biggest weakness. The lack of data skills in the sector has been known for almost a decade ([Marsh Skills and Leadership Review 2013](#)). Given the revolutionary advances in digital data and analytics since then, it is unsurprising there's still so much work to be done to catch up. What's perhaps most challenging is the diversity of skills needed: collectors, curators, organisers, cleaners, analysts, communicators, thinkers, challengers, protectors, sharers, ethicists, technologists, visionaries, realists... organisations need them all. The [ODI data skills framework](#) is an interesting context around which to consider the evolving jobs market in the sector.

We will continue to monitor, with interest, the change over time particularly in relation to confidence, practices, changing behaviours and the extent of rewards and benefits, i.e. the shift from 'somewhat agree' to 'strongly agree', from 'moderately' to 'extensively', and from 'occasionally' to 'regularly'.

As you would expect of an organisation specialising in data, the findings, feedback from users, and experience of producing the analysis have influenced a range of changes and improvements. These include our: tool design, theoretical model, data model, validation processes and analytical approaches. In doing so we continue our own cycle of learning and improvement.

Overarchingly, we see this research as another step in evidencing the 'problem space' and support needs of the not-for-profit sector in relation to data. We are delighted to be part of a diverse and growing network of peers and partners both in the UK and internationally with a shared interest in building the data capabilities of the sector.

6.3 What needs to happen now?

Our message to policy makers and decision makers interested in strengthening the not-for-profit sector is to invest in building knowledge and skills around data. For organisations involved in educating and skilling people for the future, we encourage you to develop courses and pathways into the not-for-profit sector for the [whole plethora of growing skills roles](#). We particularly encourage those supporting the development of leadership skills to embrace data as a core resource and responsibility in running any organisation.

For not-for-profit sector organisations we encourage you to undertake a Data Maturity Assessment (or a repeat Data Maturity Assessment) as a way of enabling staff to learn about data and catalysing action to improve.

We at Data Orchard are encouraged to be part of a [growing number of support providers](#) helping not-for-profits get better with data. Collaboration is one of our core values and so we've been delighted the [Data Maturity Assessment tool has been of value to other specialists and consultants](#) working in this space. Our growing [community of not-for-profit sector data people](#) is one way we can enable more people to learn and support each other.

Meanwhile sector infrastructure organisations and networks have a broader role in promoting and leading data maturity for their memberships. We see [cohort approaches to advancing data maturity](#)

are already showing benefits and the potential to expand these further will be a great opportunity for scaling and accelerating progress.

6.4 Achievements over the last year

We published our first state of the sector Data Maturity report in 2021 (based on the initial data generated in 2019 and 2020). Since then, we've continued to invest time and resources in maintenance and improvements with a focus on making the Data Maturity Assessment tool financially sustainable.

Some of our achievements since our first report have been:

- Creation of the Data Maturity Hub with a range of [educational tools and resources](#), case studies and stories about real-life journeys and rewards of data maturity in the sector.
- Widespread promotion of the tool via events, blogs, and social media to raise awareness about data maturity among leaders, networks, support providers and infrastructure organisations working to build the data capabilities of the not-for-profit sector.
- Creation of the resource pack with everything an organisation needs to engage and communicate with staff when undertaking an organisation data maturity assessment.
- Investment in advanced and customised reporting, repeat assessment and cohort assessment products to enable data maturity to be assessed over time and at scale.
- Publication in January 2022 of a new version of the Data Maturity Framework (v2.1).
- Publication of our 2022 Data Maturity Assessment Impact Report, and this, our second State of the Sector Data Maturity Report for data collected in 2021.
- More in-depth analysis to explore questions and hypotheses following the first research.

6.5 Plans for next year

Our primary focus will be to continue to ensure the financial sustainability and quality of the assessment tool:

- User test new features for customised results dashboards.
- Develop and user test advanced benchmarking features.
- Produce another State of the Sector Data Maturity Report for data collected in 2022.
- Engage more people and organisations in researching and knowledge sharing around data maturity.

6.6 How you can contribute to next year's results

We would encourage all readers of this report to give feedback, ask questions and get involved in discussions. In addition:

For people working in not-for-profit organisations:

- If you haven't already done so, do [take the Data Maturity Assessment](#). It's available in free and premium versions.
- Share this report and encourage other organisations in the sector to take the assessment too.

For consultants, volunteers, agencies and partners supporting the not-for-profit sector:

- Please feel free to use and share the free Data Maturity Assessment tool with your clients.
- [Get in touch if you'd like to discuss partnering for discounted pricing](#) on the premium version for individual assessments, repeat assessments, and/or cohort assessments.

For infrastructure organisations, networks and membership groups:

- Please share this report and the Data Maturity Assessment tool with your members and networks.
- [Get in touch to discuss conducting a data maturity assessment at scale](#) for a specific geography, sub-sector or group of organisations.

ANNEX 1: DETAILED ANALYSIS BY KEY THEME

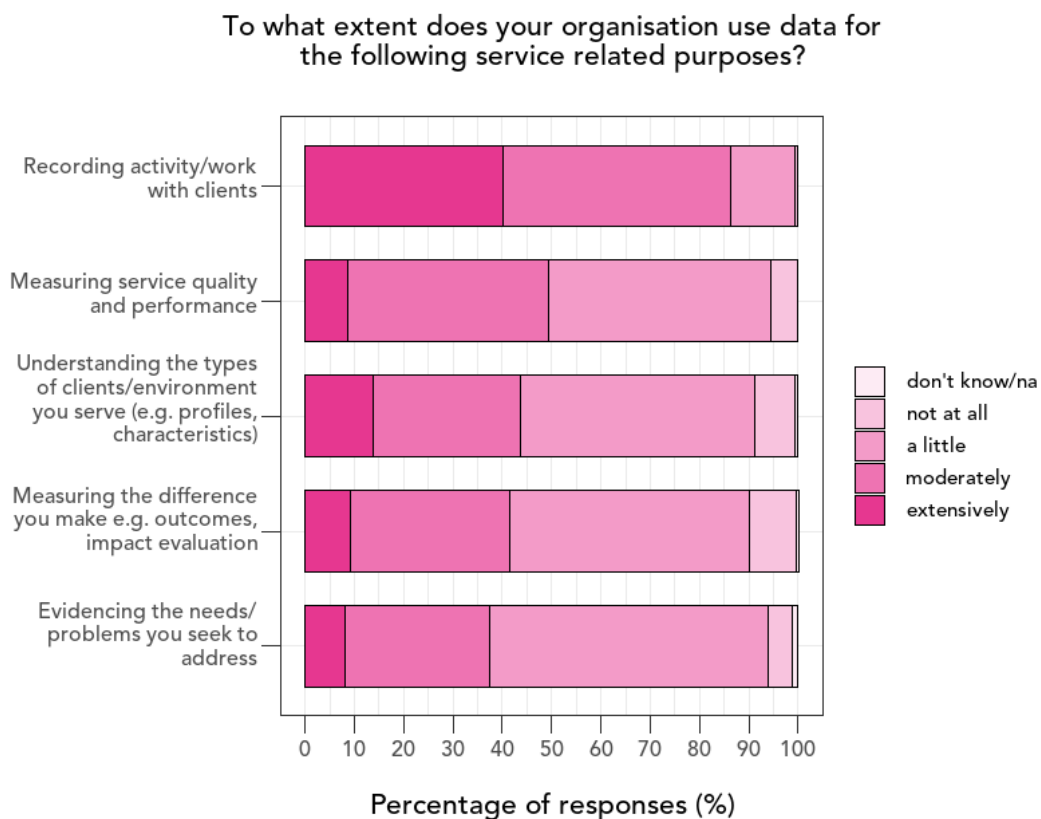
This annex provides a more detailed analysis of organisational data maturity with a focus on each of the seven key themes: Uses, Data, Analysis, Leadership, Culture, Tools and Skills. The analysis here is based on organisational level results (i.e. results from multiple respondents from the same organisation have been combined to provide a single organisation result). We have also included results for those organisations that have completed the ‘taster’ version of the assessment which is why some questions analysed here have higher number of organisations than others.

USES

Use of data in relation to services

The biggest use of data in relation to services is in capturing and recording what organisations do with clients (86% moderately or extensively). Around half are using data for measuring service quality and performance (49% moderately or extensively).

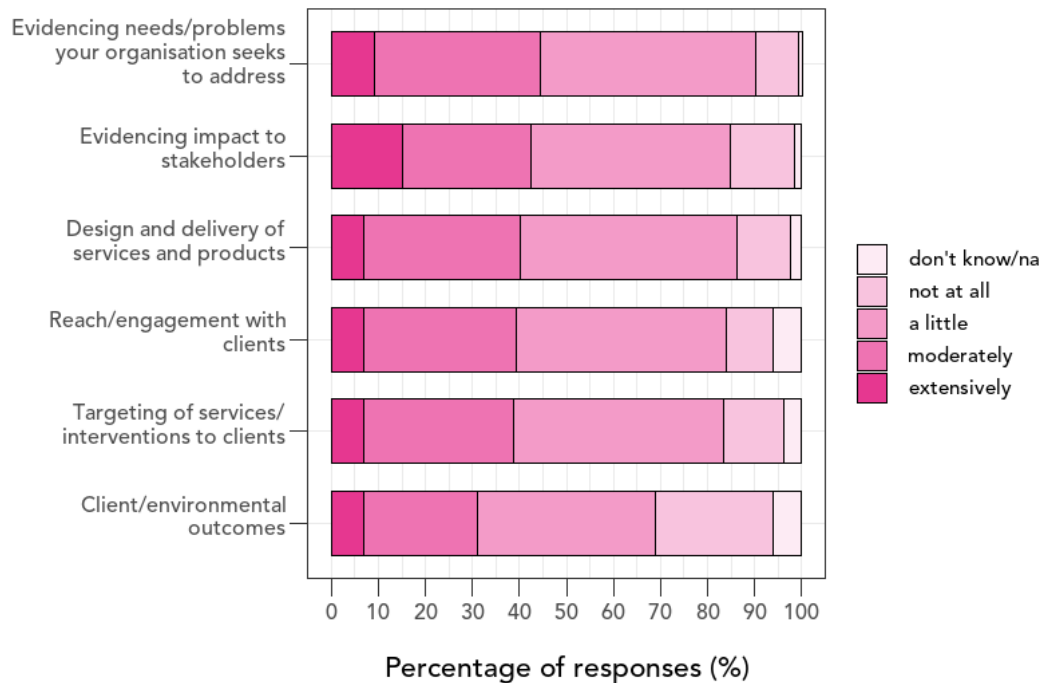
Overall organisations are less likely to use data for the more challenging areas like measuring the difference they make e.g. outcomes and impact evaluation (31% moderately or extensively), and evidencing the needs or problems they seek to address (37% moderately or extensively).



In relation to the benefits, less than half are reaping even moderate rewards. Interestingly, organisations report they are strongest in evidencing the needs/problems their organisation seeks to address (44% moderately or extensively), and evidencing impact to stakeholders (43% moderately or

extensively). Around 30-40% report at least moderate benefits in: targeting services/interventions to clients (38.6%), design and delivery of products and services (40%) and lastly influencing client outcomes (31%) (or environmental ones if they serve habitats rather than people).

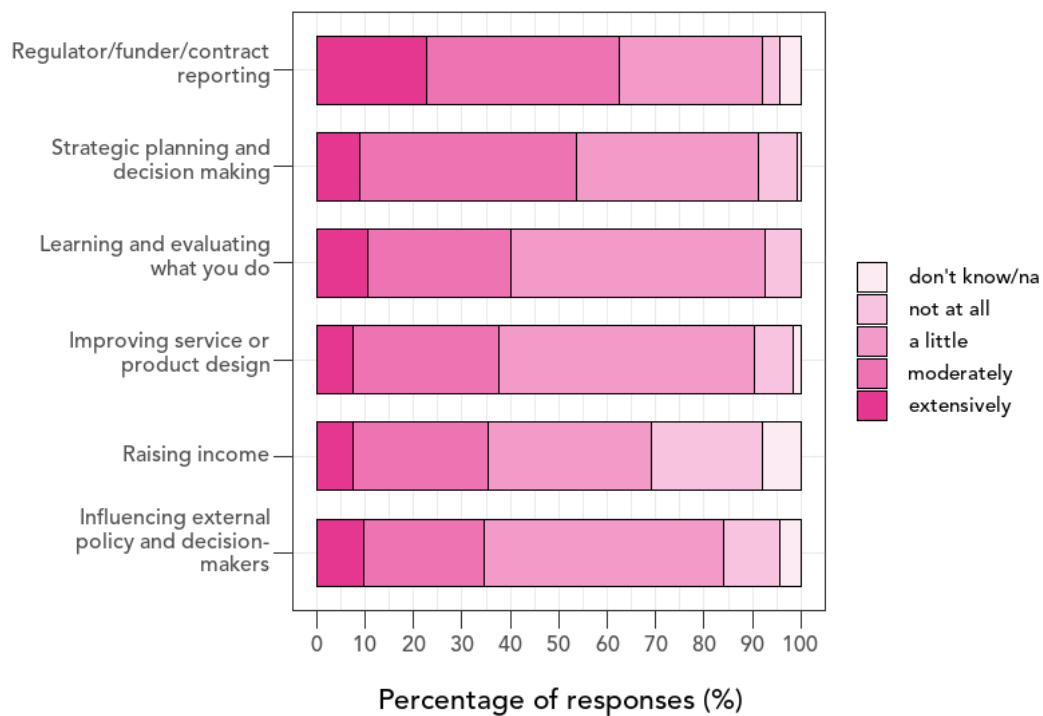
To what extent has your organisation's use of data and analysis influenced the following in relation to your services?



Use of data for running and driving the organisation

Data is used most for regulator, funder, and contract reporting. 63% say they do this moderately or extensively. Focusing on moderate to extensive use: just over half (54%) say they use data for strategic decision making and planning and 40% say they use it for learning and evaluating what the organisation does. 38% use it for improving service or product design. The least common purposes for using data, both 35%, are for raising income and for influencing external policy and decision makers.

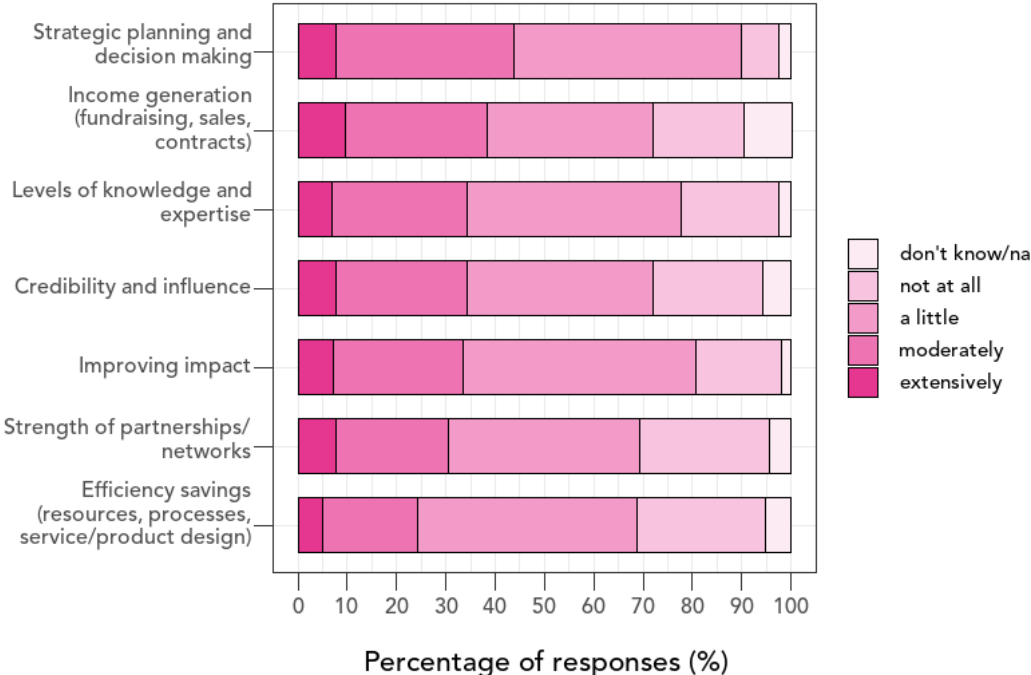
To what extent does the organisation use data for the following purposes?



The findings suggest many of the rewards of data and analytics have yet to be reaped. Compliance (in relation to regulators/funders and contracts) is the top purpose for using data (63% say they use data for this purpose moderately or extensively). Less than half of organisations see even moderate benefits for other purposes. 44% see moderate or extensive benefits of data and analytics influencing internal strategic planning and decision making capabilities; and 38% see benefits for income generation.

Around one in three are seeing moderate benefits in levels of knowledge and expertise, credibility and influence, improving impact, and strengthening partnerships/networks. Notably in all cases it's more 'moderate' than 'extensive' with only around 7% seeing any extensive influence. Efficiency savings (resources, processes, service and product design) is the area where fewest report any influence of data and analytics (24% moderately or extensively).

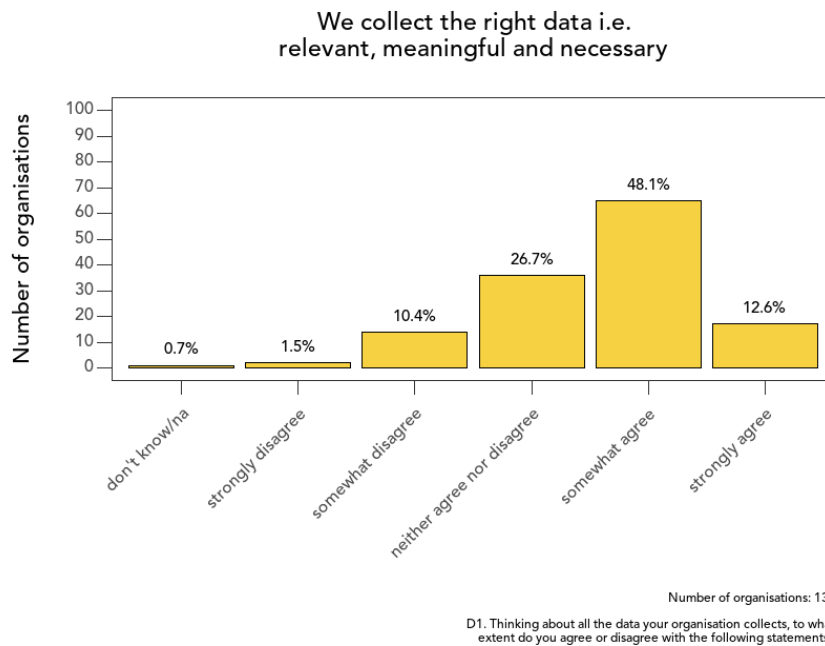
To what extent has your organisation's use of data and analysis influenced the following in relation to your internal capabilities?



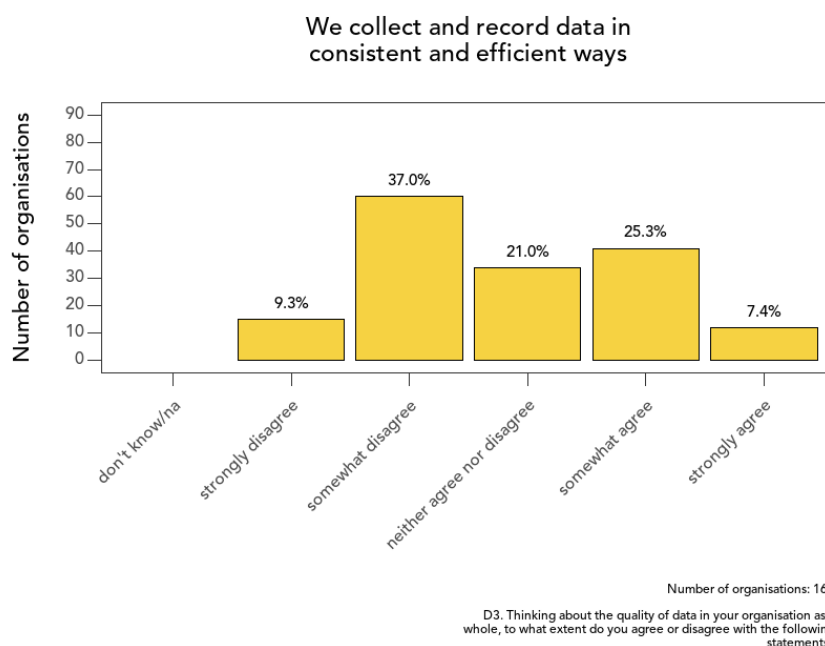
DATA

Collection

Less than two thirds say their organisation collects the right data i.e. data that is relevant, meaningful and necessary (48% somewhat agree, 13% strongly agree).

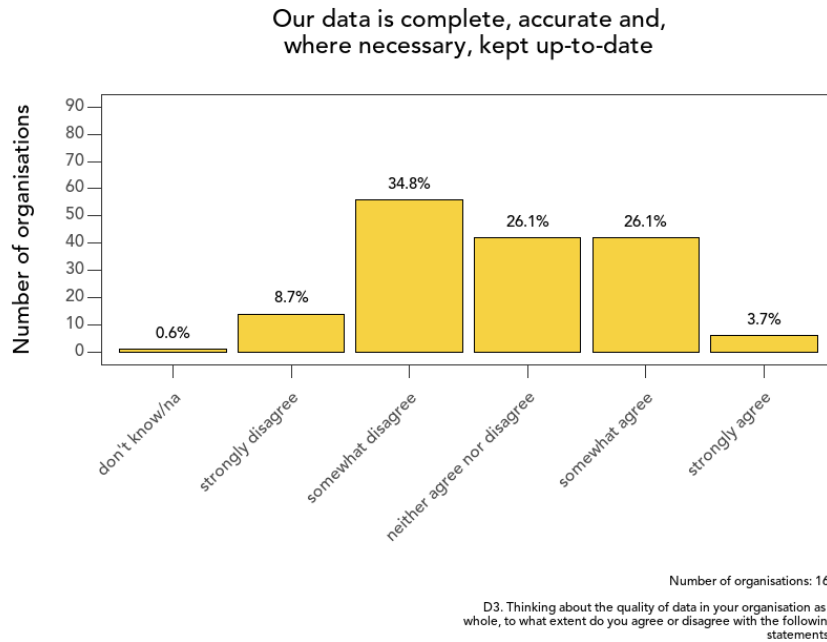


33% say they collect and record data in consistent and efficient ways (25% somewhat agree, 7% strongly agree). Almost half (46%) don't collect data in consistent and efficient ways.

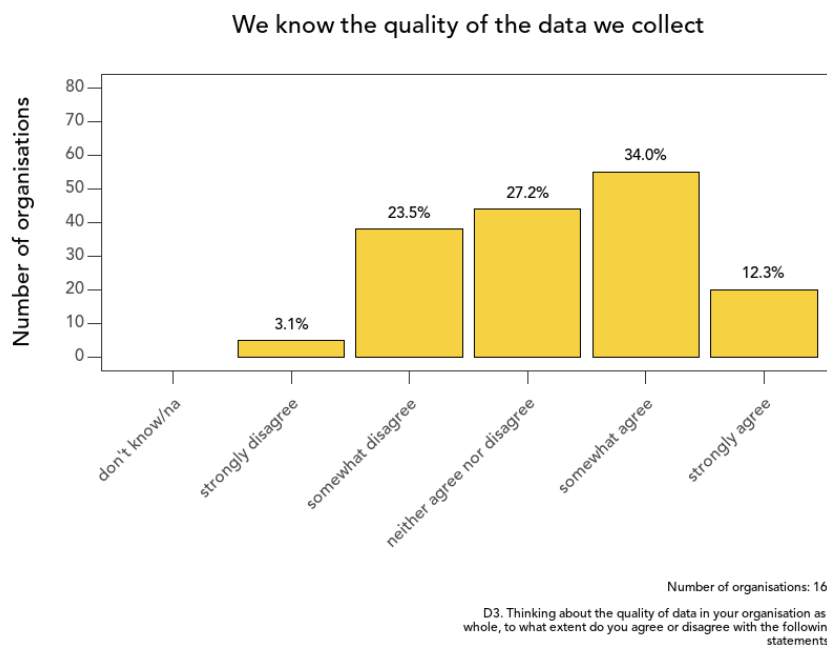


Quality

When it comes to data quality there's a very mixed picture. More tend to disagree than agree with the statement 'Our data is complete, accurate, and where necessary kept-up-to-date', 44% and 30% respectively.

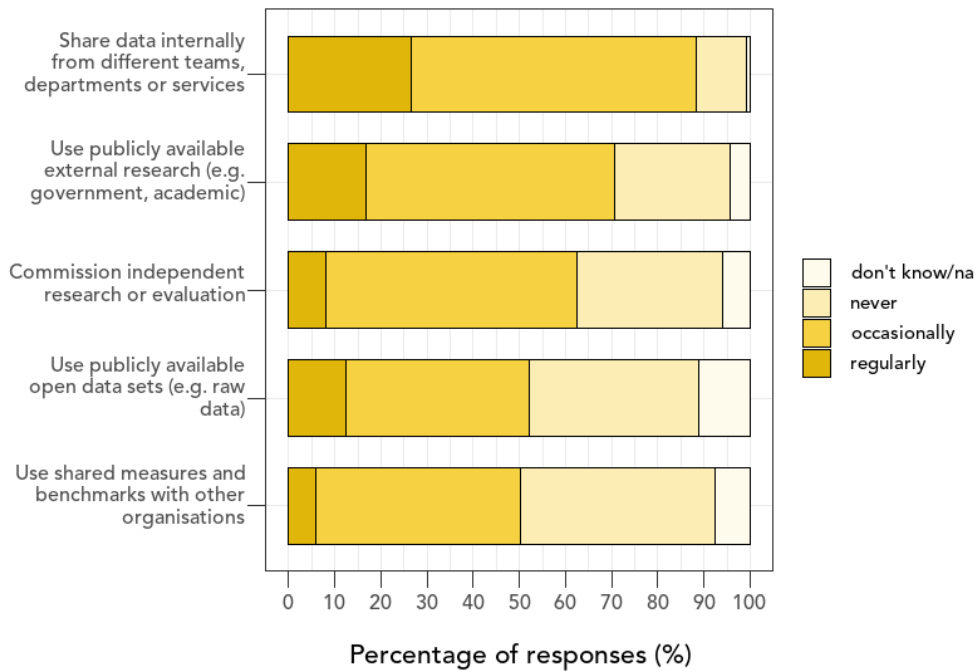


Less than half say they know the quality of the data they collect (34% somewhat agree, 12% strongly agree).



Sources

Thinking about sources of data, how often does your organisation do the following?

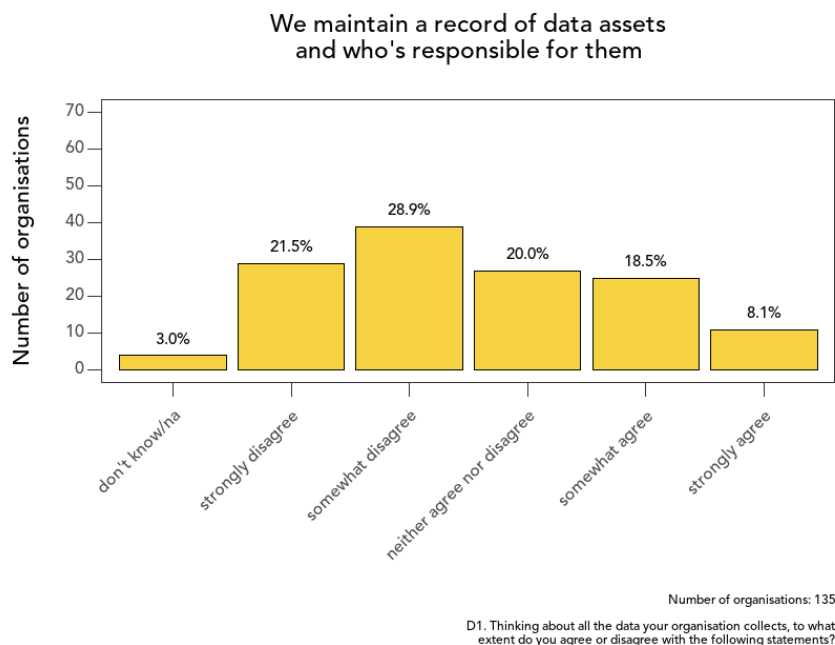


- 88% say they share data from different teams, departments, or services (27% regularly, 62% occasionally).
- 70% use publicly available external research e.g. government or academic (17% regularly, 54% occasionally).
- 63% commission independent research and evaluation (8% regularly, 54% occasionally).
- 52% say they use publicly available open data sets e.g. raw data (13% regularly, 40% occasionally).
- 50% say they use shared measures and benchmarks with other organisations (6% regularly and 44% occasionally).

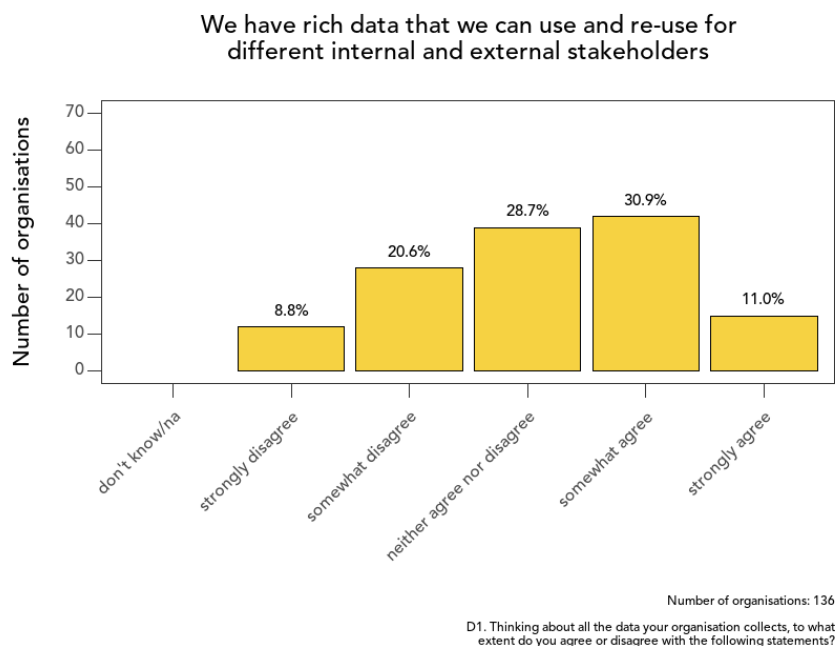
Overall, it should be noted, these practices tend to be more 'occasional' than 'regular'.

Assets

Half say they don't maintain a record of data assets and who's responsible for them (29% somewhat disagree, 22% strongly disagree). Just over a quarter say they do (19% somewhat agree, 8% strongly agree). One in five are ambivalent on this question.



Meanwhile less than half say they have versatile data, i.e. rich data that can be used and reused for different internal and external stakeholders (31% somewhat agree, 11% strongly agree).

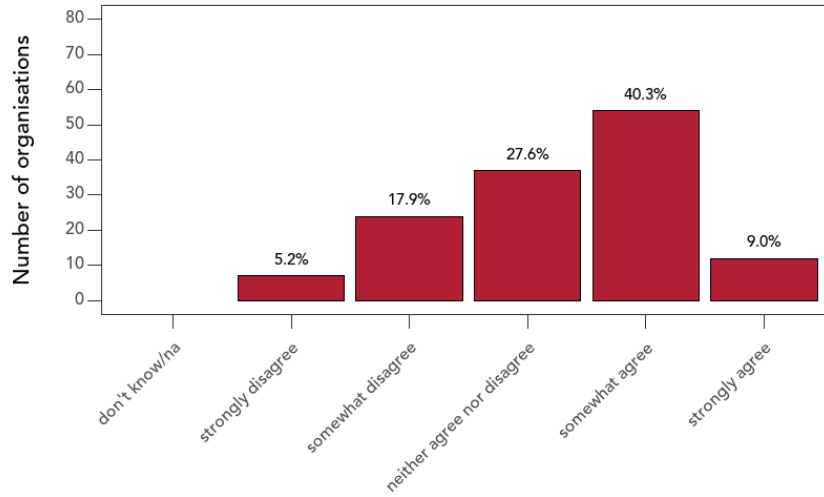


ANALYSIS

Type

Around half say they analyse data in meaningful and useful ways (9% strongly agree, 40% somewhat agree).

We analyse data in meaningful and useful ways

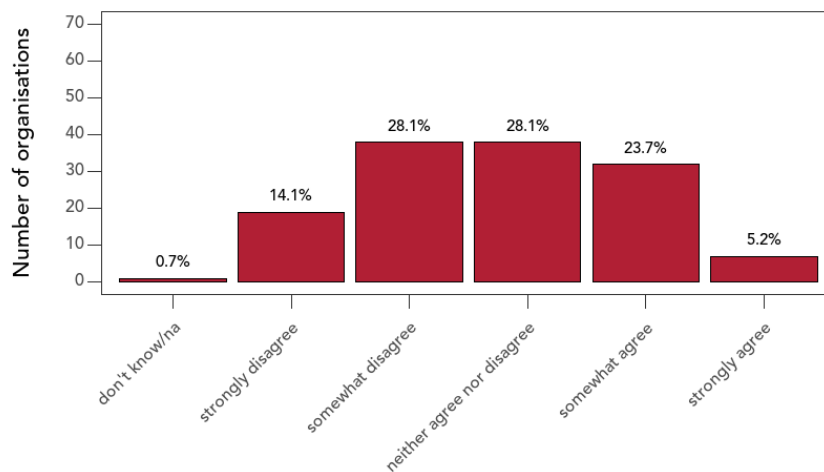


Number of organisations: 134

A1. Thinking about data analytics in your organisation, to what extent do you agree or disagree with the following statements?

31% say they use data to explore or test assumptions about the difference they make (3% strongly agree, 28% somewhat agree). 29% say they run pilots or trials to explore how best to act in the future (5% strongly agree and 24% somewhat agree).

We run pilots and/or trials to explore how best to act in future



Number of organisations: 135

A1. Thinking about data analytics in your organisation, to what extent do you agree or disagree with the following statements?

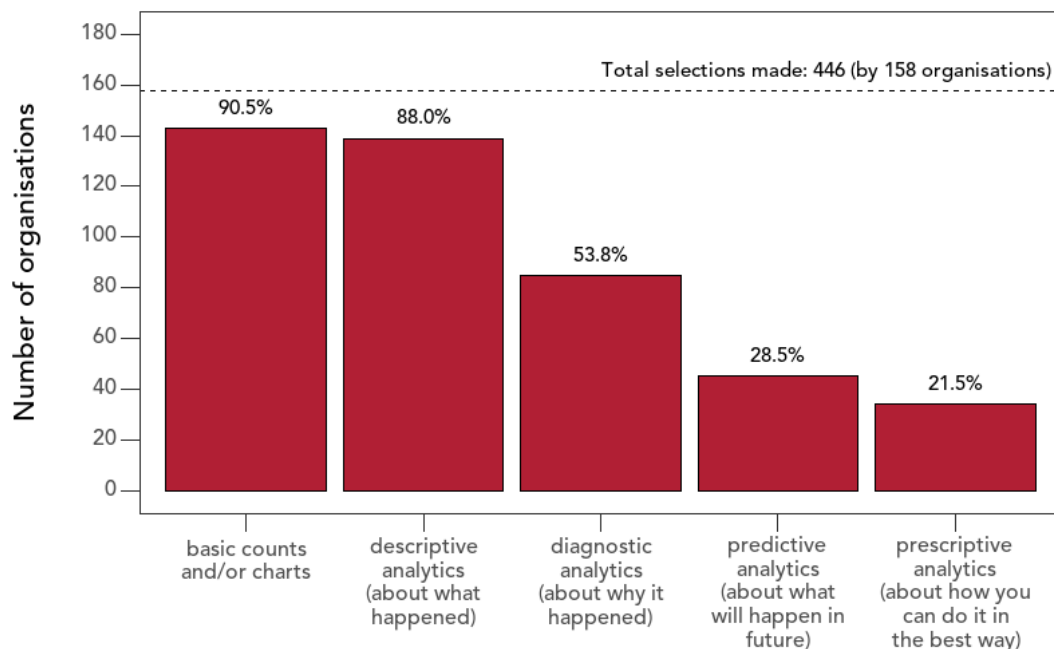
Technique

The findings suggest there's a lot of counting (91%) and analysis based on historic descriptive data (88%). There's much less of the deeper thinking about causes, patterns, exploring differences and correlations (54%). In particular, some of the more advanced predictive and prescriptive types of data analytics are being used by a smaller proportion of organisations (29% and 22% respectively).

Predictive analytics is about what will happen in the future. Examples of this include forecasting, modelling trends, behaviour patterns, and machine learning. Anecdotally, our experience also shows that cash-flow forecasting is the first (and most common) type of predictive analytics used which may account for some of the 29% reporting on this.

Prescriptive analytics is about how you can do things in the best way e.g. optimisation, recommending decisions for the most effective intervention/action, experimental design, simulation, and artificial intelligence. Around one in five organisations say they are doing this type of analysis.

Which of these types of data analytics are used in your organisation?

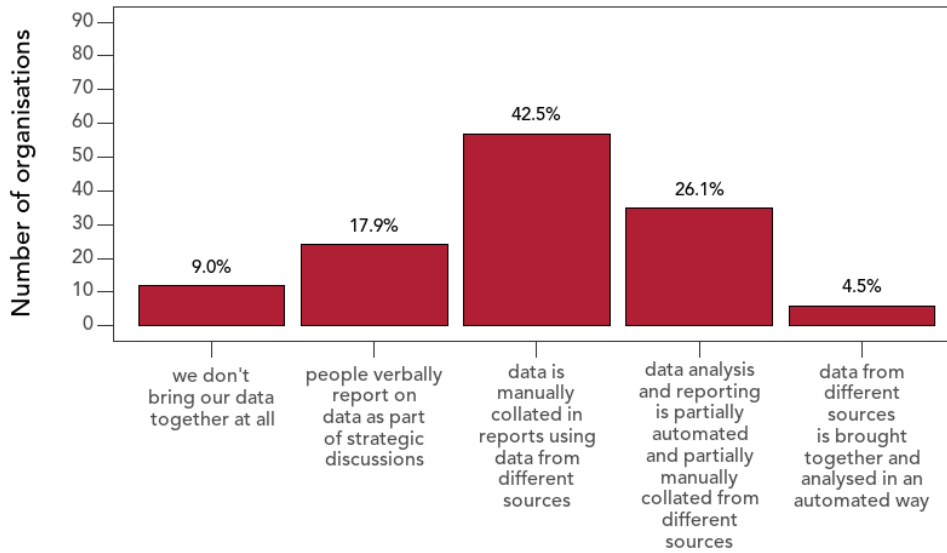


Number of organisations: 158
Number of selections made: 446

Joining

One in 20 organisations brings data together in an automated way to provide a strategic overview. One in ten say they don't bring their data together at all. Most commonly data is manually collated in reports using data from different sources (43%) or approached in a partially manual/ partially automated way (26%).

Which of these best describes how your organisation brings data together to provide a strategic overview?

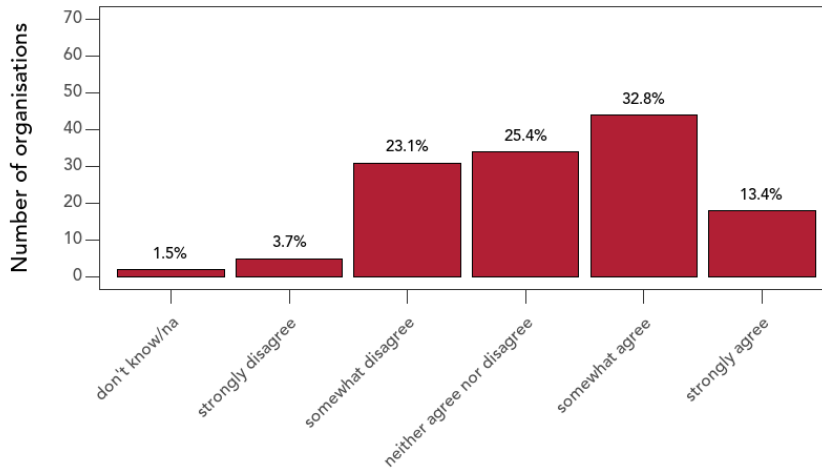


All organisations
Number of organisations: 134

Presenting

Just under half say they present and communicate data in accessible ways to different audiences (13% strongly agree, 23% somewhat agree).

We present/communicate data in accessible ways to different audiences (e.g. charts, graphics, visualisation)



Number of organisations: 134

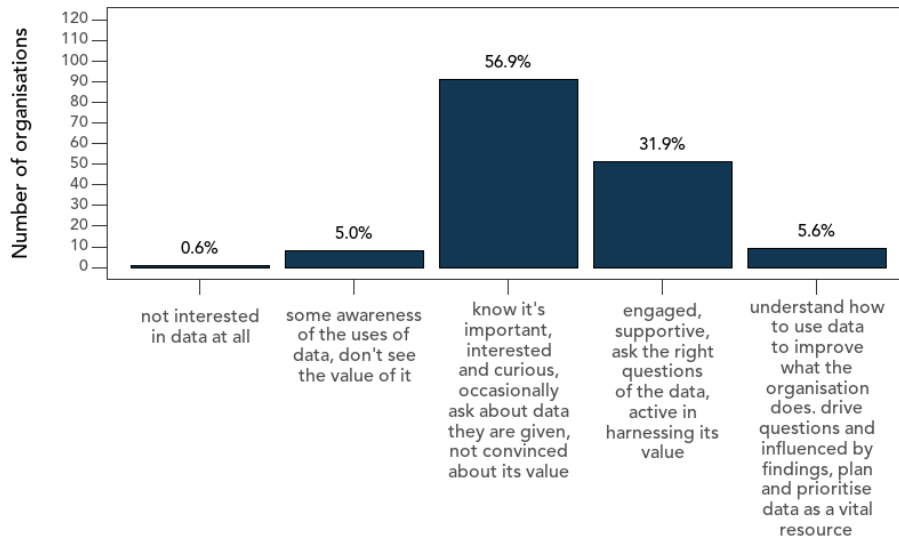
A1. Thinking about data analytics in your organisation, to what extent do you agree or disagree with the following statements?

LEADERSHIP

Attitudes

In 63% of the organisations respondents say the leadership is not convinced about the value of data. Just under a third say the leadership attitude is engaged and supportive, they ask the right questions of the data and are active in harnessing its value. 6% prioritise data as a vital resource and understand how to use data to improve what the organisation does.

Which of the following best describes the overall leadership attitude towards data in your organisation?

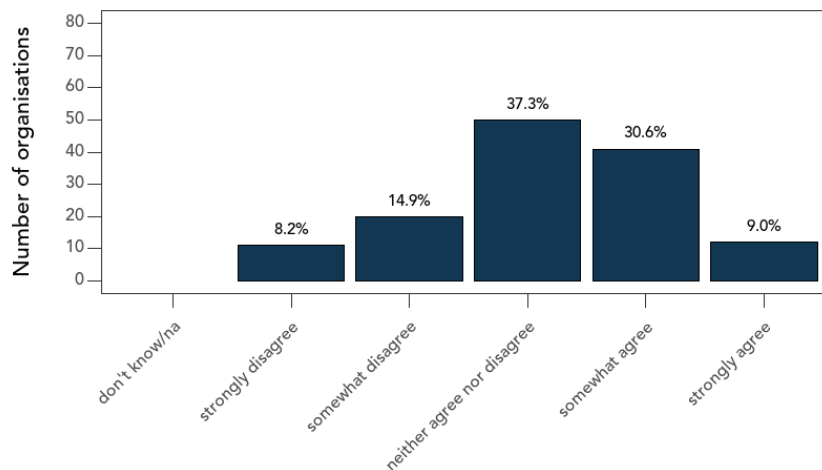


Number of organisations: 160

Plans

Two in five of the organisations have an overarching business plan with defined measurable goals (9% strongly agree, 31% somewhat agree).

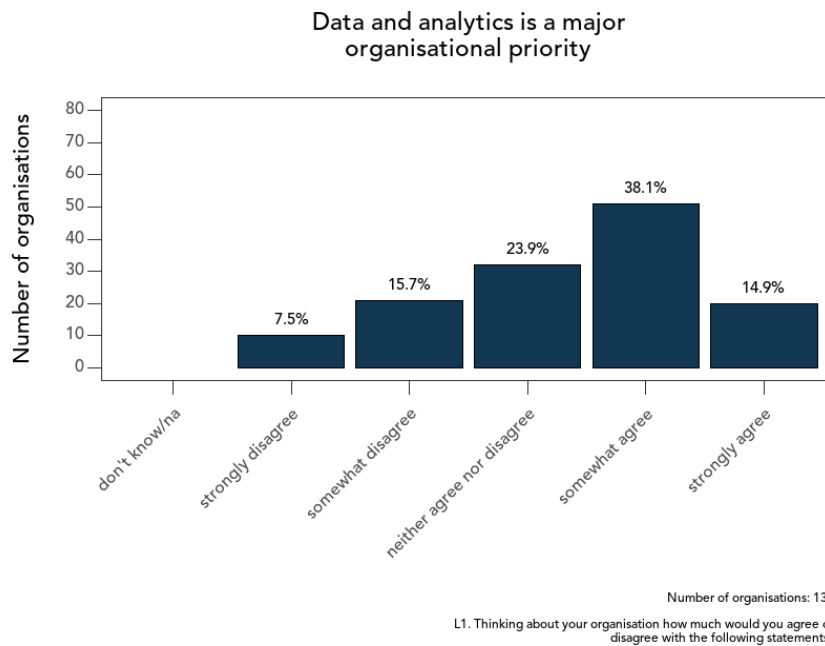
We have an overarching business plan with defined measurable goals



Number of organisations: 134

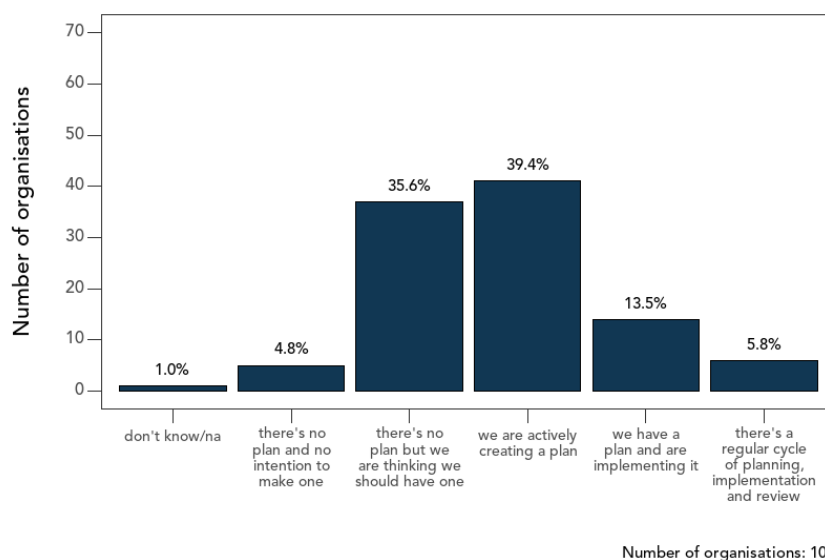
L1. Thinking about your organisation how much would you agree or disagree with the following statements?

Just over half say data and analytics is a major organisational priority (15% strongly agree, 38% somewhat agree).



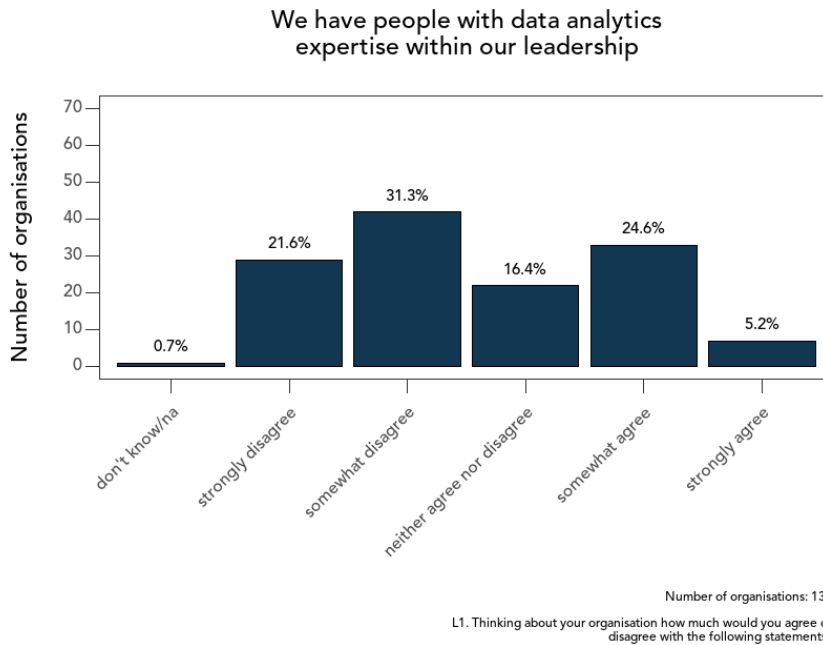
The organisations with an overarching business plan are more likely to say data and analytics was a major organisational priority than those without a plan. Of the 40% with an overarching business plan, 74% said data and analytics was a major organisational priority. Most organisations are at least 'thinking' they should have a plan for improvement in data. Only 5% says there's no plan and no intention to make one. 6% have a regular cycle of planning, implementation and review, 14% have a plan and are implementing it, 39% are actively creating a plan.

Which of these statements best describes how your organisation is planning for improvement in data?

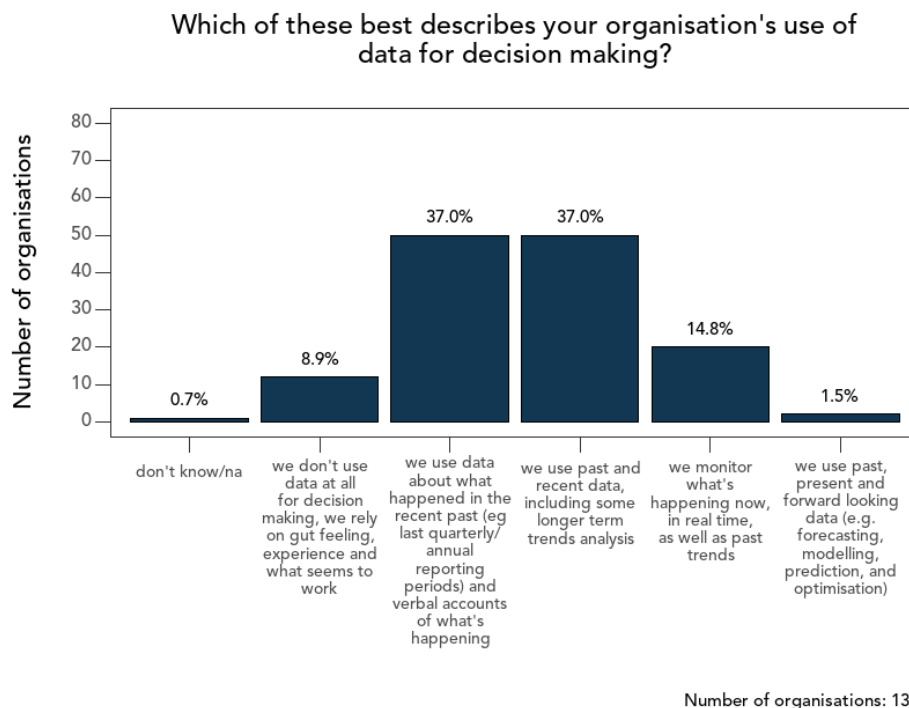


Capability

30% say they have people with data analytics expertise within their leadership (5% strongly agree, 25% somewhat agree). Over half say they don't (22% strongly disagree, 31% somewhat disagree).

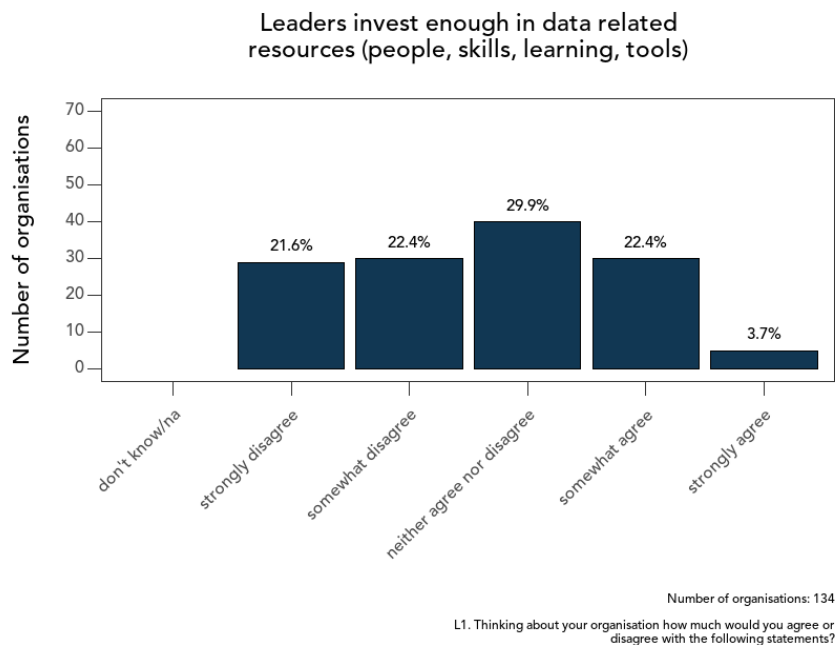


9% say they don't use data at all for decision making, and rely on gut feeling, experience and what seems to work. Meanwhile 2% use past, present and forward looking data (e.g. forecasting, modelling, prediction and optimisation) for decision making. 15% monitor what's happening now in real time as well as past trends. The majority either use data about what happened in the recent past (37%) or use past and recent data with some longer-term trends analysis (37%).



Investment

Opinions are very mixed on the issue of investment in data. 44% say leaders don't invest enough in data related resources i.e. people, skills, learning, tools. Meanwhile just over a quarter say leaders do invest enough (4% strongly agree, 22% somewhat agree).



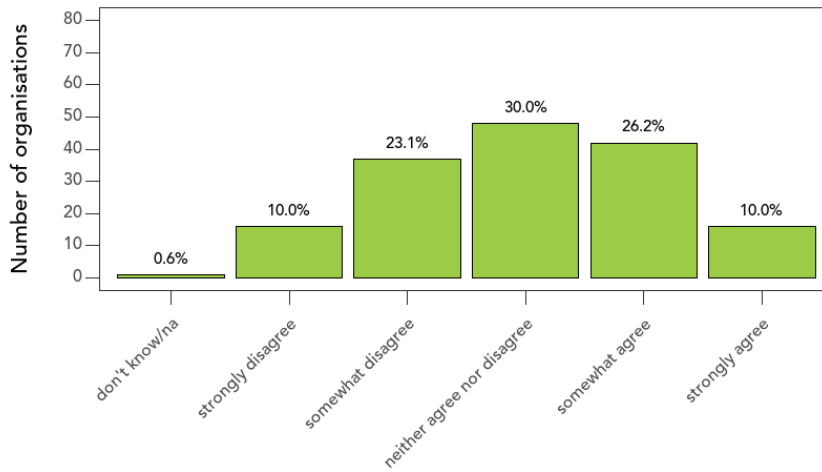
CULTURE

Team approach

41% say data is seen as a team effort, not just one person's responsibility (13% strongly agree, 28% somewhat agree). Opinions are divided on whether different teams/levels of seniority regularly discuss data and how to act on it.

Just over a third say people from different teams/levels of seniority regularly discuss data and how to act on it (10% strongly agree, 26% somewhat agree). A similar proportion disagree (10% strongly disagree, 23% somewhat disagree).

People from different teams/levels of seniority regularly discuss data and how to act on it

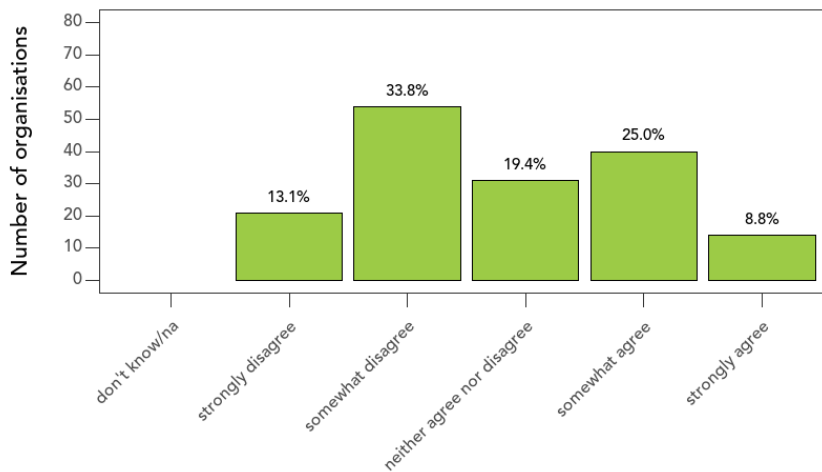


Number of organisations: 160
 C1. To what extent do you agree or disagree with the following statements about your organisation?

Self-questioning

When it comes to using data internally to ask difficult questions and challenge practices, opinions are, again, divided. 33% say their organisation is comfortable with this (9% strongly agree, 25% somewhat agree). Meanwhile just under half are not (13% strongly disagree, 34% somewhat disagree).

We're comfortable using data internally to ask difficult questions and challenge our practices



Number of organisations: 160
 C1. To what extent do you agree or disagree with the following statements about your organisation?

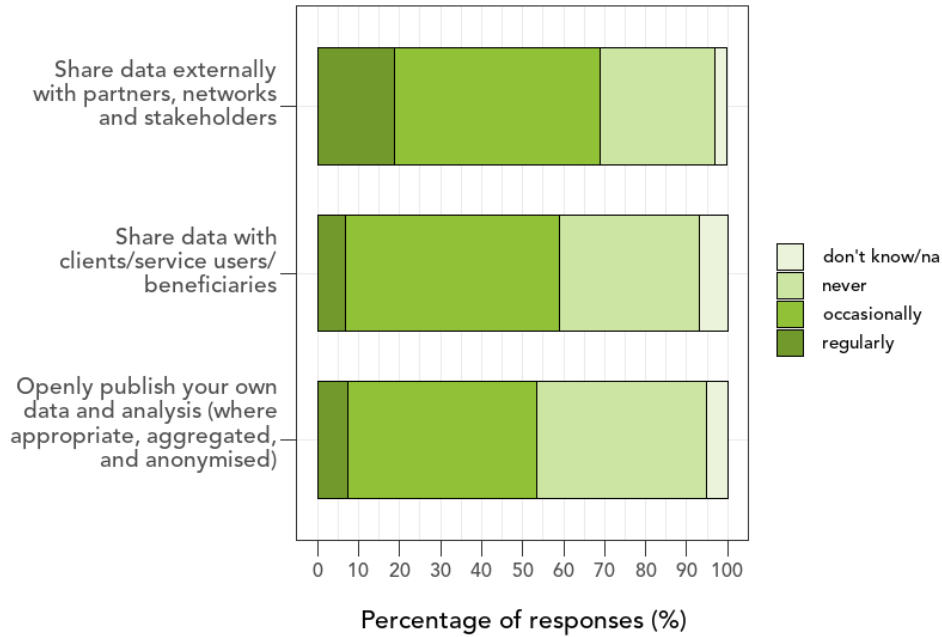
Openness

Overall, there appears to be quite a lot of data sharing occurring. Note these practices tend to be more 'occasional' than 'regular'.

- 69% share data externally with partners, networks, and stakeholders (19% regularly, 50% occasionally).

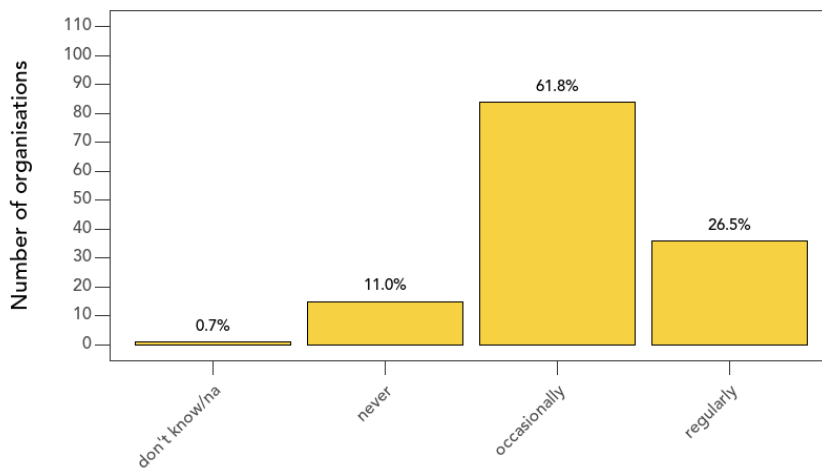
- 59% say they share data with beneficiaries (7% regularly, 52% occasionally).
- 53% openly publish their own data and analysis (8% regularly, 46% occasionally).

Thinking about openness and sharing of data, how often does your organisation do the following?



Sharing data internally from different teams, departments or services is reported to be widely practiced (27% regularly, 62% occasionally).

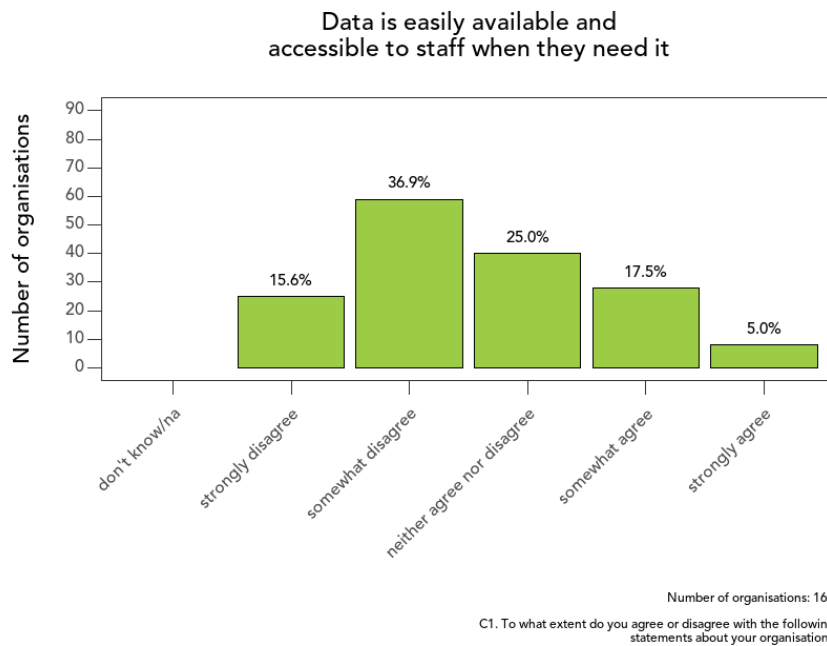
Share data internally from different teams, departments or services



Number of organisations: 136

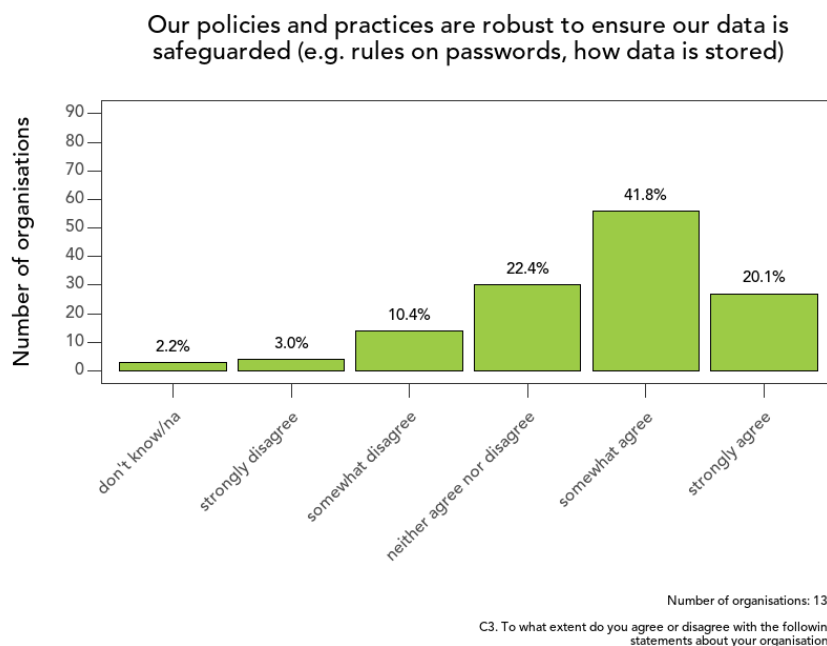
D2. Thinking about sources of data, how often does your organisation do the following?

Whilst most say they share data internally (88%), less than a quarter say data is available and accessible to staff when they need it (5% strongly agree, 18% somewhat agree). Over half say it is not available when they need it.



Protection

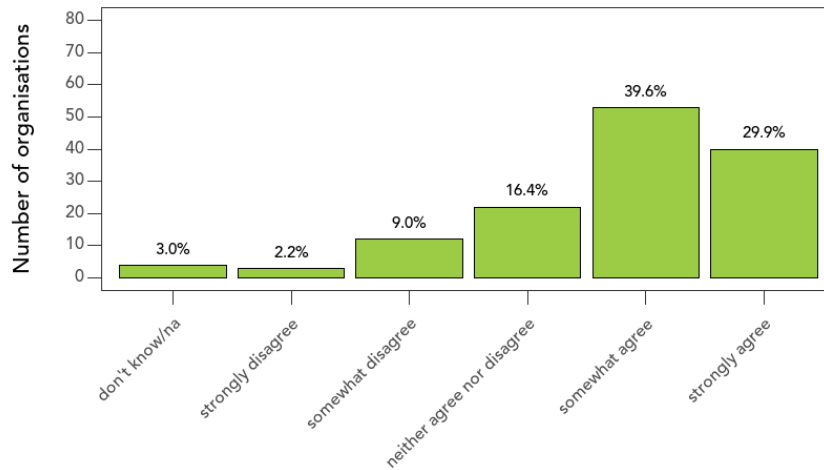
Despite the introduction of the new data protection legislation in 2018 (including GDPR), there's a mixed picture in terms of policies and practices, managing access to sensitive and personal data, and overall security. 62% say their policies and practices are robust to ensure data is safeguarded e.g. rules on passwords, how data is stored (20% strongly agree, 42% somewhat agree).



It's a mixed picture with some organisations doing better in some areas than others. Overall:

- 70% specify and manage access to sensitive and personal data.
- 59% are confident about the security of the data they hold on paper, computers and other devices.
- 43% monitor and test potential risks to improve their data security and protection.

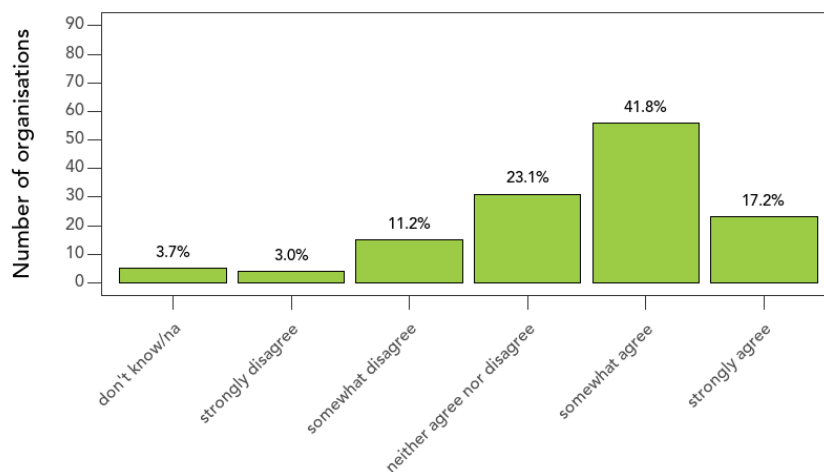
We specify and manage access to sensitive and personal data (e.g. related to job role)



Number of organisations: 134

C3. To what extent do you agree or disagree with the following statements about your organisation?

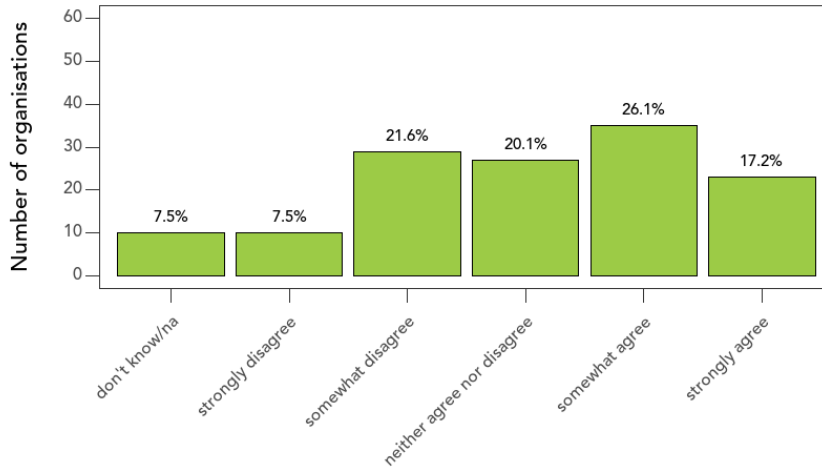
We're confident about the security of the data we hold on paper, computers and other devices



Number of organisations: 134

C3. To what extent do you agree or disagree with the following statements about your organisation?

We monitor and test potential risks to improve our data security and protection (e.g. theft, accidental loss, malicious attack)

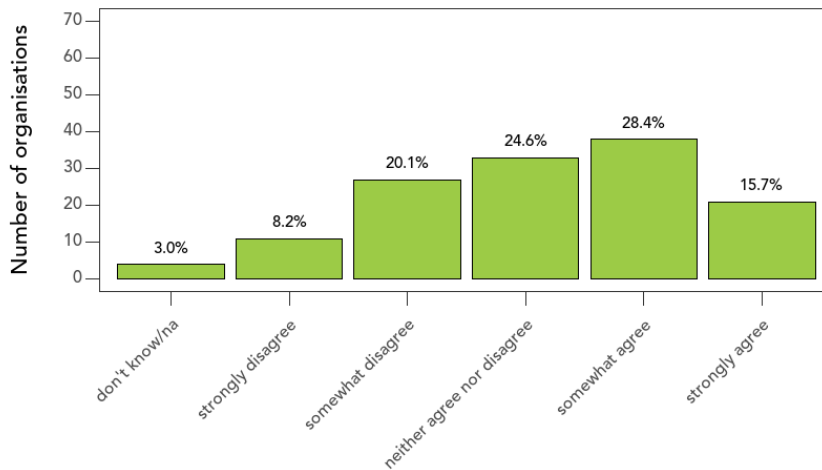


Number of organisations: 134

C3. To what extent do you agree or disagree with the following statements about your organisation?

A data management issue highlighted in the findings, relates to deleting data about identifiable individuals. Only 44% say they do this (16% strongly agree, 28% somewhat agree).

We delete data about identifiable individuals that is no longer necessary



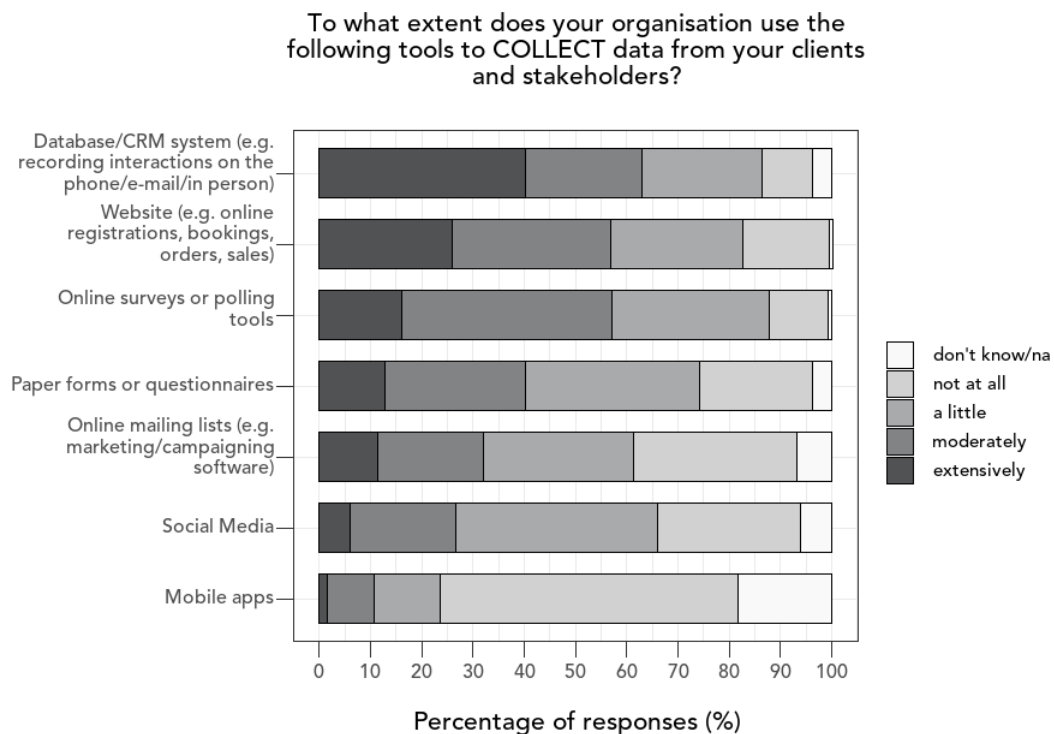
Number of organisations: 134

C3. To what extent do you agree or disagree with the following statements about your organisation?

TOOLS

Collection

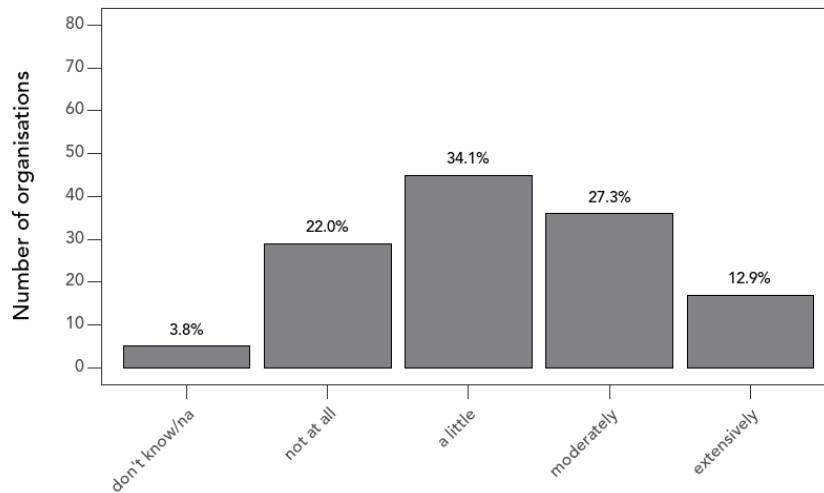
49% say their organisation has good tools for collecting data (15% strongly agree, 34% somewhat agree). Databases/CRM systems feature most strongly with almost 86% using these to some extent (23% moderately, 40% extensively). 83% collect data via websites (online registrations, bookings, orders, sales) 31% moderately and 26% extensively. 88% use online surveys/polling tools (41% moderately, 16% extensively). Paper forms or questionnaires, mailing lists and social media are also used by 60-80% though less extensively. The least used are mobile apps which are used moderately or extensively by 10%.



Of course, most organisations make use of multiple tools to collect data from clients and stakeholders, though it is interesting to explore a little more closely around the use of paper-based approaches.

40% say they collect data on paper forms or questionnaires either moderately or extensively. Given the sector works with many marginalized and vulnerable clients this may be necessary (working with older people, children and those who are digitally excluded may mean there are situations where it's just not appropriate). Most agree (74%) that where possible they collect data digitally so they don't have to re-type from paper forms and questionnaires.

Paper forms or questionnaires



Number of organisations: 132

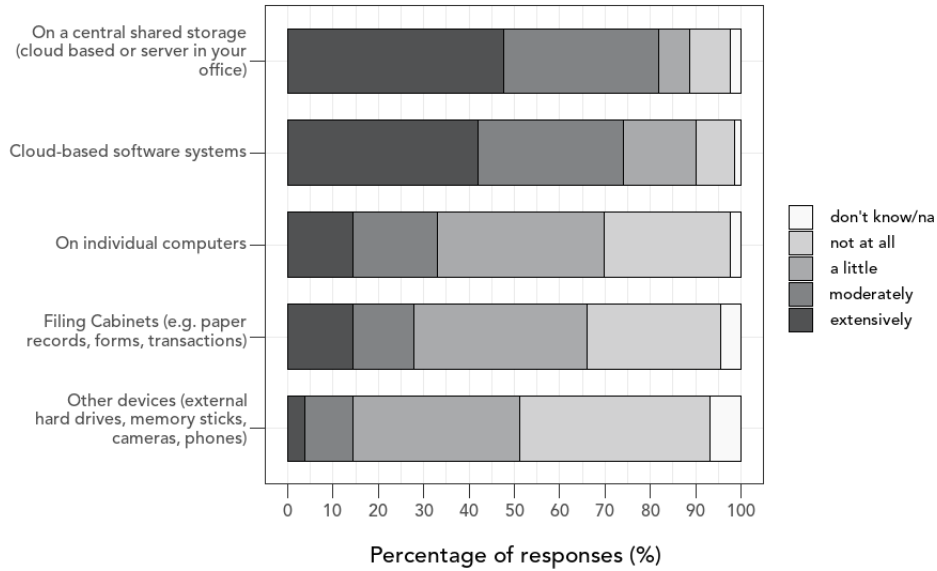
T2. To what extent does your organisation use the following tools to COLLECT data from your clients and stakeholders?

Storing

Just under half the organisations have good tools for storing and managing data (12% strongly agree, 35% somewhat agree). The majority are using centralised and cloud-based tools to physically store data, though of these probably 20-30% have not fully transitioned with some data still stored on individual computers and other devices. Around 10-20% don't appear to have adopted cloud-based tools.

62% say their files and documents are centrally and securely stored (15% strongly agree, 47% somewhat agree). Meanwhile filing cabinets remain widely used for 28% of organisations (14% extensively, 14% moderately).

To what extent does your organisation PHYSICALLY STORE data in these ways.

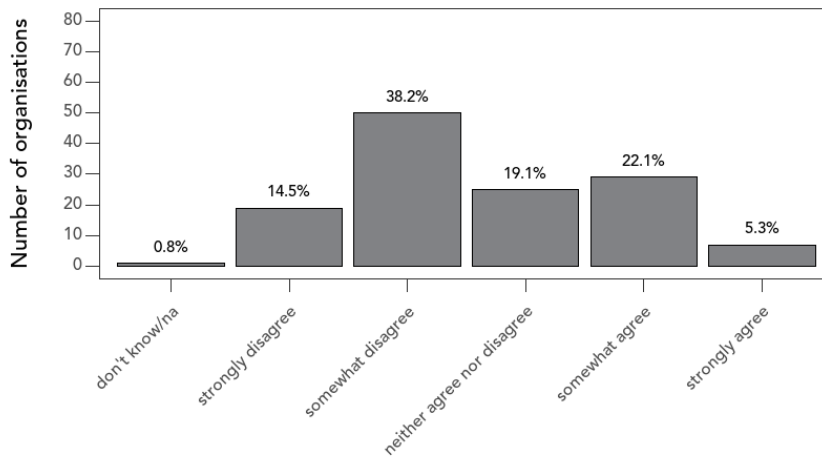


Organising and managing

Just one in three say their digital files and documents are well organised and managed (8% strongly agree, 27% somewhat agree). Allied to this, only just over a quarter say they archive old, unnecessary files and documents (5% strongly agree, 23% somewhat agree).

This aligns with the overall problem of staff being unable to easily search for and find the information they need. Only 1 in 20 confidently say they can do so in their organisation (5% strongly agree, 22% somewhat agree).

Staff find it easy to search for and find the information they need



Number of organisations: 131

T4. Thinking about all the data in the organisation (e.g. files, documents, photos, videos, and presentations etc), to what extent do you agree or disagree with the following statements?

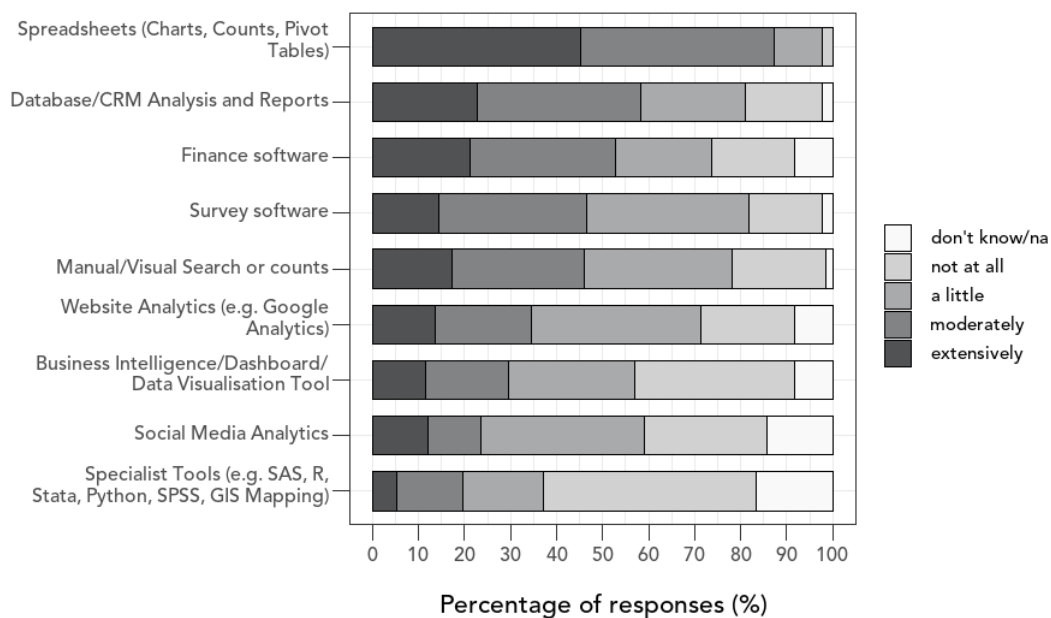
58% say they centrally manage all their tools and systems including hardware, software, licences and access (18% strongly agree and 40% somewhat agree). Half say they think about integration between tools when purchasing new products.

Analysing and reporting

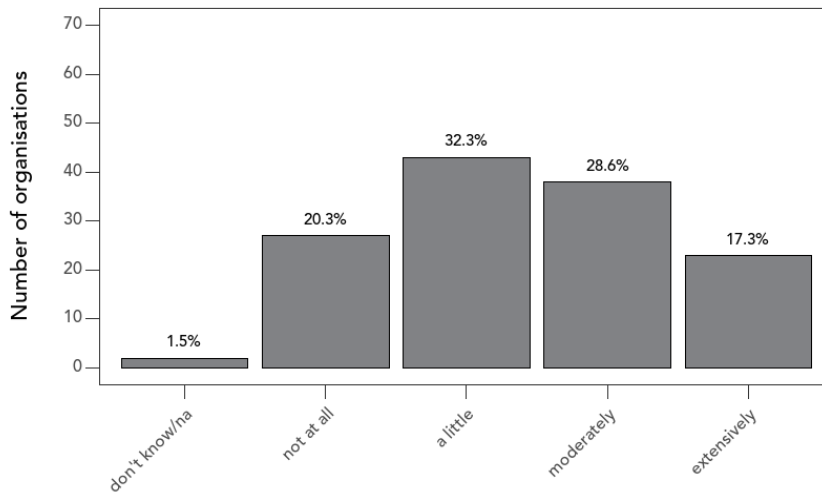
38% say they have good tools for analysing data. There are a very wide range of tools used for analysing and reporting data. Spreadsheets remain the most universal of them all (45% using them extensively for analysis and report, 42% moderately so).

Database/CRM tools and finance software and are the next most common. More advanced business intelligence tools are used to some extent by around 57% (11% extensively, 18% moderately) and specialist tools are being used by around a quarter (5% extensively, 14% moderately). Meanwhile 78% say they use manual/visual search or counts (17% extensively, 29% moderately) perhaps counting up numbers from paper-based forms ...or perhaps counting puffins?).

To what extent does your organisation use the following tools to ANALYSE and REPORT on data you collect and store?



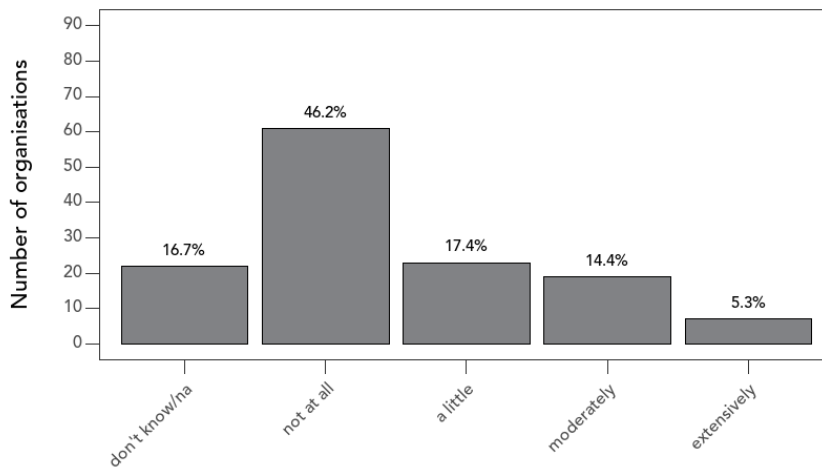
Manual/Visual Search or counts



Number of organisations: 133

T5. To what extent does your organisation use the following tools to ANALYSE and REPORT on data you collect and store?

Specialist Tools (e.g. SAS, R, Stata, Python, SPSS, GIS Mapping)

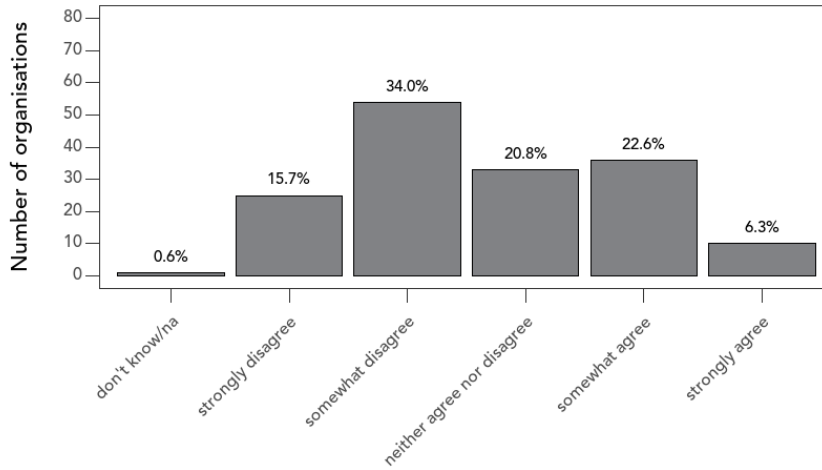


Number of organisations: 132

T5. To what extent does your organisation use the following tools to ANALYSE and REPORT on data you collect and store?

Allied to the largely manual approach to bringing data together reported in the 'Analysis' theme section, less than one in three say they have good tools for automating reporting of data (6% strongly agree, 23% somewhat agree).

We have good tools for automating reporting of data



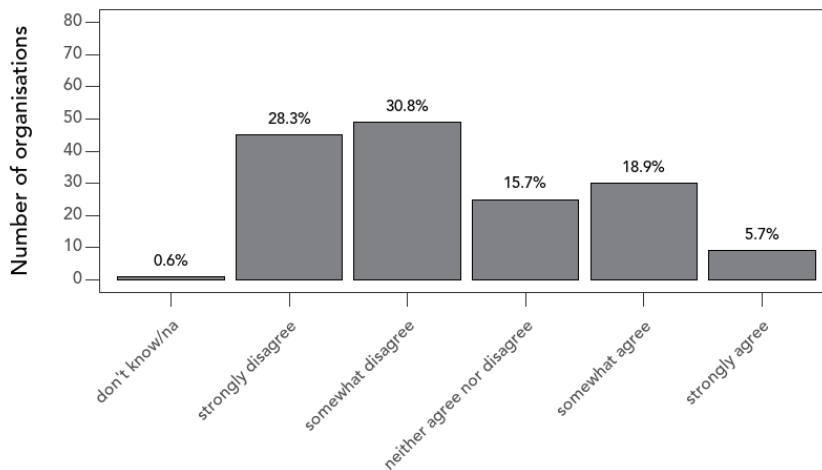
Number of organisations: 159

T1. To what extent do you agree or disagree with the following statements about your organisation?

Integration and architecture

A quarter say their organisation has good tools for joining and relating data from various sources (6% strongly agree, 19% somewhat agree). Well over half (59%) say they don't.

We have good tools for joining and relating data from various sources



Number of organisations: 159

T1. To what extent do you agree or disagree with the following statements about your organisation?

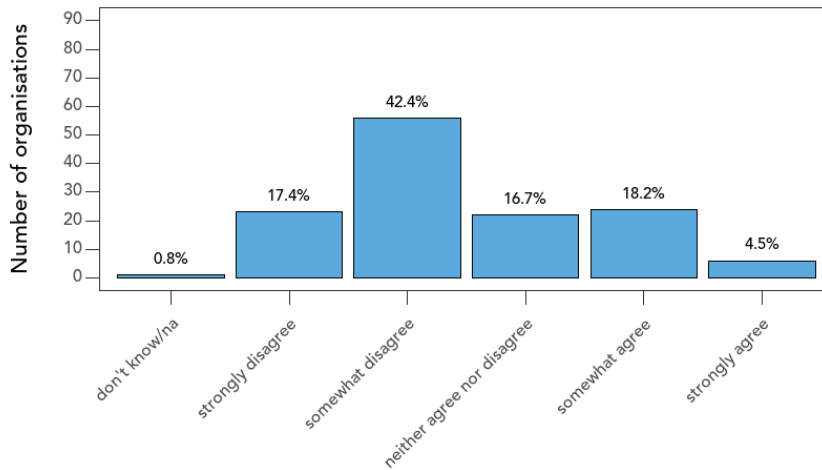
Half say they think about integration between tools when purchasing new products (14% strongly agree, 36% somewhat agree).

SKILLS

Capacity

Less than a quarter of organisations say they have appropriate numbers of staff managing and developing their data capabilities (5% strongly agree, 18% somewhat agree). Considerably more (60%) disagree (17% strongly disagree, 42% somewhat disagree).

We have appropriate numbers of staff managing and developing our data capabilities



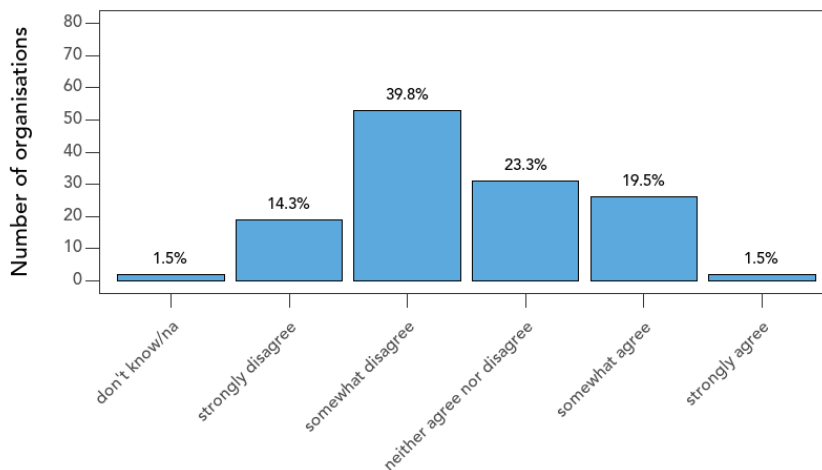
Number of organisations: 132

S1. To what extent do you agree or disagree with the following statements about your organisation?

Skills and capabilities

One in five say they have the right skills and capabilities to maximise their use of data (2% strongly agree, 20% somewhat agree). In over half of the organisations (54%), respondents don't think they have the right skills and capabilities to maximise use of their data.

We have the right skills and capabilities to maximise the use of our data

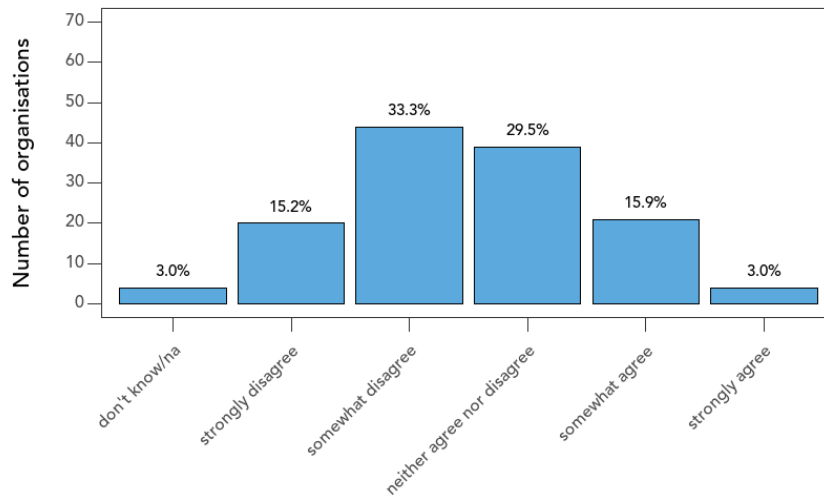


Number of organisations: 133

S1. To what extent do you agree or disagree with the following statements about your organisation?

At a broader level, data literacy among staff in general is a weak area. While 19% agree most staff are data literate (3% strongly agree, 16% somewhat agree), nearly half disagree (15% strongly disagree and 33% somewhat disagree).

Most staff are data literate

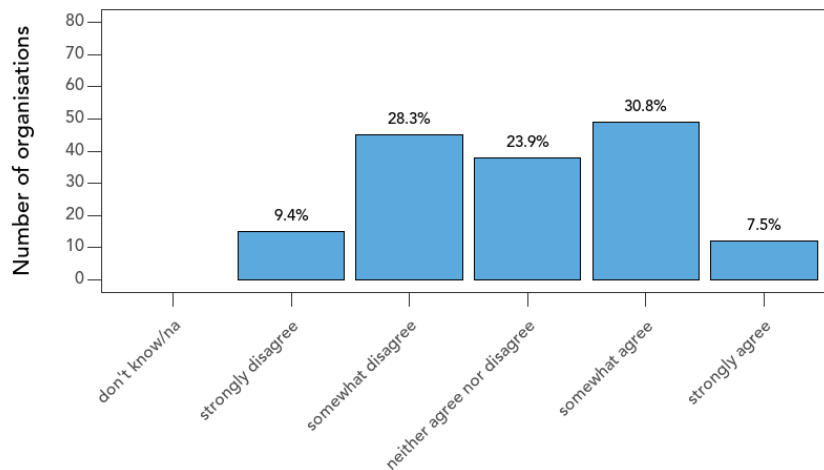


Number of organisations: 132

S1. To what extent do you agree or disagree with the following statements about your organisation?

Less than 40% say they understand their needs around data skills and capabilities (8% strongly agree, 31% somewhat agree). Almost as many disagree (9% strongly and 28% somewhat).

We understand our needs around data skills and capabilities

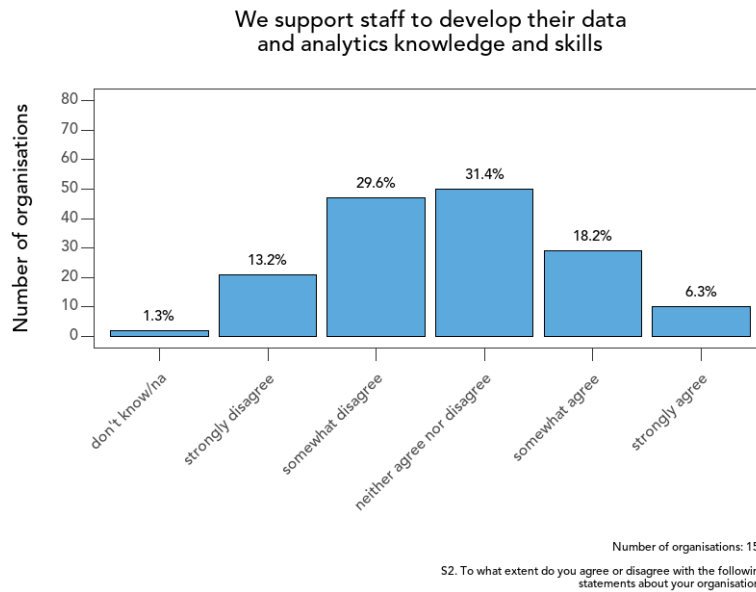


Number of organisations: 159

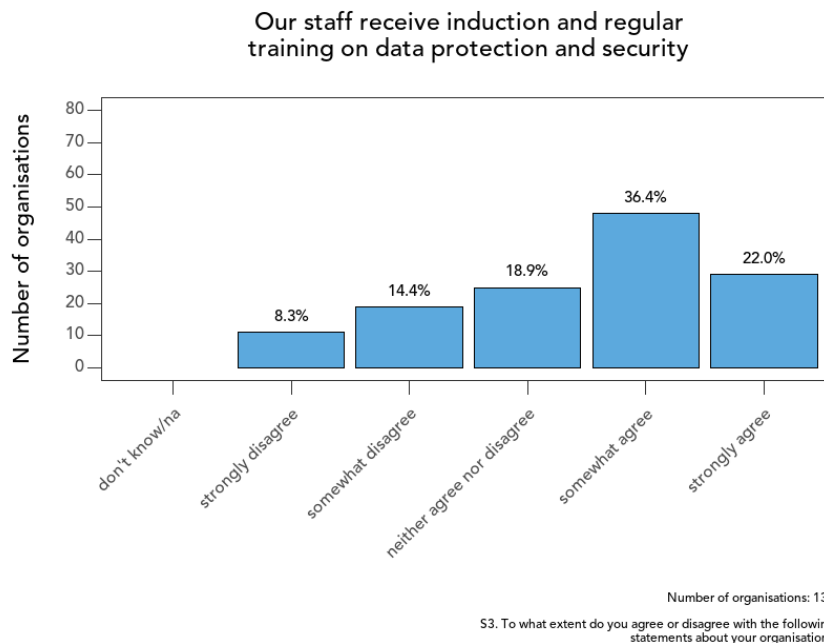
S2. To what extent do you agree or disagree with the following statements about your organisation?

Training

Around a quarter of organisations say their organisation supports staff to develop their data and analytics knowledge and skills. Meanwhile 43% do not.



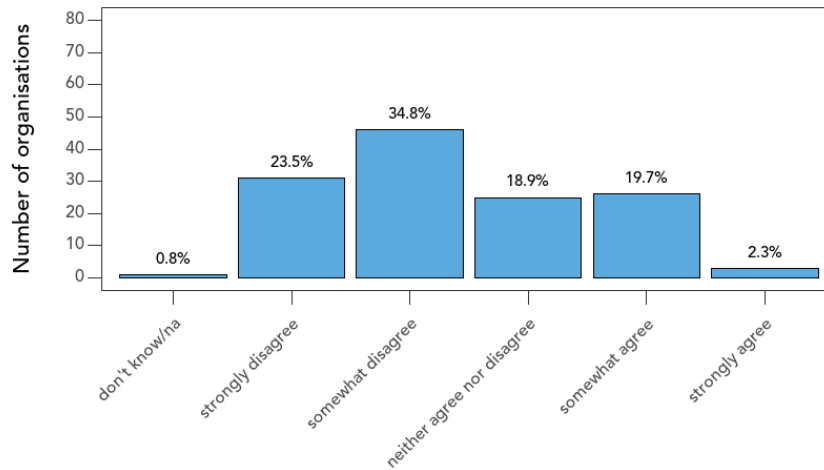
Focusing specifically on training in data protection and security, 58% say their staff receive induction and regular training on this (22% strongly agree, 36% somewhat agree). A similar number (52%) say their staff know how to respond to a data breach, potential breach or near miss (suggesting the training is at least somewhat effective). This relates to earlier findings (see 'Culture' section) which suggest around 59% are at least somewhat confident in their policies and practices in this area.



Access to knowledge and expertise

In addition to the poor level of support for staff to engage in learning and knowledge development in this area, the results also indicate a problem with access to expertise both internally and externally. Around one if five say they coordinate their internal data expertise across different teams and services.

We coordinate our data expertise across teams/services including senior, specialist, technical and administrative roles

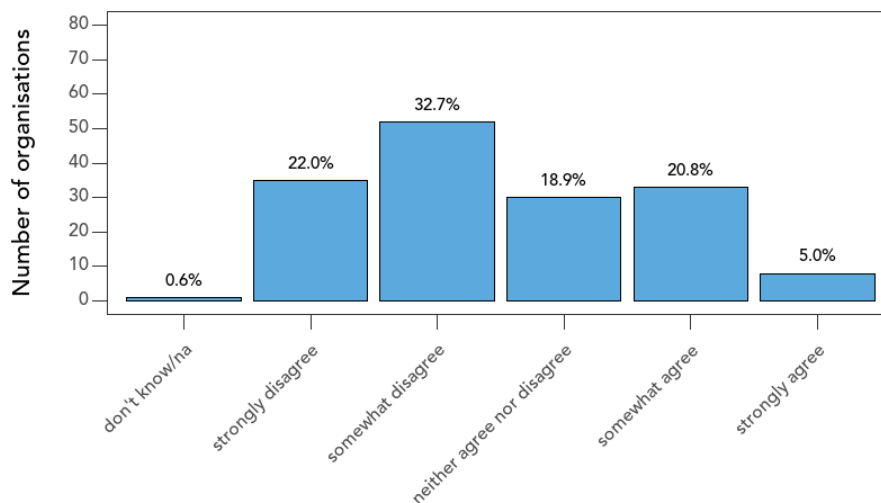


Number of organisations: 132

S1. To what extent do you agree or disagree with the following statements about your organisation?

Only 26% say they have access to external data and analytics support and advice from experts they trust (5% strongly agree, 21% somewhat agree).

We have access to external data and analytics support and advice from experts we trust



Number of organisations: 159

S2. To what extent do you agree or disagree with the following statements about your organisation?

ANNEX 2: SECTOR CATEGORISATION BY LEGAL TYPE

We have four key categories for segmenting types of organisations as users of the tool. The first three (NGO, Public Sector and Universities) are non-commercial organisations and are therefore combined in the analysis for the 'Not-for-Profit' sector.

1. NGO (NON-GOVERNMENTAL ORGANISATIONS)

For UK based organisations:

- Trust
- Scottish Charitable Incorporated Organisation
- Royal Charter
- Registered Society
- PRI/LTD BY GUAR/NSC (Private, limited by guarantee, no share capital)
- PRI/LBG/NSC (Private, limited by guarantee, no share capital, use of 'limited' exemption)
- Constitution
- Community Interest Company
- Charitable Incorporated Organisation (in England or Wales).

For non-UK based organisations:

- NGO (non-UK validated non-government or commercial entity with social mission)

2. PUBLIC SECTOR

- Public Sector (apparently a government entity)
- Academy Trust (a type of public education provider in England)

3. UNIVERSITY

Validated by url/website

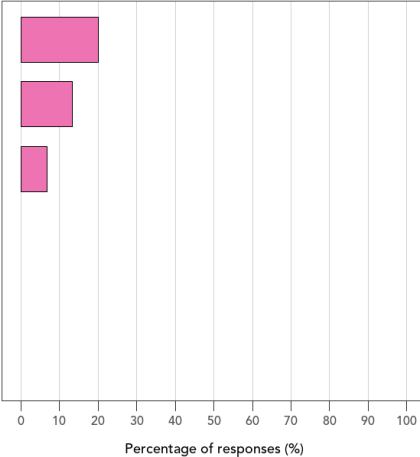
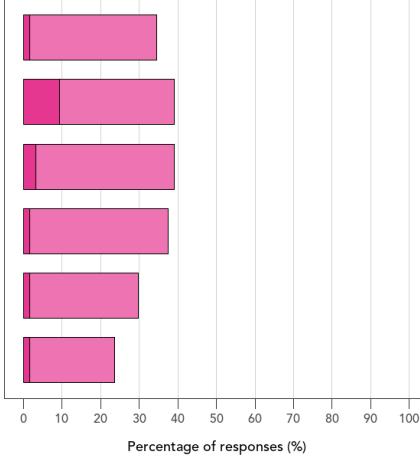
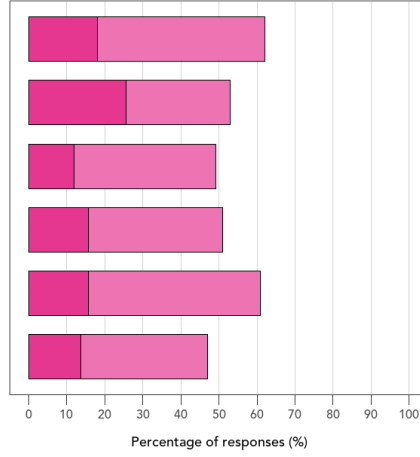
4. COMMERCIAL

- Public Limited Company
- Private Limited Company
- Commercial (non-UK validated commercial)

ANNEX 3: REWARDS AND BENEFITS BY DATA MATURITY STAGE

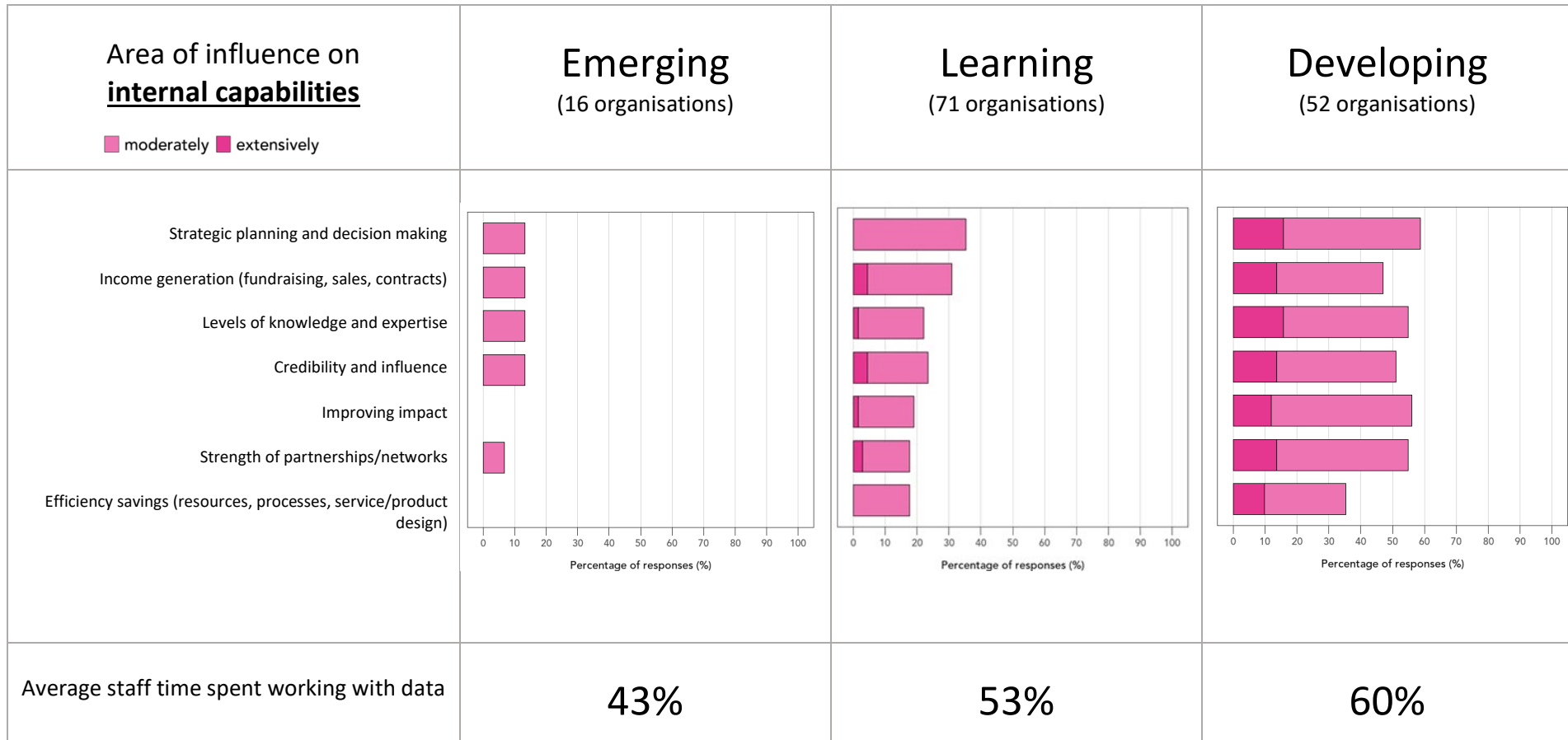
Influence of data and analytics on services by maturity stage

Comparing the influence of data and analytics on services for organisations at different stages of maturity. Note there is no data for organisations at the 'Unaware' stage and we have excluded organisations at the 'Mastering Stage' due to low numbers. Therefore, here we have focused on organisations at the middle three stages: Emerging, Learning, and Developing

<p>Area of influence in <u>service delivery</u></p> <p>■ moderately ■ extensively</p>	<p>Emerging (16 organisations)</p>	<p>Learning (71 organisations)</p>	<p>Developing (52 organisations)</p>
<p>Evidencing needs and problems the organisation seeks to address</p> <p>Evidencing impact to stakeholders</p> <p>Design and delivery of services and products</p> <p>Reach/engagement with clients</p> <p>Targeting of services/interventions to clients</p> <p>Client/environmental outcomes</p>	 <p>Percentage of responses (%)</p>	 <p>Percentage of responses (%)</p>	 <p>Percentage of responses (%)</p>
<p>Average staff time spent working with data</p>	<p>43%</p>	<p>53%</p>	<p>60%</p>

Influence of data and analytics on internal capabilities by maturity stage

Comparing the influence of data and analytics on internal capabilities for organisations at different stages of maturity. Note there is no data for organisations at the 'Unaware' stage and we have excluded organisations at the 'Mastering Stage' due to low numbers. Therefore, here we have focused on organisations at the middle three stages: Emerging, Learning, and Developing

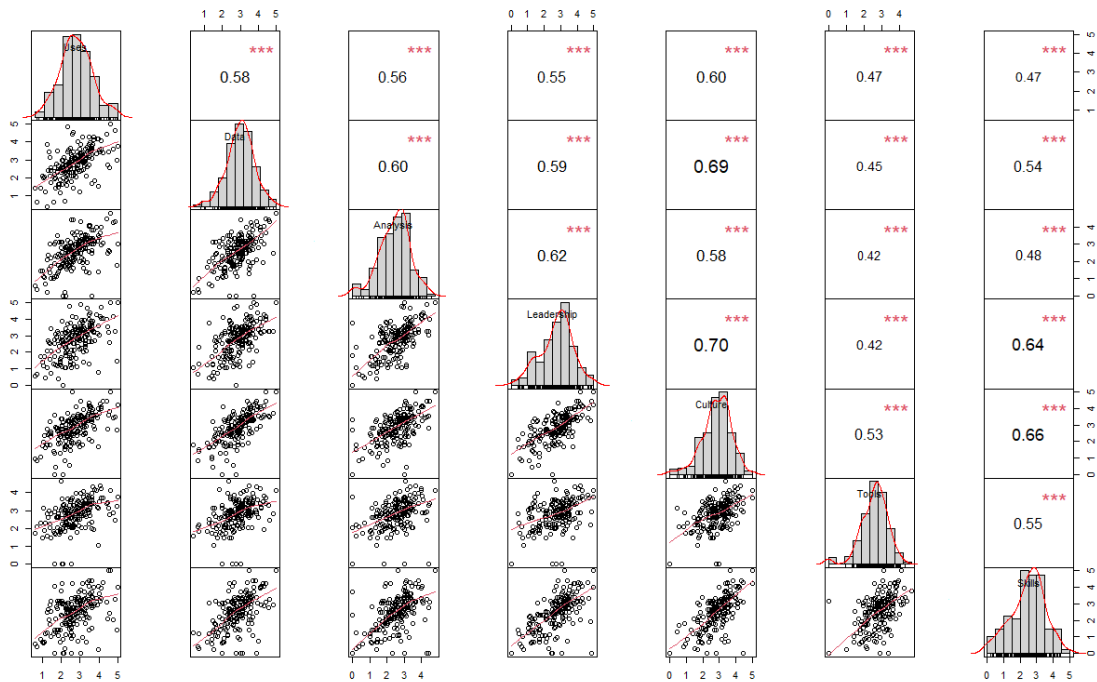


ANNEX 4: CORRELATIONS BETWEEN THEMES

The theme correlation analysis shows some statistically significant relationships particularly between:

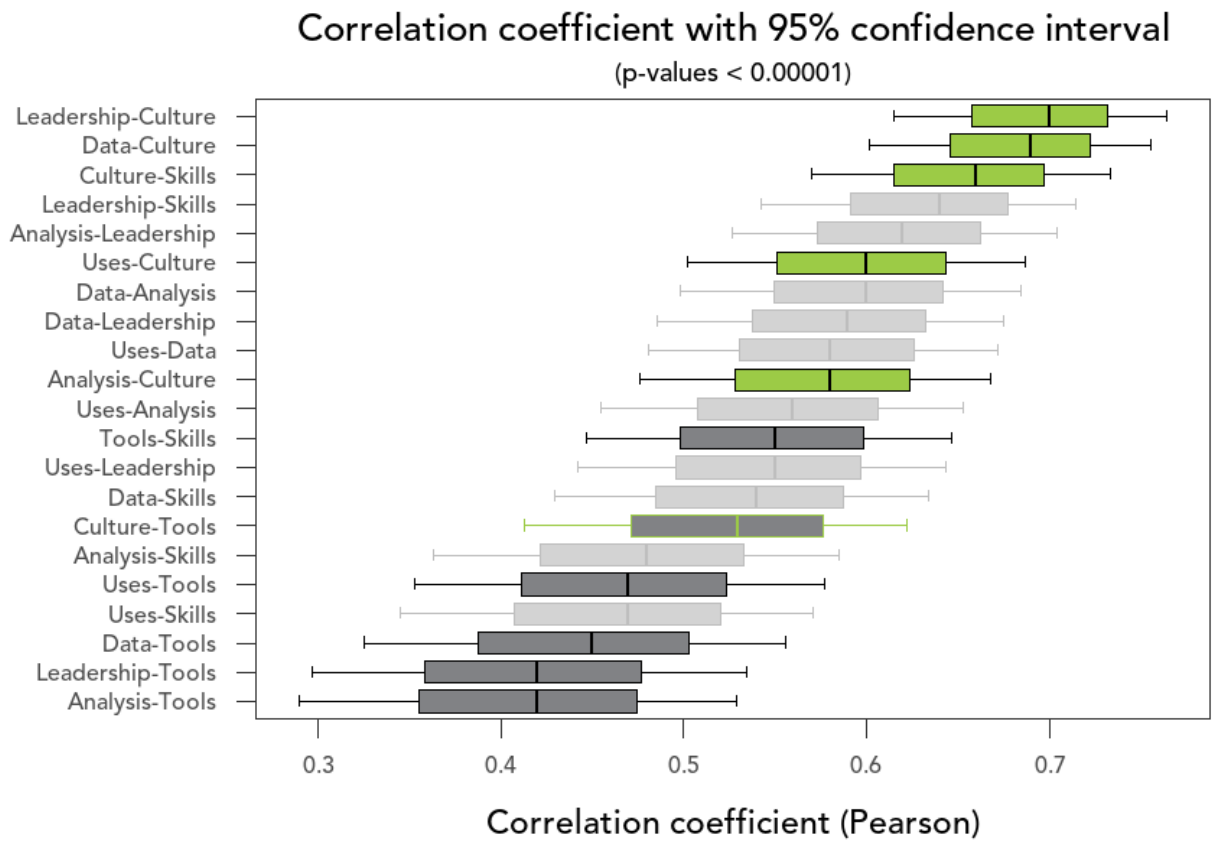
- Culture and Leadership
- Culture and Data
- Culture and Skills

These have a correlation coefficient of around 0.7 (on a scale of -1 to +1). There are several others around the 0.6 mark which again are significant in terms of the relationship. The fact that the correlation figures are all positive indicates a positive relationship i.e. the higher the score in one theme, the higher the score in the other is likely to be. Were there to be a negative correlation coefficient this would indicate a negative correlation in which the higher the score one theme the lower the score in the other. All correlations have a p-value of less than 0.0001 which is driven by the number of observations, indicating that it would be unlikely to obtain these results by chance.



The 3 red stars on the correlation scatter table above indicate a close-to-zero p-value for the relationship.

In the boxplot below the relationships highlighted in green all include 'Culture' whilst those in the dark grey indicate those including 'Tools'.



ANNEX 5: ANALYSIS OF DATA MATURITY BY INCOME LEVEL

For the 59 organisations where we have validated income data we have plotted the income against data maturity score for the whole organisation. Note we used the log scale due to the wide range of income levels. (Plotting actual income would have bunched-up most of high income results into a corner to allow for the extreme low values to be plotted at the other end of the scale.) The analysis shows there's no significant correlation between the income and data maturity score.

