Service Insights Ltd

Data Challenges in Social Housing

2024

1.   EXECUTIVE SUMMARY

It is reasonable to assume that social housing landlords working in the digital age are able to effectively manage information relating to the properties they own, the people living in them, and the services they provide.

However, research by the Housing Ombudsman (May 2023[1]) found that poor knowledge and information management was a recurrent theme contributing to explaining why landlords fail to provide adequate services. Our study extends the Ombudsman's research through the topic of '*Data Challenges in Social Housing*'.

Based on 224 employee survey responses and 30 employee interviews, a predominantly middle management and front line operational employee perspective was gained across seven core housing management functions. Whilst recognising that social housing providers are on a technology and data quality journey (with some more advanced than others), five overarching findings emerged as follows:

1) **Approaches to data quality are not fulfilling employee needs.** Whilst employees recognised that data quality is essential for achieving operational and strategic aims, they felt that current approaches to using data are not helping them deliver service efficiencies nor making their jobs easier – a key objective of technology solutions.

2) **Current applications of technology may be acting as barriers to delivering good service.** This identified that data systems, their complexities, limitations, and the need for effective data management were recurrent themes holding employees back. Overall, siloed data was a recurrent challenge and concern of employees, and is significantly impacting upon service quality. The greatest opportunity to improve data quality was 'systems integration'.

3) **The impacts of poor data quality are far reaching.** Poor data quality was detectible across all seven core housing management functions covered in our study. This was also true for different organisational sizes (large, medium, and small RSL's), and seniority of employees (defined as CEO's, Directors, or Heads of Service). More concerningly, poor data quality was seen directly leading to poor decision making which impacted on service outcomes, for which many employees involved in the research were able to describe recent experiences.

4) **Poor data needs to be turned into good data, and good data into good practice.** Addressing issues of siloed or poor quality data presents one challenge. However, a longer-term challenge is knowing *how* to turn good data into good practice, and then how to apply it. Sharing of experiences and best practice within the sector will become increasingly important over coming years.

5) **Social housing providers need to prepare for a new era of productivity:** Good data quality is essential for making the most of future artificial intelligence. Those who are currently behind on data quality will likely fall behind the innovation-adoption curve in the AI revolution. As technology progresses, there is a risk that those who fall behind the most may actually contribute towards *greater* [digital] inequality and exclusion by not being able to service tenants in the most effective ways. This may lead to history repeating itself in digital forms, in what Eubanks[2] refers to as 'the digital poorhouse'.

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[1] Housing Ombudsman (2023) *Spotlight on: Knowledge and Information Management (KIM)*. Available online: https://www.housing-ombudsman.org.uk/reports/spotlight-on-knowledge-and-information-management/ Data Accessed: 25.01.2024

[2] Eubanks, V. (2019) *Automating Inequality: How high-tech tools profile, police, and punish the poor*. Picador, New York, USA.

Five recommendations are offered:

1) **Address siloed data:** Employees desire one unified technology system that consolidates data from various sources and departments (both property and tenants), allowing for more streamlined and standardised approaches to data management.

   By applying architectural approaches to data such as a 'data fabric' methods to simplify data access and facilitate self-service data consumption[3], siloed data can be addressed. In our study, a small number of the more advanced housing providers were adopting such approaches to very good effect.

2) **Improve data quality:** Social housing providers urgently need to improve the quality of data held for properties and tenants. This is driven by an immediate need to improve current service delivery, but also by a future need of preparing for the adoption of artificial intelligence, for which good quality data is essential.

3) **Truly embed the importance of data quality into organisational culture:** Operational practices are interconnected. By reinforcing an organisational culture that recognises the practical importance of good data quality and enabling employees to take responsibilities for data quality, this will help to foster an ongoing culture of regularly tending to and overcoming poor quality data issues.

4) **Ensure behaviour drives systems, not systems driving behaviour:** Having checks to ensure that *systems* do not drive behaviour is important to retain a balance between digital and human, and to prevent an overreliance upon technology as a sole source of information, knowledge, judgement, and decision making. This is important, as it can help ensure that more vulnerable tenants cannot be 'lost in the system' simply because they do not fit standard patterns of behaviour as defined by technological applications.

5) **Consider a sector-wide data strategy:** As part of this research, an employee observed that, "*Demands on social housing are increasing, data is becoming more important… maybe it's time we need a sector-wide data strategy?*".

   This may form the basis of useful debate. Because all social landlords will have similarities through the management of their homes and tenants, in principle, these similarities could be replicated at a much larger scale - through standardised practices technologically, and though standardised data terminology.

   If this, or similar approaches, were undertaken to bring housing management data closer together at scale, it may lay even greater foundations and opportunities for maximising new knowledge gained through artificial intelligence to the benefit of the sector as a whole.

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[3] IBM (2024) *What if a data fabric architecture guided decision-making*. Available online: https://www.ibm.com/data-fabric#:~:text=Data%20fabric%20is%20an%20architectural,facilitates%20self%2Dservice%20data%20consumption. Date Accessed: 03.02.2024.

Data Challenges in Social Housing

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Contents

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2. INTRODUCTION

2.1 Why research data challenges in social housing?

For landlords working in the social housing sector, common sense suggests that the two most fundamental sources of information required to underpin consistently high levels of service quality are **property-based** and **tenant-based** information.

Yet how good is the sector at gathering, updating, and applying this data as a basis for delivering quality services? Could better data quality be a factor in improving both customer experience and operations management performance measures[4] such as quality, speed, dependability, flexibility, and cost? [*Note: Definitions for each of these are seen over the page].

The idea for this research study arose from our work delivering customer satisfaction surveys in the social housing sector. Our independent research company, Service Insights Ltd, often experiences housing providers who have complications accessing what could be considered basic information, that is, combining tenant profile and property information into a single spreadsheet. As landlords managing homes and tenants, this should be easy, yet seems overly difficult in practice. Why?

Furthermore, in 2023, the Housing Ombudsman's[5] research into knowledge and information management identified some concerning responses to questions specifically targeted at complaints handlers:

Question: ***Have you had issues with accessing or being provided with records to respond to complaints?***

- 55% responded 'yes'.

Question: ***Have the issues impacted on your ability to fully address complaints?***

- 82% of those experiencing issues responded 'yes'.

Question: ***Have the issues impacted on your ability to meet your complaint handling timescales?***

- 77% of those experiencing issues responded yes.

Question: ***"Are there issues with the data storage systems you use?"***

- 75% responded that there were.

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[4] Slack, N., Brandon-Jones, A., Johnston, R. Betts, A. (2015) *Operations and Process Management – Principles and practice for strategic impact* (4th ed). Pearson, UK.
[5] Housing Ombudsman (2023) *Spotlight on: Knowledge and Information Management (KIM)*. Available online: https://www.housing-ombudsman.org.uk/reports/spotlight-on-knowledge-and-information-management/ Data Accessed: 25.01.2024

As service based organisations increasingly rely upon digitised services, it is worth contextualising these issues with three examples from the last 25 years.

Firstly, when I started working in the social housing sector in the late 1990's, Bill Gates, co-founder and chair of Microsoft wrote in his book 'Business @ the Speed of Thought'[6] that *"digital processes are about the empowerment of individuals…. A belief in empowerment is key to getting the most out of a digital nervous system"*. But to what extent does this *actually* occur for social housing employees delivering services through increasingly tech-based means? Are some social housing providers so far behind the curve on effectively *applying* technology and information management that the approaches they use in practice are holding them back from delivering quality services?

Secondly, in 2021, the academic Amy Ostrom[7] and colleagues identified research and practice priorities for those interested in the service discipline. Of four priorities, the first two identified '*technology and the changing nature of work'* and '*technology and customer* experience'. Collectively, these can be interpreted as maximising technology in evolving organisational environments whilst applying technology to achieve customer-perceived service improvements. Is the social housing sector making the most of this and increasing customer experience through technology adoption?

Thirdly and finally, it is worth acknowledging the future context. The world is at the beginning of a new era of service productivity through advances in artificial intelligence – this relies upon good quality data at its source. Is the social housing sector ready to make the most of this opportunity?

Overall, for social housing providers, a wider societal challenge can also be acknowledged. Writing in 2019 in her book entitled 'Automating inequality – how high tech tools profile, police and punish the poor'[8], Virginia Eubanks systematically investigated the impact of data mining, policy algorithms, and predictive risk models on poor and working-class people in America. Eubanks acknowledges that *"when automated decision making tools are not built to explicitly dismantle structural inequalities, their scale and speed intensify them"*, and goes on to refer to the term of 'the digital poorhouse'. In this context, is there a risk that social housing providers not keeping pace with data quality and information management may find themselves simply repeating history in a digitised world?

Definitions: Operations management performance objectives (adapted from Slack et al, 2015)

Quality: Doing things right, providing error-free services that are 'fit for their purpose'.

Speed: Doing things fast, minimising the time between a tenant asking for services and the tenant receiving them in full.

Dependability: Doing things on time, keeping the promises that have been made to tenants.

Flexibility: The ability to vary or adapt activities to cope with unexpected circumstances or provide tenants with individual approaches, or to introduce new services.

Cost: Producing services that provide good value for money.

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[6] Gates, B (1999) Business @ the Speed of Thought – Succeeding in the Digital Economy. Penguin Books Ltd, London, UK.

[7] Ostrom, A., Field, J.M., Fotheringham, D., Subrmony, M., Gustafsson, A., Lemon, K., Huang, M.H., McColl-Kennedy, J.R. (2021) *Service Research Priorities: Managing and Delivering Services in Turbulent Times*. Journal of Service Research, Vol. 24(3) 329-353.

[8] Eubanks, V. (2019) *Automating Inequality: How high-tech tools profile, police, and punish the poor*. Picador, New York, USA.

3. RESEARCH DESIGN

3.1. Research aim

The research aim was to:

> **Explore data challenges in social housing to better understand the influence of data quality on service quality and opportunities for service improvement.**

3.2. Research questions

Three research questions were identified as follows:

1) **Do employees experience data challenges in the social housing sector?**

2) **[If so] What is the nature and scope of these challenges?**

3) **What impact do data challenges have on day to day operational service delivery and performance?**

3.3. Research design

The study applied a mixed methods research design combining qualitative and qualitative techniques. Firstly, an online employee survey was issued to approximately 600 employees. Secondly, 30 employee interviews were undertaken lasting between 25 minutes to an hour in duration.

The questionnaire was designed by the principal investigator (Dr Simon Williams, Service Insights Ltd) and covered up to 30 questions (including 22 closed questions and 8 open / free text questions) depending upon respondents answers to routed questions.

A total of 8 English social housing providers (7 housing associations, 1 council) were involved in the study, which covered a wide range of geographical locations (North, South, East and West of England) and organisational sizes (the largest with over 30,000 properties; two with between 10,000 to 20,000 properties; two with between 5,000 to 10,000 properties; two with 1,000 to 5,000 properties; and one with under 1,000 properties).

A total of 67% of feedback was received from seven core housing management functions:

1) **Responsive repairs**
2) **Housing management**
3) **Customer service teams**
4) **Lettings**
5) **Supported housing**
6) **Income management / benefits / rent management / arrears**
7) **Anti-social behaviour (ASB)**

Furthermore, when considering the seniority of respondents, the majority of views were sourced from middle management and front line operational employee (84%), whilst 8% of views were sourced from senior leaders (e.g. CEOs, Directors, Heads of Service). A further 8% responded 'other'.

3.4. Data collection

Data was collected over a 6 month period, with the online survey data collected using Snap Surveys software and interviews conducted over Zoom or Teams.

3.5. Analysis

Snap Surveys software was used to quantitatively analyse the online employee survey. The qualitative interviews were thematically analysed using manual first and second cycle coding techniques to enable core themes to emerge.

3.6. Research limitations

All research designs inherently include limitations. For this research, limitations can be acknowledged firstly as the fact that, due to the scale of the study (online survey to 600 employees + 30 interviews), we can not assert that the results are statistically representative of *all* employees working in social housing.

Secondly, whilst we have gained feedback from a sample of social housing organisations from across many regions of England (including North, South, East and West of England) and of different sizes (small, medium, and large RSLs), arguably the research would have been stronger with more participants from a wider range of social housing providers.

Overall, however, based on the feedback gained from over 200 survey respondents and interviews with 30 employees, the study nonetheless contributes to understanding an issue of importance at a time when housing providers are heavily relying upon technology and information management systems for day to day service delivery.

4. RESEARCH FINDINGS

This section provides a summary of the findings from the online employee survey and the qualitative depth interviews.

4.1.   Employee perceptions of data quality

Figure 1 illustrates levels of agreement with nine statements in the employee survey. Taking the top three scores from this, it is interesting to note that a very high proportion of employee agree that *data quality is essential for achieving long-term strategic aims*, and is *essential for delivering service quality*, and *achieving day to day operational aims*.

However, when taking the lowest three scores, it can be seen that levels of awareness of *all the data sources required to undertake jobs well* drops below 80%, and most starkly, *levels of trust with the accuracy of data* scores below 50%, whilst the most stark of all is the lowest score where only 38.6% agreed they found it *easy to access all the data sources they need*.

Figure 1: The organisational context - Levels of agreement with various data attributes

	Percent Agree	Count
Data quality is essential for achieving my organisation's long-term strategic aims	**99.6%**	**224**
I believe data quality is essential for delivering service quality	**98.6%**	**220**
Data quality is essential for achieving my day to day operational aims	**97.8%**	**224**
I believe data quality is essential for delivering a great customer experience	97.3%	221
My organisation is gathering increasing amounts of data over time	91.4%	221
I have confidence that data quality in my organisation will improve in future	81.7%	219
I'm aware of all the data sources required to undertake my job role well	**79.4%**	**223**
I am able to trust that the data I access is accurate	**45.5%**	**220**
I find it easy to access all the data sources I need	**38.6%**	**220**

Figure 2 illustrates levels of satisfaction with various concepts associated with data quality.

Whilst the percentage scores will be different compared to Figure 1 (due to the fact that this question is measuring a different construct – satisfaction and not agreement), it is again interesting to note that the top three scores are associated with the ability to *collect, store and analyse data*, however, the lowest three scores are associated gaining benefits from these (in particular, *using data to deliver service efficiencies*, and lowest of all, *using data to make jobs easier*).

Figure 2: Satisfaction with data quality

	Percent Satisfied	Count
Collecting data	**63.2%**	**212**
Storing data	**62.9%**	**210**
Analysing data	**62.5%**	**208**
Using data to support effective decision making	59.8%	209
Managing data	59.2%	211
Using data to identify emerging trends	58.9%	207
Using data to identify new insights	**55.7%**	**210**
Using data to deliver service efficiencies	**54.8%**	**210**
Using data to make my job easier	**54.2%**	**212**

4.2.   Employee perceptions of data challenges

Firstly, when exploring levels of *awareness* of data challenges, respondents were asked if they were aware of any examples of poor data quality in their organisation during the last 12 months. Of the 185 respondents who answered this question, 54.1% stated 'yes' compared to 45.9% 'no'.

When considering this question from an organisational perspective, individual organisation scores varied between 25% up to 81.8%. Additionally, from a middle management and frontline operational employee perspective, 51.0% stated 'yes' and 49.9% 'no', which compared to senior leaders who scored 76.5% 'yes' and 23.5% 'no'.

Although some response groups within these responses are relatively small (e.g. only 18 senior leaders responded, representing 8% of the respondent profile), it nonetheless suggests that awareness of poor data quality is not limited to front line or middle

management employees, and also suggests that awareness may cover both operational and strategic perspectives.

Secondly, when exploring the types of data challenges, from a list of 32 variables, employees were asked to identify items that they current felt were the main data challenges in their organisation (a choice of 'other' was also available).

Figure 3 illustrates the top 10 highest scores, from which it is interesting to note that *multiple data storages* ranks highest (62.1%) followed by *databases not synching* (50%), and *duplicate data* (48.2%). Overall, this tends to suggest that the issue of clear usable data is problematic.

Figure 3: Top 10 data challenges perceived in the organisation

	Percent Agree	Count
Multiple data storages	**62.1%**	**139**
Databases not synching	**50.0%**	**112**
Duplicate data	**48.2%**	**108**
Inaccurate data	47.8%	107
Legacy issues	47.3%	106
Incomplete data	45.1%	101
Lack of processes or systems	37.5%	84
Lack of skills / knowledge	35.7%	80
Unuseful data	30.8%	69
Organisational culture	29.5%	66

4.3. Barriers to improving data quality

When asked about employee perceptions of their top barriers to improving data quality, *data systems and management* emerged as the central concern, followed by a further three factors all scoring above 10%: *capacity of resource*; *costs*; and *organisational culture and leadership* (Figure 4).

Figure 4: Barriers to improving data quality (n=150)

Each of these factors can be described as follows:

- **Data Systems and Management:** This theme appears to be a central concern to employees. This revolves around the challenges related to data systems, their complexity, limitations, and the need for effective data management.

- **Capacity and Resources:** Concerns about having enough resources, both in terms of employees and technology, to handle data effectively.

- **Costs:** The financial implications of data management, including the costs associated with new systems and training.

- **Organisational Culture and Leadership:** The role of leadership, culture, and 'buy-in' within the organisation in addressing data challenges.

- **Data Quality:** Ensuring the accuracy and relevance of data, as well as dealing with incomplete or outdated data.

- **Training:** The need for educating employees and improving their data-related knowledge and skills.

- **Communication and Collaboration:** Issues related to communication between teams and the importance of collaboration in data management.

- **Compliance:** Concerns about data privacy rules, GDPR, and legal requirements in data collection.

- **Multiple Systems and Integration:** Dealing with the existence of multiple data systems and the need for them to communicate effectively. Interestingly, this issue was cited relatively infrequently for this individual question, contrary to many other sources identified throughout the research (e.g. Figure 3; Figure 5; employee interviews; etc).

- **Customer Engagement:** Involving customers in data collection, and addressing their concerns about data sharing and usage.

Comments relating to examples of the top barriers in their organisation include:

> *"Poor recording of information, lack of access to other systems, silo culture."*

> *"Stop asking the same questions multiple times and store all data in one place only, not loads of different places".*

> *"Old laptops that can't take mobile working, lack of IT employee that understand the problems that front line employee have, one system [that] does all. Every section does things differently. [We] store information in various different systems. It's a lot to remember".*

> *"Money / budgets / too costly; old condition of equipment".*

> *"Employee awareness of importance of accurate data, databases not synching".*

> *"People do not know the importance of adding or updating data".*

> *"Systems driving behaviour, volume of data, skills to interpret insight".*

Finally, in identifying two particularly pertinent comments, it is worth noting one employee who regarded their greatest barrier simply as:

> *"Understanding data quality… data collection, accuracy, and interpretation".*

…whilst perhaps more concerningly, another employee referred to the risk of:

> *"Systems driving behaviour".*

4.4. Opportunities for improving data quality

When asked about employee's perceptions of what they would most like to change to enable improvements in data quality (Figure 5), 'systems integration' clearly stands out from other concepts.

Figure 5: Factors enabling improvement (n=174)
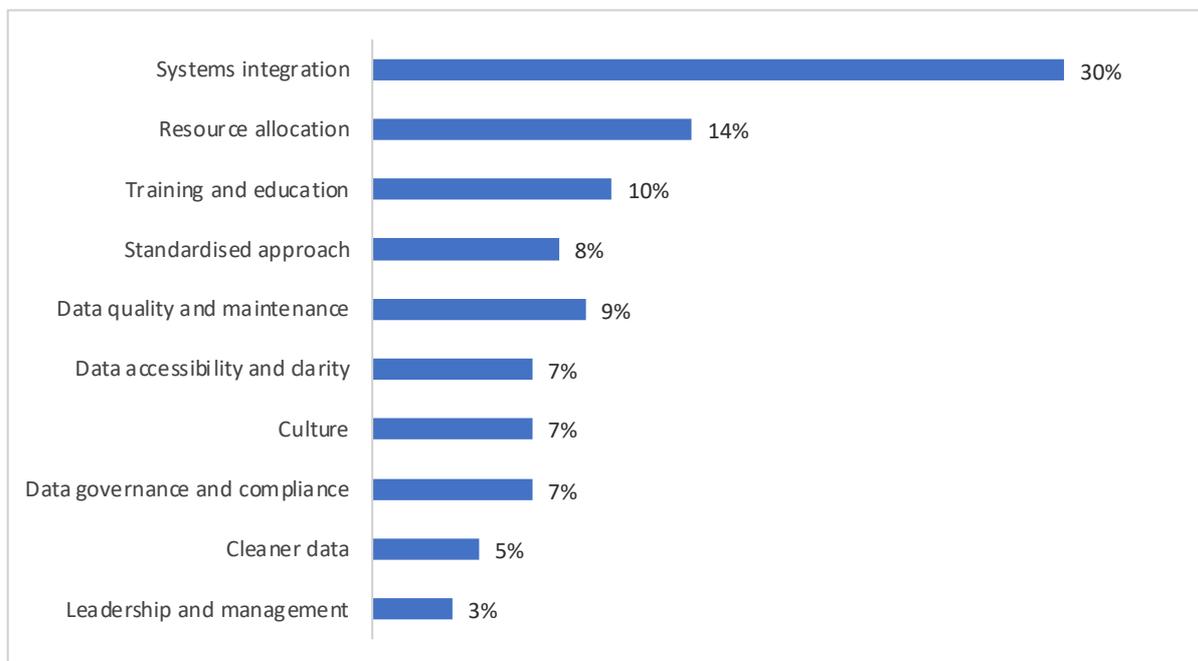
Each of these factors can be described as follows:

- **Systems Integration:** This theme emphasises the need for systems that can communicate with each other effectively. Many comments mention the desire for one unified system that can consolidate data from various sources and departments, allowing for a more streamlined and standardised approach to data management.

- **Resource Allocation:** The theme of resource allocation underscores the significance of having sufficient resources, both in terms of employee and technology, to manage data effectively. Several comments highlight the challenges related to resource constraints and the need for adequate funding and staffing.

- **Training and Education:** This theme highlights the importance of educating employees and providing training in data management, quality, and the proper use of software tools. Several comments stress the need for improving employee knowledge and skills to enhance data-related practices.

- **Standardised Approach:** A number of comments related to a desire to see industry wide practices and systems.

- **Data Quality and Maintenance:** Comments under this theme discuss the importance of cleaning and maintaining data to ensure it remains accurate and

relevant. This involves regular data checks and updates to remove outdated or unnecessary information.

- **Data Accessibility and Clarity:** Data accessibility refers to making data easy to access and understand for employee and customers. Some comments emphasise the need for clear and user-friendly systems and data presentation to ensure that data is readily available and comprehensible.

- **Culture:** Comments under this theme focus on the role of leadership in understanding and supporting data quality efforts. Effective leaders are expected to comprehend the complexities of data management, encourage data-driven decision-making, and allocate resources for data-related initiatives.

- **Data Governance and Compliance:** Data governance encompasses ensuring that data is accurate, up to date, and well-maintained. Many comments mention the importance of data cleansing and data ownership, stressing the need for accountability and responsibility in maintaining data quality. This theme also relates to adhering to data protection and privacy regulations, such as GDPR. While mentioned in some comments, it has a lower frequency compared to other themes, suggesting that organisations are aware of compliance requirements but may not see it as the primary concern in data quality improvement.

- **Cleaner Data:** An organisation to prioritise data quality and encouraging awareness among employee are key components of this theme. It involves fostering a data-driven mindset and promoting the importance of data throughout the organisation.

- **Leadership and Management:** Comments under this theme focus on the role of leadership in understanding and supporting data quality efforts. Effective leaders are expected to comprehend the complexities of data management, encourage data-driven decision-making, and allocate resources for data-related initiatives.

Comments relating to examples of the opportunities for data quality improvement include:

> *"Consolidate all our software to one backing system instead of multiple different systems".*

> *"A system that is tailored to all the different areas of a housing association, that everyone can use and have access to".*

> *"Systems to be updated to reflect the same categories for data across the organisation. I.E. patch numbers the same from team to team".*

> *"IT systems that have the same data so if one is updated so is the other; for IT systems to only show current information for the person in our property; stop collecting data that doesn't need to be collected and put the effort into ensuring current data is up to date".*

> *"A wider understanding of the need for better data so we all take responsibility for improving it".*

"Educate other teams about the impact of missing/inaccurate data can have on other team's delivery of service; one system that we all use to access the same data".

"[A] greater understanding of the importance of accurate data plus the evidence of the 'so what' as a result of using data".

Finally, in summary, it is worth noting a comment from one employee who regarded the greatest opportunity for data quality improvement as:

"A recognition of why it matters and support to change".

4.5. Employees in their own words - Impacts of poor data quality

This section presents selected examples of poor quality data and the impacts on the organisation, service delivery, employee, and tenants. Referring back to the five operations management performance measures (quality, speed, dependability, flexibility, and cost), these examples suggest that data challenges are negatively impacting upon all of these indicators to a greater or lesser degree.

4.5.1. Poor decision making

Example 1:

"Repairs and investment decisions made on inaccurate data pose risks to delivering a great customer experience balanced alongside the regulators demands around compliance and making sound judgements on investing in our assets".

Example 2:

"Stock condition information for kitchens and bathrooms - we have a big list on a spreadsheet, rather than a housing management system. If we replace a kitchen ad hoc because it's falling apart and we didn't expect it to, then that's not [always] updated on the spreadsheet because people have got 110 things to do.

Then we get to next year's planned schedule and it's still on there as being 25 years old and down for replacement - we send a surveyor to double check it, and it turns out a brand new kitchen is already installed. We get back to our office and look at our system and think, when did we replace that? How was that paid for? ... and all that kind of stuff. Having inaccurate data generates a whole lot of extra of work. It's manual input and human error.

The impact of this for tenants is that it's annoying. If we send letters saying we're replacing your kitchen this year, then they think you don't know what you are doing. We've actually had some tenants who will ask 'how are you storing data about the properties?' ".

4.5.2. Inaccurate performance reporting

Example 1:

> **Interviewee:** *"The main [computer generated] reports which go to Board are probably about 90% right… they are in a 90% boundary – you are not going to be too far out, and generally if you have a really big error [in the data], it jumps out at you".*
>
> **Interviewer:** *But if it's a slight error, you might not know?*
>
> **Interviewee:** *Exactly. I know of one housing provider – I'll not mention them, but it's a large one – [where] their repairs stats that they took to Board and reported to NROSH were completely wrong. [They] found a data input error which meant that all the 6 months reports on repairs were thrown out completely. It was human error – [an employee member] had been told to do it that way – but it's something that can easily happen, particularly when you have large datasets".*

Example 2:

> **Interviewee:** *"You'll find that if anything is wrong with data, it will be with repairs, because there are so many ways to manipulate it. I've seen people do that…"*
>
> **Interviewer:** *"To make it look better?"*
>
> **Interviewee:** *"Yeah… if you have people closing off repairs that haven't been completed, then that makes a big difference. I've seen that happen – you say you've got 95% completion rate, well in practice, that's [not] the case. Sometimes practices can make data reporting look a little bit [better but] less accurate than it should be".*

4.5.3. Inaccurate operational reporting

Example 1:

> *"What we've had is that someone has written a [computer based] report [to extract data] and they don't seem to have tested it at all. They give them to an operative and say 'there you go', and if that person isn't wise and checks it to make sure it's working, you find that it's bringing out all sorts of rubbish which is meaningless.*
>
> *You have people writing [I.T] reports who've never worked on the front line and don't understand what you are looking for. Employees don't have knowledge of data sources – that's where a gap lies.*
>
> *Another challenge in reporting is that the report may have been fine 5 years ago, but since then we've put on a different repairs system, we've tagged something on, it's all of a sudden churning out gobbledy-gook."*

Example 2:

> *For voids, there's a report where an employee has to go in and manually calculate it and really manipulate the figures to get the data out. It's taking half a day a week to do this… it's crazy. But our systems are quite complicated – there's over ▮ tenancy types."*

4.5.4. Missed opportunities impact income

Example 1:

> *"A tenant had gone into a nursing home, but it was a year before we got to find out that the tenant had gone. Under certain circumstances, tenants are allowed to receive housing benefit for up to a year, for instance if they go into hospital. In this instance, the tenant had initially gone into hospital and wasn't flagged to us in any way because the rent was still coming in through the housing benefit route.*
>
> *It then came to a stop so the rent began to accrue arrears. We went round and found an overgrown garden and no one there. It became apparent that support staff were aware, but didn't connect it - we effectively had a tenancy sat there for a year which could have been allocated to someone else. You also have the lost rent income. We got it resolved eventually by talking to the neighbour and following it up, but it could have been so much easier".*

Example 2:

> *"The way you set up [software] and use it is the key. If you know what it does and you use its capabilities, then you get 10 times more out of it. I've seen organisations spend £200K on a system only to find that its actually no different to the one they had previously because they've not really thought the process through".*

Example 3:

> **Interviewee:** *"We're about to undertake a new version of our [income management] software, because the software provider isn't supporting the software for much longer. If we didn't move across now in the first tranche of people being moved across, we would have to pay to be moved across at a later date.*
>
> *So instead of wating a bit and letting others pave the way by finding the bugs in the system and dealing with it, it was decided we would go within this first tranche.*
>
> *We've been doing some user testing and it's not user friendly at the moment. A lot of the things we are finding are failing and all we've heard back from the IT provider is that – as far as we know – we're still going ahead. This does worry me, as from the income side of it, we've got to start our year end processes by the end of the calendar year, so it doesn't leave much time to iron out any kinks in it once we go live next month.*
>
> **Interviewer:** *Could you provide a sense of the volume of money you're dealing with? What's at risk here?*
>
> **Interviewee:** We've got around £19 million a year that we bring in as income, with a small team of under █ staff.
>
> **Interviewer:** So the computer systems, the infrastructure, influence this a lot?
>
> **Interviewee:** Yes, a lot".

4.5.5. Negative impacts upon customer experience

Example 1:

> *"Systems not integrating resulting in silo decision making which ultimately affects customers".*

Example 2:

> *"We need good quality accurate data to deliver a person-centred service to customers".*

4.5.6. Tendency not to trust data sources

Example 1:

> *"We've an unfortunate legacy type form of information on our systems. When it was brought across to the new system, the allocations side of things for when tenants used to sign up for properties, they never used to have to provide information like national insurance numbers, dates of birth – all the things which would give you the ability to check you have the right person, anything you might need if you are checking income for them.*
>
> *The legacy information which came across gave us standard default years, so immediately you don't know how old the person is that you are going to visit. You need that basic information to help people with their benefits – we do help people maximise their benefits.*
>
> *If you know they are of pensionable age, you know that they may be missing out on something like the guaranteed pension credits whereas if they are of working agree but living in a sheltered property, there's a completely different set of circumstances you could look into. So, when we visit, we can't be certain who we will see and we may not have the right information or the right forms to be able to deal with them effectively".*

Example 2:

> *"Big issues – [we're] still relying on contractors' data and what they say our performance is. We should have confidence in the data in our system and be able to use this".*

Example 3:

> *"I think maybe it's been people's lack of knowledge about our housing management system and feeling like they would rather depend upon something that they know… like a spreadsheet."*

4.5.7. The disconnected organisation - Silo information and impacts practice

Example 1:

> *"So, the main issue is data being sporadic across different software. The data is here, there, and everywhere".*

Example 2:

> *"Systems connecting to others - two data sources that do not match and require manual manipulation".*

Example 3:

The initial problem I think we had was that only part of the service went over to the new system when it was initiated. We went over with some other teams but not all, so it never really linked us right from the start.

This caused problems with the data, because we weren't looking at the same information. So, for example, we could never see the complete information for supported housing – there could be some vital information held [by other team members], but they always held their notes on a completely different system.

Likewise, on the homelessness side, if we dealt with someone who was one of our tenants who then became homeless and then tried to come back to us, the link was no longer there".

4.5.8. Willingness to accept data challenges as normal working practice

Example 1:

"[Data challenges] probably impacts every single day".

Example 2:

"There are quite a lot of data challenges, nearly every day".

4.6. Employees in their own words - Reflections on future considerations

4.6.1. Artificial intelligence - a new era of productivity

"With AI, it will be looking at the data that you have – it will be looking at the person or the repairs job, etc. But I can see a time where a customer can [contact us] anytime day or night wanting to find out where a repairs job had progressed or what their rent balance is, and the system be able to talk to them to give any information they want.

And from our perspective we will be able to ask the system any question about any property or any area, and the system could actually make up the report.

It could be the interface between the customer and the system – they will be able to ask questions and it will give an answer. I think we'll be having these conversations in about 18 months to 2 years. [But] if the data isn't correct, it could tell them anything!".

4.6.2. Continued investment in information systems

"The IT team are very good at ensuring that everything runs smoothly. Very limited downtime, and everything works as it should do. But the flip side is that if you spend all your time doing that, then very little happens in terms of development and improvement".

4.6.3. Flexibility and adaptability through cloud computing

"Using the example of damp, because we've the flexibility to adjust the reporting in our cloud based system, we can easily adapt and measure the number of damp jobs coming in and where they are, so we've been able to adjust quite quickly.

That's something that others have been struggling with. Our system is so adaptable that we can get the data out – if the data is there, we can get at it".

4.6.4. Measuring the cost of poor data quality

"There is probably something to be said for Senior Managers taking a step back from reactive practices and quantify the financial losses, the time losses, the inconvenience, and effort required due to the data – which is don't think is ever analysed in employee time.

I think it would probably be substantial.

And if we knew that, then maybe priorities would shift on improving data quality and improving systems".

4.6.5. A future sector-wide data strategy?

"Demands on social housing are increasing, data is becoming more important… Maybe it's time we need a sector-wide data strategy?"

5. CONCLUSIONS

This report presented exploratory research focussing upon 'data challenges in social housing'. Based on 224 employee survey responses and 30 employee interviews, a predominantly middle management and front line operational employee perspective was gained (alongside a smaller group of senior leaders and employees from other roles) from seven core housing management functions.

When answering our research questions (Section 3.2), it can be said that:

1) **Employees experience data challenges _relatively frequently_ in their work.**

2) **The nature and scope of data challenges appears to be all encompassing, i.e. affecting housing providers of all sizes and across different core service functions. Despite some housing providers being further advanced than others, data challenges generally seem to be accepted as the norm by many and fundamentally remain largely 'unchallenged'.**

3) **Data challenges seem to have a high degree of negative impact on day to day operational service delivery and performance. None of the organisations involved in the research, however, were able to convey a clear understanding of the scale and costs associated with this.**

Overall, whilst recognising that social housing providers are on a technology and data quality journey with some more advanced than others, five overarching themes emerged:

1) **Approaches to data quality are not fulfilling employee needs.** Whilst employees recognised that data quality is essential for achieving operational and strategic aims, they felt that current approaches to using data are not helping them deliver service efficiencies nor making their jobs easier – a key objective of technology solutions.

2) **Current applications of technology may be acting as barriers to delivering good service.** This identified that data systems, their complexities, limitations, and the need for effective data management were recurrent themes holding employees back. Overall, siloed data was a recurrent challenge and concern of employees, and is significantly impacting upon service quality. The greatest opportunity to improve data quality was 'systems integration'.

3) **The impacts of poor data quality are far reaching.** Poor data quality was detectible across all seven core housing management functions covered in our study. This was also true for different organisational sizes (large, medium, and small RSL's), and seniority of employees (defined as CEO's, Directors, or Heads of Service). More concerningly, poor data quality was seen directly leading to poor decision making which impacted on service outcomes, for which many employees involved in the research were able to describe recent experiences.

4) **Poor data needs to be turned into good data, and good data into good practice.** Addressing issues of siloed or poor quality data presents one challenge. However, a longer-term challenge is knowing _how_ to turn good data into good practice, and then how to apply it. Sharing of experiences and best practice within the sector will become increasingly important over coming years.

5) **Social housing providers need to prepare for a new era of productivity:** Good data quality is essential for making the most of future artificial intelligence. Those who are currently behind on data quality will likely fall behind the innovation-adoption curve in the AI revolution. As technology progresses, there is a risk that those who fall behind the most may actually contribute towards *greater* [digital] inequality and exclusion by not being able to service tenants in the most effective ways. This may lead to history repeating itself in digital forms, in what Eubanks[9] refers to as 'the digital poorhouse'.

5.1. Recommendations for consideration

1) **Address siloed data:** Employees desire one unified technology system that consolidates data from various sources and departments (both property and tenants), allowing for more streamlined and standardised approaches to data management.

   By applying architectural approaches to data such as a 'data fabric' methods to simplify data access and facilitate self-service data consumption[10], siloed data can be addressed. In our study, a small number of the more advanced housing providers were adopting such approaches to very good effect.

2) **Improve data quality:** Social housing providers urgently need to improve the quality of data held for properties and tenants. This is driven by an immediate need to improve current service delivery, but also by a future need of preparing for the adoption of artificial intelligence, for which good quality data is essential.

3) **Truly embed the importance of data quality into organisational culture:** Operational practices are interconnected. By reinforcing an organisational culture that recognises the practical importance of good data quality and enabling employees to take responsibilities for data quality, this will help to foster an ongoing culture of regularly tending to and overcoming poor quality data issues.

4) **Ensure behaviour drives systems, not systems driving behaviour:** Having checks to ensure that *systems* do not drive behaviour is important to retain a balance between digital and human, and to prevent an overreliance upon technology as a sole source of information, knowledge, judgement, and decision making. This is important, as it can help ensure that more vulnerable tenants cannot be 'lost in the system' simply because they do not fit standard patterns of behaviour as defined by technological applications.

5) **Consider a sector-wide data strategy:** As part of this research, an employee observed that, "*Demands on social housing are increasing, data is becoming more important… maybe it's time we need a sector-wide data strategy?*".

   This may form the basis of useful debate. Because all social landlords will have similarities through the management of their homes and tenants, in principle, these similarities could be replicated at a much larger scale - through standardised practices technologically, and though standardised data terminology.

   If this or similar approaches were undertaken to bring housing management data closer together at scale, it may lay even greater foundations and opportunities for maximising new knowledge gained through artificial intelligence to the benefit of the sector as a whole.

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[9] Eubanks, V. (2019) *Automating Inequality: How high-tech tools profile, police, and punish the poor*. Picador, New York, USA.
[10] IBM (2024) *What if a data fabric architecture guided decision-making*. Available online: https://www.ibm.com/data-fabric#:~:text=Data%20fabric%20is%20an%20architectural,facilitates%20self%2Dservice%20data%20consumption. Date Accessed: 03.02.2024.