

# HOUSING TECHNOLOGY™



**DATA MATTERS  
2024**

**10 SEPTEMBER 2024**  
**THE BRITISH MUSEUM  
LONDON**



## THE BEST OF...

Then & now, omni-channels, mobile working, STP, women in housing IT & much more...

## HOUSING MANAGEMENT

HMS migration, digital transformation, M&As, appraisals & surveys

## FINANCE MANAGEMENT

AI for finance, arrears & e-procurement

## CUSTOMER MANAGEMENT

Smart devices, data 'deluges', tenant wellbeing & compliance

## INFRASTRUCTURE

Retrofitting homes, cyber security & multi-factor authentication

## GENERAL NEWS

IT leadership, technical debt, data migration & sustainability

## Celebrating 17 years of technology in social housing

Housing Technology began at the end of 2007, with our first edition published in January 2008, and here we are now, 99 editions later with our 100th edition (in case you missed our subtle front cover).

So much has changed since George Grant (prev. head of alliances at the National Housing Federation & IT business consultant) and Alastair Tweedie (prev. co-founder of a fintech news service & Microsoft's EMEA marketing) identified an opportunity for innovation in social housing, setting the stage for Housing Technology to become a transformational hub for IT and business change in social housing, predominantly in the UK but also in Europe and beyond.

### Then & now

On page 56, our 'Then & now' special feature brings together the combined knowledge and experience of some of Housing Technology's longest-standing contributors, speakers and supporters (we've not added up their combined years of social housing expertise but it's at least two centuries' worth...). The article is really worth reading in full in order to gain a better understanding of how the past 16 years or so (ancient history in IT terms) have influenced today's landscape of IT operations and business processes, as well as getting a view on the future direction of travel.

### A community effort

And much though we'd love to claim full credit for the past 16 years, the enduring success of Housing Technology is, firstly, a reflection on our readers, speakers, editorial contributors, commercial partners and event sponsors. The amazingly collaborative nature of our sector



Alastair Tweedie (l), Editor & Co-Founder, and George Grant, CEO & Co-Founder, Housing Technology

and everyone's willingness to share their successes, failures and experience gained along the way is the very essence of the Housing Technology community.

Secondly, the Housing Technology community is a direct result of our dedicated team.

- Jo Euston-Moore, with us from the very first edition, is the brilliant designer behind all the graphics for the magazine, reports, events and our annual conference.
- Sebastian Emerson, our digital manager, is the brain behind our online operations and digital offerings.
- Kelly-Ann Grimes and Kate Dryden, as well as being our event and logistics gurus, provide exceptional cross-team support for all of our projects.
- Amanda Wiper, just back from maternity leave, is our partnerships consultant, excelling in building and maintaining our commercial relationships.
- Laura Philip, previously from Aareon, is our marketing manager and responsible for our social media and marketing presence.
- Charlie Bezkorowajny is our videographer and responsible for scripting and filming Housing Technology's interviews and short films for our On Demand channel.

**Here's to the past 16 years...  
Let's continue innovating, sharing our stories and pushing our sector forward.**

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PRINTED IN THE UK BY  
The Magazine Printing Company  
magprint.co.uk



# Forthcoming events

**HOUSING TECHNOLOGY**

**DATA MATTERS 2024**

**10 SEPTEMBER 2024**  
**THE BRITISH MUSEUM LONDON**

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**TECHNOLOGY SHOWCASE** Please see [housing-technology.com/showcase](http://housing-technology.com/showcase) for more information

[aico](#) | [HomeLINK](#) | [Asprey](#) | [CIVICA](#) | [FireAngel](#) | [housinginsight](#) | [Lioness](#) | [NEC](#) | [nexus](#) | [Social Telecoms & PARTNERS](#)

**HOUSING  
TECHNOLOGY™**



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**LAST FEW  
REMAINING  
TICKETS**



## WHY ATTEND DATA MATTERS 2024?

- Data-focused presentations
- Informal networking with your peers
- Technology showcase of IT suppliers
- High-quality food and refreshments
- Iconic London venue
- Pre-event evening reception

## HOUSING SPEAKERS & PRESENTATIONS ANNOUNCED

Find out more at [housing-technology.com/event-speaker/data-matters-2024](https://housing-technology.com/event-speaker/data-matters-2024)

Housing Technology's Data Matters one-day event returns for its third consecutive year at The British Museum in central London on Tuesday 10 September 2024.

**MONDAY 09 SEPTEMBER**  
**6-8PM**  
**BROWNS | COVENT GARDEN**  
**LONDON**

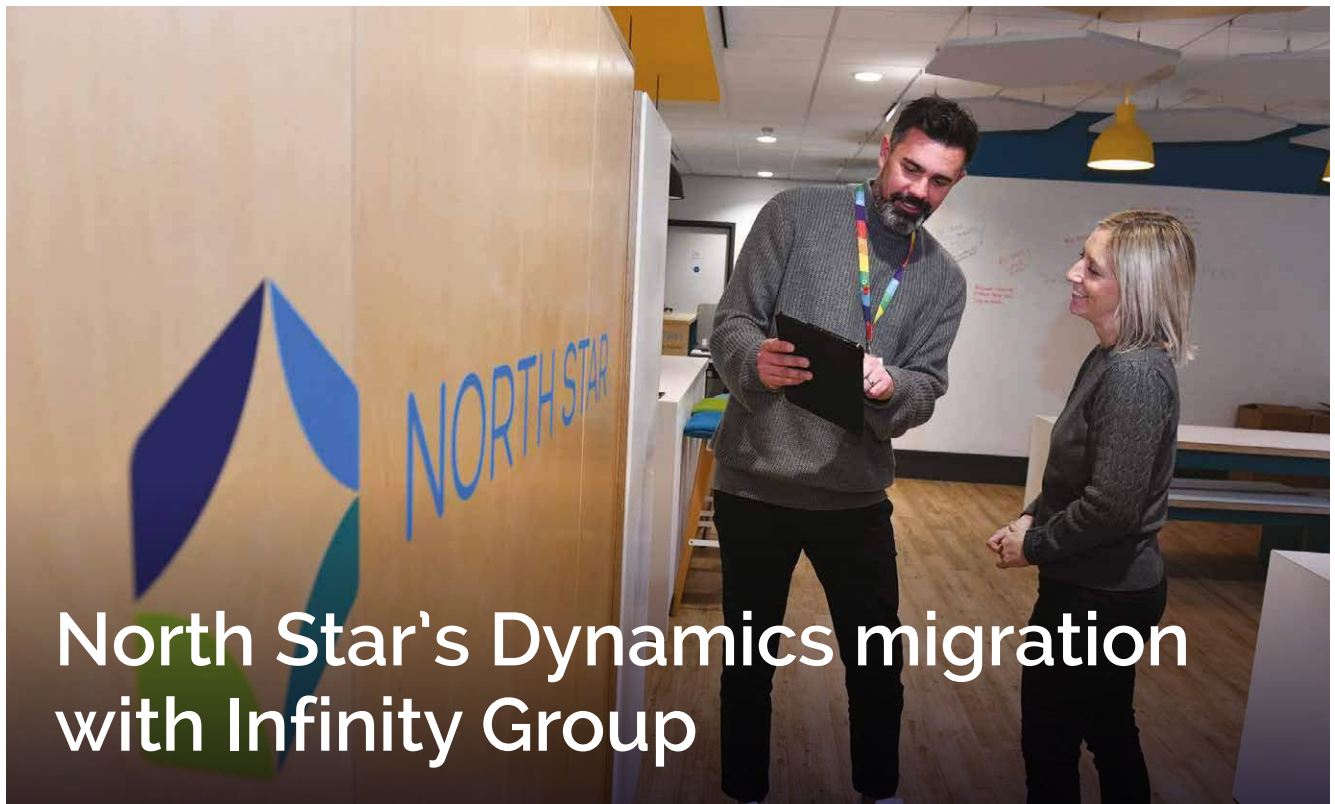
Ticket holders can join Housing Technology's exclusive pre-event evening reception with drinks, canapés, and informal networking. Registration is limited, book your ticket to secure your place.



## EXCLUSIVE PRE-EVENT EVENING RECEPTION

**BOOK NOW** at [housing-technology.com/event/data-matters-2024](https://housing-technology.com/event/data-matters-2024)





## North Star's Dynamics migration with Infinity Group

*North Star is close to completing its full migration from Capita OpenHousing to Microsoft Dynamics with support from Infinity Group. The housing provider was previously using Capita OpenHousing for rent accounting and tenancy management but wanted a more integrated, available and streamlined process.*

Sean Lawless, director of insight and transformation, North Star Housing, said, "Our roadmap has been to replace our current housing management system with Microsoft Dynamics, one module at a time. We've already deployed the CRM platform and a compliance module with Infinity Group, and in April we launched our tenancy and rent management module.

"Our previous solution didn't provide access for users to see balances and was rather siloed, with limited options for integration with our accounting systems, so we decided that rent accounting should be next. Infinity Group's rent accounting module has now replaced all of the tenancy and rental management that were previously done in OpenHousing.

"Our biggest challenge was data. We were moving all tenancy transactions and diary notes from thousands of tenancies, and there were millions of pieces of transactional data that needed to be migrated. By doing this in a well-managed and structured way with Infinity Group's housing team meant that from our go-live date, all balances matched our previous system as well as our accounting system."

Infinity Group's arrears management module, which uses algorithms to identify residents in arrears or about to go into arrears, was implemented at the same time.



**Sean Lawless, Director of  
Insight & Transformation,  
North Star Housing**

Lawless said, "We're now much more efficient. With our old system, housing officers were individually checking each rent account for arrears, which could be as many as 300 per month. With the new module, housing officers are only presented with rent accounts that are off plan or about to go off plan."

North Star is aiming to switch off OpenHousing completely in October after the final phase covering the deployment of modules of repairs and voids.

Lawless said, "We've seen others 'overlay' Dynamics and Salesforce on top of their existing housing management systems but our goal was to have a single modern system that managed all our processes."



Plentific has been selected by Anchor to digitalise its entire business operations across its housing portfolio of 54,000 properties and 200,000 work orders per year.

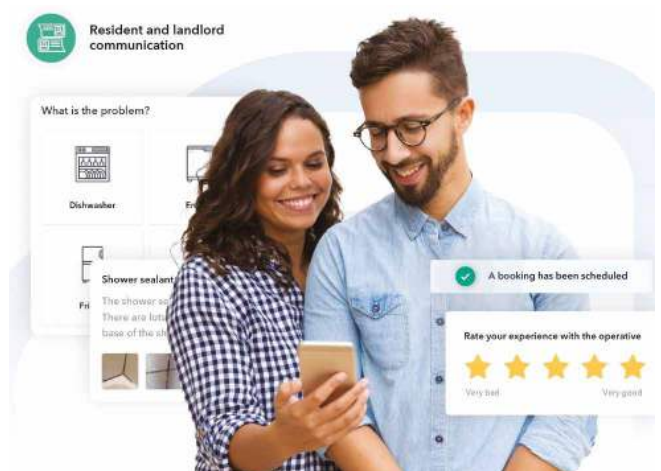
Plentific will be providing a single real-time platform to connect Anchor's staff and residents with contractors and digitalise its supply chain.

Plentific's platform will be deployed as an integration layer to unify Anchor's tier-one main contractors and tier-two sub-contractors. Plentific's software will also improve the housing provider's services to its residents through simpler interfaces, better workflows and greater automation.

Besides integration, Plentific's platform will also enable a number of other automations including work-order management for maintenance and repairs, inspections and resident engagement as well as supply chain, voids and compliance management. It also includes a marketplace of local SME contractors.

The optimisation of processes is planned for roll out in early 2025, with the whole process validation taking eight months.

Sarah Jones, chief executive, Anchor, said, "We know that completing repairs and planned works on time, to a good standard and at a price that represents value for money is central to our residents' experience of their homes, so it's vital that we get this right."



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# Considerations for a stock condition survey

## An asset management solution provider's perspective

David Ellis, Director of Operations, Asprey Solutions

*Since the introduction of systems and methodologies for cost- and condition-forecasting around 25 years ago, the amount of data available to housing providers, uses for it and collection methods have increased rapidly. Unfortunately, the improper use of data is also on the increase. It is therefore useful to examine how stock condition surveys and the evolution of asset management systems (AMS) have affected data management.*

### AMS purposes

With the government's focus on controlling costs and outcomes in the sector, the original purpose of an AMS was to provide a picture of the current and likely future condition and planned maintenance costs of a housing portfolio.

This remains a key requirement but is no longer quite so simple to ensure. 20 years ago, the first AMSs were populated with stock condition survey data of varying provenance and coverage, plus ad-hoc data on major past repairs.

This data was then extrapolated or cloned over whole-stock portfolios using algorithms similar to those used in best-practice guidance for surveying. The validity of outputs was dependent upon how representative the available data was of the whole stock and how well the system's extrapolation algorithms spread that data.

The resulting cost and condition projections were a revelation and supported the massive investment that new housing-condition standards such as Decent Homes imposed on the sector. These projections relied on statistically-sound representative samples of data being collected and reliable extrapolation algorithms.

### 20+ years of data improvements

Since those early days, there have been changes in data manipulation tools and data volumes:

- Increased cloning of properties to represent others made it easier to understand outputs.
- Increased cloning of components from one property record to another further aided understanding.
- Commonly, cloning is even carried out by surveyors to widen the scope of stock-condition surveys. Unfortunately, cloning poor data or cloning good data badly are common faults in the drive to achieve wider and more understandable (rather than better) information on stock.
- Data has been amassed from the unprecedented level of planned maintenance work.
- Validation surveys for planned and other maintenance works have often been recorded.
- The sector practice of 20 per cent per annum stock-condition surveys often accompanied the culling of vast amounts of data over five years old. This data is applied piecemeal to asset management databases.

Because surveys and AMS algorithms relied on similar statistical sampling conventions, the extrapolation of survey data proved surprisingly accurate in its early days, even though lots of ageing and questionable data had been used.

Unfortunately, new surveys, although often using sound statistical sampling methodologies, haven't always been of sample selections based on enhancing the overall representativeness of the existing contents of the organisation's asset management database.



They might instead serve a number of other purposes, such as filling data gaps, focusing on specific assets designated for planned works or merely extending the rolling survey plan based on a five-year-old hypothesis. There is nothing intrinsically wrong with these other purposes but there will be a gradual deterioration in the validity of samples and projections if there isn't an underlying aim of increasing the statistical validity of existing data or at least considering the overall data impact. Hence, data has improved and grown but lost its focus on the bigger picture.

### Survey considerations

How many surveys are first based on a full assessment of the existing data, how many conclude on the subsequent whole-stock position, and whose job is it to do so?

Remember, rule of thumb with rolling surveys is that 20 per cent of the existing data becomes invalid annually whether it has been replaced with new data or not.

Most asset management databases hold information on the provenance of data in them and set out stock-stratification information that allows such assessments to be carried out at any time. This information is rarely used in survey briefs and is very difficult to interpret without going back to basics.

People with responsibility for projections don't like them to be subsequently proven wrong, despite that being inevitable; regulatory reporting puts more pressure on such people in their day-to-day roles. The only way to build constant improvement into forecasting is to have their originators learning by monitoring the forecasts and comparing them to the actual results, driven by a will to improve rather than fear of failure; sadly, such monitoring is much abused in all business sectors.

### The client's role in data management

The solution to commissioning a sound stock-condition survey is to ensure that everyone is aware of the range of purposes to which it will be put, whether supplementing energy data, planning programmes of work or simply part of a rolling programme of stock-data maintenance and improvement. The latter purpose should be accompanied by a review of the existing data and a careful analysis to achieve the best sample in the most economic way. The survey design should mirror the asset management data's structure or that structure should be changed if it is not fit for purpose.

The four key stages of the exercise are:

- **Agree scope** – the surveyors will cover the minimum requirements so clearly define any extra requirements prior to commissioning.
- **Pilot** – ensure the surveyors are properly briefed and test the data collection and AMS loading in a pilot.
- **Validation** – data volumes grow fast so validate early and regularly via both desktop reviews and spot checks.
- **Final reporting** – at completion, load the data into the AMS and compare all results to the surveyor's report.

Guides to reliable statistical-sampling methodologies are widely available and should be considered by those people commissioning the survey to properly instruct surveyors. However, the statistical impact of the sample against the population that the survey covers and also that population's relevance to the whole stock should both be considered.

Surveyors will generally bring substantial professional skills to any assignment but they need a clear brief to ensure they can respond to their client's needs. Unsatisfactory surveys are too often attributed to unsatisfactory surveyors, despite unsatisfactory instructions.

The work of Asprey Solutions' business intelligence consultants, with a variety of housing customers on asset-value rationalisations and option appraisals, uses stock-condition cost projections alongside other data collated by our consultants to inform investment, divestment and rationalisation measures in asset portfolios.

We work with data from third-party AMSs as well as our own and find it relatively straightforward to identify and compensate for any data deficiencies. The level of our consultants' data-analysis skills is heightened but data gaps, inconsistencies, exceptions and anomalies are capable of identification by anyone with an appropriate output of the data.

### Representative sampling

The principles of representative sampling can be more complex but surprisingly small samples of homogenous data (often as low as 10 per cent randomly chosen) can provide an accurate picture of homogenous populations. With disparate data, 100 per cent samples are generally needed.

Consequently, arranging assets into homogenous groupings is critical; most databases record asset types, construction types, build years, location and so on that can be used to create reasonable groupings for survey and extrapolation purposes. The AMS supplier should be able to advise on the extrapolation algorithm within their system and any cloning assumptions (the surveyors should also have a record of their assumptions).

Armed with this information, users can gain substantially more confidence in the veracity of the results coming out of their AMS and/or improve any deficiencies.

*David Ellis is the director of operations at Asprey Solutions.*



# Aareon to be sold for €3.9 billion

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*Aareal Bank and Advent International have announced their intention to sell Aareon to TPG and CDPQ for around €3.9 billion (£3 billion).*

Lee Burke, chief revenue officer, Aareon said, "This is a huge milestone and great news for Aareon, its customers and employees. Aareon will become an independent company, investing in and enhancing its innovative product suite to better serve the social housing sector."

Aareal Bank and Aareon said that they will continue to support their customers after the transaction through their joint venture, First Financial Software. The transaction is expected to take place later this year.

Flavio Porciani, partner, TPG, said, "For many years, we have admired Aareon's position as a leader in the European property management sector. We are thrilled to partner with the Aareon team and our fellow investors to build on the successes of the business as a standalone company."

Harry Thomsen, chief executive officer, Aareon, said, "This transaction marks a milestone in the development of Aareon. Thanks to the strong support of our owners Aareal Bank and Advent International, the company has made excellent progress in recent years. We now have reached a point where we can take the next step in our development."

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# Flagship signs three-year deal with Asprey

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**Flagship Group has signed a three-year contract with Asprey Management Solutions for its Asprey Assets software to cover asset management and planned works.**

Charlie Conley, head of asset investment, Flagship Group, said, "Our new Asprey asset database will enhance our use of data and reporting as well as give us a platform for more detailed asset investment planning.

"Our surveyors will be able to report on the condition and improvements needed for our properties more easily and we'll be able to action those recommendations more effectively."

## **Asprey & Sava's sustainability modelling**

Asprey Solutions and Sava have joined forces to launch a combined solution that helps housing providers to optimise their property investments and asset performance in a way that is environmentally, socially and economically viable and sustainable.

Asprey and Sava's solution combined the strengths of two powerful BI products to offer a comprehensive approach to portfolio rationalisation and option appraisal, coupling Sava's energy modelling with Asprey's commercial sustainability modelling.

Asprey's AspireBI tool equips users with a streamlined asset value rationalisation and option appraisal model, fostering strategic decision-making and consensus-building across organisations. Sava's Intelligent Energy provides energy performance calculations, data quality assessments, and improvement planning tools.

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# Cardo Group & Nexus

## – Lessons from a complex acquisition & data migration

John Brett, Operations Director, Nexus Open Systems

Successfully navigating the complex processes of acquisitions and data migrations takes a mix of strategic planning, technical know-how and teamwork. From Cardo Group's recent acquisition of Osborne Property Services (OPS) and its collaboration with technology partner Nexus Open Systems, we've gathered key strategies for pulling off successful acquisitions and large data migrations. These insights are particularly valuable for housing leaders looking to manage similar challenges.

### Understanding the challenge

Acquisitions and data migrations present unique challenges that demand careful planning and execution. The key considerations include:

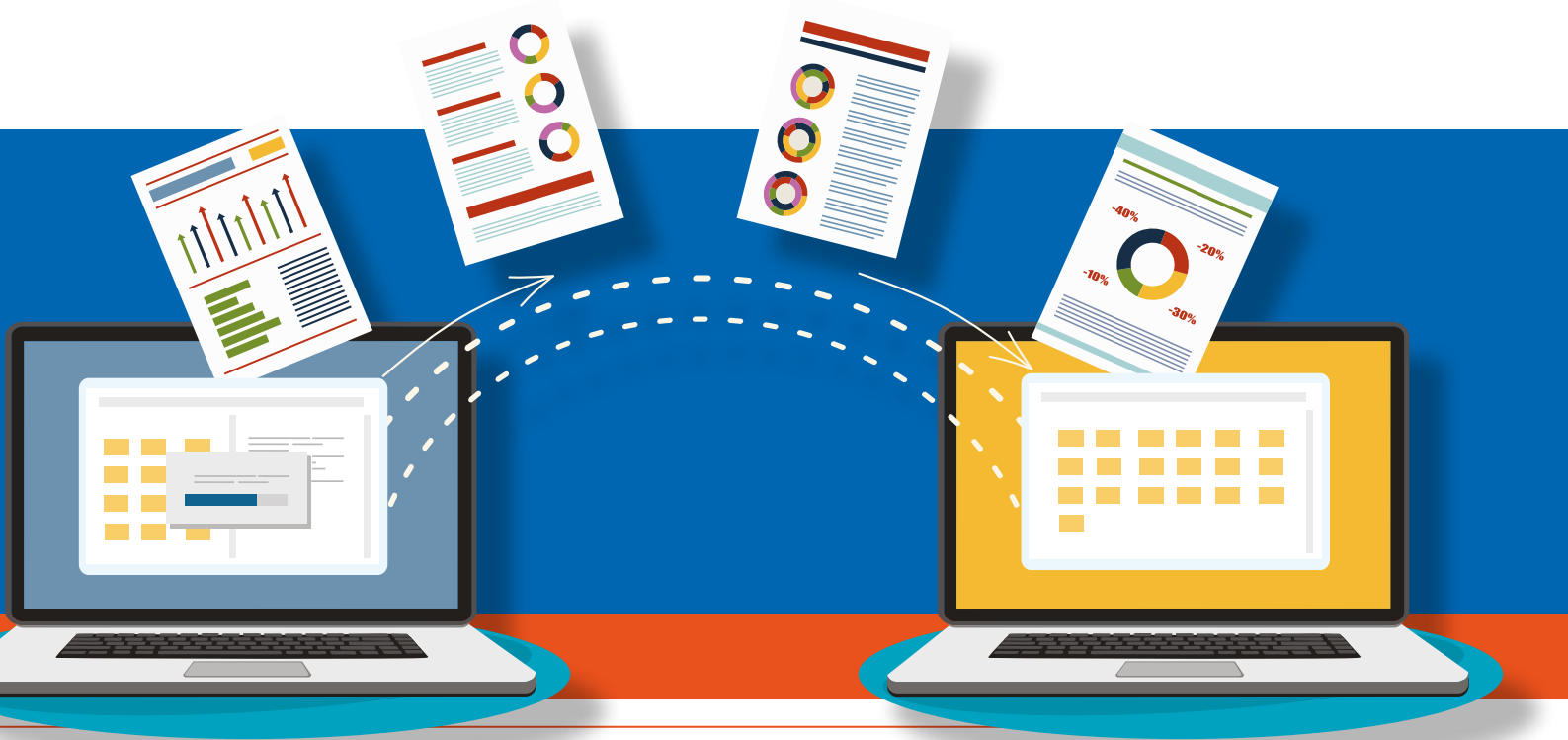
- **Complex system transfer:** Integrating an acquired business into the parent company's infrastructure demands an in-depth analysis of all information assets. For Cardo, this meant identifying and transferring systems including Dynamics 365, Microsoft 365, networking, printing and security into a new infrastructure.
- **Data-mapping:** Restructuring data to meet strategic business objectives is crucial. Cardo had to manage data across 60 Teams/SharePoint sites, ensuring that security permissions, versions and archive integrity were maintained throughout the process.
- **SaaS migration:** In-depth analysis of all the SaaS platforms to provide migration plans for user accounts as they were transferred to the new infrastructure.
- **Shared services identification:** Identifying which assets from the acquired business are within scope, those that will remain with the parent business and those that can be shared services between the acquired and existing businesses can optimise efficiency.
- **Evolving workforce management:** Managing workforce changes during a transition is critical. Cardo navigated changes for 300 users, including handling new starters and leavers.

- **Minimising downtime:** Maintaining uninterrupted service is vital. Strategies to minimise downtime and ensure business continuity were key priorities.
- **Cross-departmental coordination:** Recognising that other departments relied on the migration's key delivery dates was essential. For example, activities such as rebranding the business, updating vehicle livery and issuing new uniforms were all contingent on the activation of new email addresses at go-live. This awareness ensured seamless coordination and timing across the organisation.

### Executing the project

Successfully managing acquisitions and data migrations requires strategic execution:

- **Upfront planning:** Thorough initial planning ensures alignment with broader business strategies. Nexus conducted exploratory workshops and strategic discussions with Cardo and OPS stakeholders to understand their long-term goals and match them with the integration process.
- **Scalability & future-proofing:** Designing infrastructure to accommodate future growth is essential. Nexus created a robust multi-tenant environment to support Cardo's evolving needs, ensuring scalability and adaptability.
- **Regular communication:** Transparent and consistent communication is the bedrock of effective project management. Weekly progress meetings facilitated real-time problem-solving and decision-making, keeping



all stakeholders informed and engaged. Workshops of proposed changes to line-of-business systems provided further opportunities to identify undocumented business processes and ensure the proposed future business systems provided the required functionality.

- **Expert technology partnerships:** Leveraging specialised IT partners can mitigate risks and ensure smooth transitions. Nexus's expertise in managing large-scale data migrations provided invaluable guidance and support, demonstrating the importance of choosing experienced partners.
- **Thorough scoping:** Comprehensive discovery phases help to identify potential risks and complexities. Nexus's extensive scoping exercises laid the groundwork for effective planning and execution.
- **Strong internal sponsorship:** Collaborating closely with the operations teams across various offices created a unified team with the sole objective of a successful migration with no business disruption. This strong internal sponsorship was vital in ensuring aligned efforts and a joint focus on achieving the project's goals.

### Leveraging technology

Technology plays a crucial role in simplifying complex projects:

- **Data-migration tools:** Tools such as Sharegate and BitTitan enable seamless data transfer while maintaining security permissions, versions and archives.
- **Device management:** Using Microsoft Intune and Autopilot ensured that all devices were reconfigured smoothly with the new system, facilitating a seamless transition and also providing efficient device management for the future.
- **Security:** Implementing Microsoft Defender, a managed SOC and cloud-based backup solution provided robust protection against cyber threats, safeguarding sensitive data and ensuring system integrity.
- **Infrastructure:** Establishing a new Azure infrastructure laid the foundation for a scalable and adaptable IT

environment, supporting Cardo's growth and future acquisitions.

- **Agile project management:** The business had to continue operating smoothly during the project, managing new contracts, tenders and newly-formed internal departments. An agile project management approach was crucial to meet these requirements without compromising the project's core objectives.

### Minimising downtime

Minimising downtime is crucial to maintaining business continuity:

- **Detailed strategy & planning:** Accurate estimation and thorough planning are essential. Nexus's detailed strategy for resource allocation and proactive approach to anticipating challenges ensured minimal disruption to Cardo's operations.
- **Proof-of-concept:** Conducting a trial run with a small sample of data allowed for feedback and adjustments before the full migration, boosting confidence in the process.
- **Synchronising phase:** Synchronising data between platforms before the planned go-live date dramatically mitigates the risk of the go live by reducing the amount of data transfer during the final cutover.
- **Third-party management:** Ensuring that all relevant third parties were fully aware of the project timelines and their obligations was crucial. This coordination guaranteed that all partners were aligned with the project's goals, minimising delays and ensuring a smooth integration process. Additionally, updating system/software logins with changed email accounts was necessary to maintain seamless access and functionality.

### Project completion & lessons learned

#### 1. Thorough planning & accurate estimation

One of the critical success factors in Cardo's project was the emphasis on thorough planning and accurate estimation to ensure completion within the agreed timescales:

- **Detailed scoping & discovery:** Conducting extensive discovery phases at the start allowed Nexus and Cardo to understand the intricacies of both the acquired and existing environments. This enabled them to identify potential risks, complexities and areas of focus early on and perform the necessary remediation to mitigate the identified risks.
- **Strategic alignment:** Ensuring that the goals of the acquisition matched the broader business strategies was essential. By aligning the project's objectives with the long-term vision of the organisation, Cardo ensured that the integration process supported its overall strategic goals.
- **Resource allocation & timeline management:** Accurate estimation of the time and resources needed for the migration helped in effective resource allocation. This involved planning for potential bottlenecks and ensuring that there were sufficient resources available to handle unexpected challenges.
- **Practice runs & simulations:** Engaging in practice sessions and running simulations helped to identify potential issues before the go-live date. This not only provided valuable insights but also boosted confidence among the stakeholders.
- **Agility in managing external factors:** Being agile enough to adapt to unexpected external factors, such as road closures, strikes, supply chain disruptions and third-party availability was crucial. This adaptability ensured that external challenges didn't derail the project timeline.

## 2. Proactive issue management

Addressing potential problems early and proactively was another critical aspect of the project's success:

- **Early identification of challenges:** By discussing previous migration challenges with the client, Nexus was able to anticipate and prepare for similar issues. This proactive approach helped in creating targeted solutions to known problems. Training on the line-of-business applications before the go-live date provided an invaluable opportunity to verify that the business requirements were being met and to uncover any undocumented business processes.
- **Design exercises & feedback loops:** Initiating design exercises at the project's outset enabled the team to foresee and address potential design-related issues. Regular feedback loops allowed for continuous improvement and adaptation throughout the project.
- **Comprehensive support materials:** Creating detailed support materials helped Cardo's staff move smoothly to the new systems. This support mitigated resistance to change and enhanced user adoption. Even in this digital era, the presence of technical- and business-support people at each location provided the stakeholders with the assurance that any queries were dealt with immediately.
- **Contingency planning:** Developing contingency plans for critical phases of the project ensured that any unexpected issues could be managed without significant

disruption. This included having backup solutions and alternative workflows ready.

## 3. Ongoing support & future projects

The role of ongoing support and planning for future growth cannot be overstated:

- **Long-term partnership:** Establishing a long-term partnership with an experienced technology provider such as Nexus has significant benefits. Such partnerships ensure continuous support, helping to address any post-migration issues promptly and efficiently.
- **Scalability & adaptability:** Designing the IT infrastructure with scalability in mind ensured that Cardo's systems could accommodate future growth. This foresight is crucial for housing providers wanting to expand their operations or integrate additional acquisitions.
- **Continuous improvement:** Ongoing support allows for continuous improvement of the IT environment. Regular updates, security patches and optimisations keep the system robust and efficient.
- **Preparation for future projects:** Leveraging the experience gained from this project, Cardo and Nexus are better prepared for future projects. This includes having a refined process and transferable template for scoping, planning and executing similar projects, reducing the learning curve and increasing efficiency.

## Integration with confidence

Successfully navigating acquisitions and data migrations requires careful planning, the smart use of technology and strong partnerships. The journey of Cardo and Nexus offers practical lessons that housing leaders can use to tackle these challenges with confidence. By focusing on thorough preparation, addressing potential problems early and ensuring ongoing support, organisations can achieve smooth transitions and set the stage for future growth.

Ben Marsden, CIO, Cardo Group, said, "Working closely with Nexus, we were thoroughly impressed by the meticulous scoping and attention to detail they brought to this project. The expertise within Nexus's team shone through every aspect, ensuring a seamless integration that met our strategic objectives while keeping our operations running smoothly.

"This project highlighted the importance of agility and foresight, enabling us to adapt to unexpected challenges and confidently plan for the future. The lessons learned will continue to guide us as we leverage this experience with future acquisitions, exploit new technologies and innovate our business."

*John Brett is the operations director at Nexus Open Systems.*



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# Innovation & transformation

Pippa Saunders, Senior Business Development Manager, Social Telecoms

*Welcome to a journey of transformation and innovation in social housing, where technology meets tenancies to create a seamless experience for both housing providers and their residents. In this article, we will explore the transformative journeys of Housing Solutions and Beyond Housing, two forward-thinking Social Telecoms customers who have embraced the power of modern contact-centre technologies to revolutionise customer engagement, satisfaction and service delivery.*

## Housing Solutions' journey

Housing Solutions has been on an ambitious digital transformation journey, underpinned by a clear strategy to enhance customer experience and operational efficiency. Richard Harvey, Housing Solutions' assistant director of digital transformation and organisational design, has been a key figure in this journey and has been instrumental in identifying and integrating innovative technologies to streamline operations and improve tenant interactions.

In 2023, Housing Solutions outlined a digital strategy that focused on creating an environment where employees, residents and the board could thrive. This strategy was influenced by its corporate objectives, emphasising the importance of being safe, satisfied and sustainable.

At the Housing Technology 2024 conference, Richard Harvey shared his insights into the integration of 8x8 AI-powered solutions, such as the Intelligent Customer Assistant (ICA) and Contact Centre Analytics. These technologies have redefined customer engagement, allowing for more streamlined and effective communication. For example, ICA is designed to provide immediate, round-the-clock support for customers, addressing a wide range of enquiries and significantly improving the customer experience.

Richard Harvey said, "Our digital transformation has been a strategic endeavour to enhance both customer experience and operational efficiency. By integrating AI with a digital assistant and contact centre analytics, we've not only streamlined our operations but also redefined customer engagement."

A digital assistant can manage routine enquiries and not only enhances customer satisfaction but also frees up the valuable time of contact centre advisors, allowing them to focus on more complex, high-value interactions.

The combination of AI and analytics provided Housing Solutions with deep insights into its customers' behaviour and preferences. This data-driven approach enabled it to tailor its services more effectively, ensuring that it met the needs of its customers in a more personalised and efficient manner.

## Beyond Housing's transformation

Beyond Housing's journey through digital transformation has been marked by innovation and a focus on enhancing customer service. At the heart of this journey is the integration of cutting-edge contact centre technology and a robust housing management system; together, these have propelled Beyond Housing to the forefront of customer service excellence.



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Leanne Thistle, Beyond Housing's customer services manager for digital, has been instrumental in implementing and embedding the 8x8 contact centre system into the business. Her expertise and knowledge of the system have been invaluable to the company's success, enabling Beyond Housing to provide a seamless and efficient service to its customers.

Leanne Thistle said, "Post-merger, we recognised better communication as something we needed to strengthen to improve customer satisfaction and 8x8 provided the clarity we required. We've looked into the quality management tool to identify team training needs, ensuring our advisors deliver superior first-contact resolutions. We're now exploring speech analytics to gain deeper insights and have already seen benefits from optimised call-flows, leading us to rebuild our IVR."

The integration of 8x8's Contact Centre and Logicdialog's digital assistant has revolutionised Beyond Housing's customer service capabilities. This scalable and efficient system has significantly reduced call and email volumes, increased agent productivity and improved first-contact resolutions. The advanced features of Logicdialog's digital assistant, such as a knowledge base with clickable links and sentiment analysis, have enhanced the customer experience by providing quick, accurate responses and a more personalised service.

Beyond Housing's collaboration with MRI Software to build a brand-new housing management system has been a key milestone in its digital transformation journey. This initiative was part of a conscious decision to combine systems, including 8x8 and Logicdialog, to create a long-term plan that benefits customers. The organisation's efforts were recognised at the Housing Technology's 2024 awards, where Beyond Housing was commended for its achievements in Digital Transformation.

### Comparative analysis

When examining the journeys of Housing Solutions and Beyond Housing, several key themes and strategies appear, highlighting the transformative impact of technology in the housing sector. Both organisations embarked on ambitious digital transformation projects, with a focus on enhancing customer service and operational efficiency through innovative contact centre solutions.

Housing Solutions and Beyond Housing have both embraced AI-powered customer experience solutions to elevate their service delivery. Streamlined omni-channel communications have enabled both organisations to offer comprehensive 24/7 support, addressing a wide array of enquiries efficiently.

Both organisations recognised the need to address the inadequacies of legacy systems and meet the growing demand for modern digital communications. They each took an approach to consolidate systems and create long-term plans that help customers, reflecting a shared understanding of the importance of customer-focused service delivery.

A key element in their strategic approaches was their use of the PfH Telecommunications Framework, which provided a structured and cost-effective procurement route for their telecommunications needs. This framework allowed both Housing Solutions and Beyond Housing to access a range of services and solutions that have been pre-checked for quality and compliance, ensuring they could implement the best possible systems.

### Technological Impact

The technological impact of AI-powered systems in the housing sector, particularly through the services provided by Social Telecoms and its partners, has been significant, offering a suite of advanced functionalities that have redefined the customer service landscape for housing providers.

Beyond Housing's use of an intelligent IVR system is a prime example of this impact. The intelligent IVR system uses AI to understand and process voice commands, allowing customers to self-serve or handle a majority of their preliminary questions through virtual assistance.

The digital assistants provided by 8x8 and Logicdialog offer an intuitive and responsive interface for customers, allowing for natural language interactions and quick access to information. This not only improved the efficiency of customer service but also increased satisfaction by providing immediate and relevant responses.

### Conclusion

For Housing Solutions and Beyond Housing, the integration of AI-powered contact centre solutions has been game-changing. These technologies have not only streamlined operations and improved tenant engagement but have also set a new standard for customer service excellence.

For prospective customers considering their own contact centre communications, it's essential to recognise the value that such technology can bring to your organisation.

By using Social Telecoms' position as no.1 ranked supplier on the PfH Telecommunications Framework, housing providers can access a range of pre-vetted services and solutions, ensuring quality and compliance while meeting their telecommunications needs.

Embracing AI-powered customer experience solutions is not just about keeping up with technology; it's about taking a proactive step towards enhancing your service delivery and making a lasting impact on your community. As proven by Housing Solutions and Beyond Housing, the right technology can empower your organisation to deliver exceptional service and drive forward with a clear, focused vision.

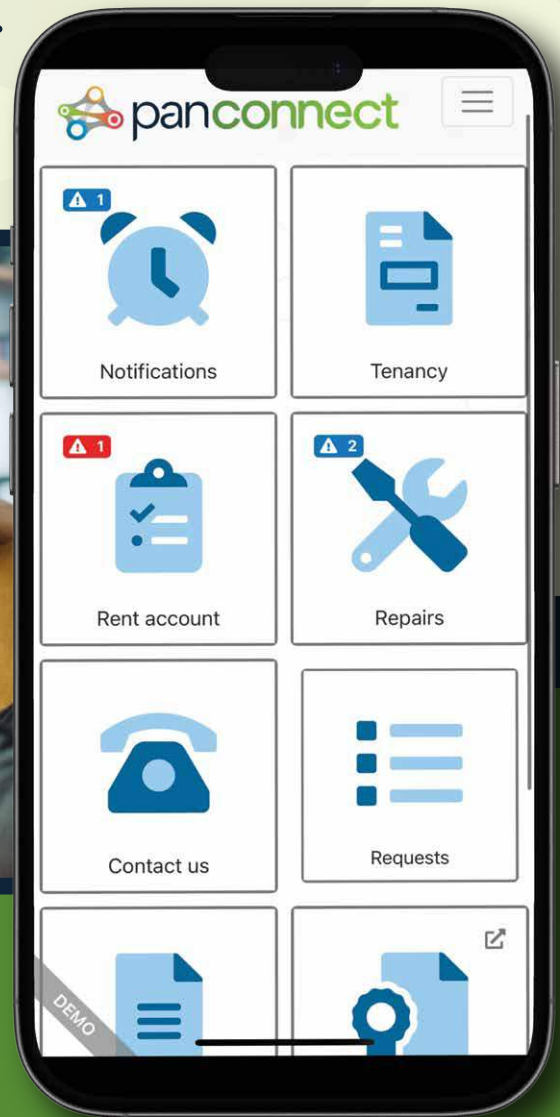
*Pippa Saunders is the senior business development manager at Social Telecoms.*





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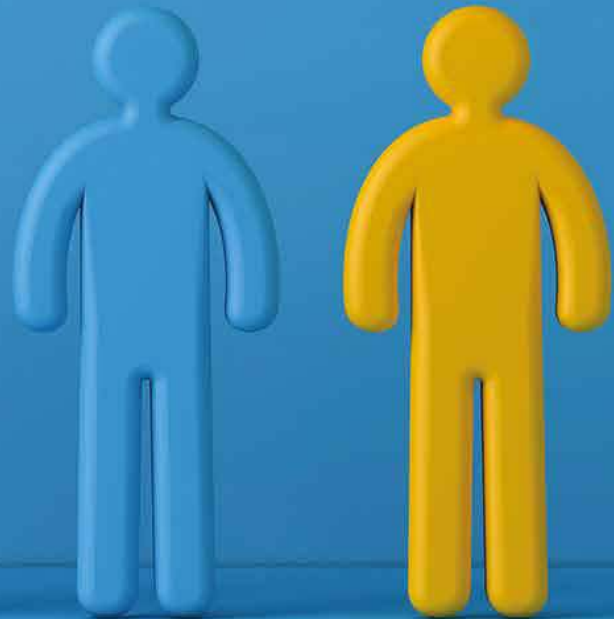
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# Transforming compliance with AI at North Star

Sean Lawless (r), Director of Insight & Transformation, and James Walder, Executive Director of Finance & Business Support, North Star Housing with Housing Technology's George Grant (l)



**INNOVATION**

**BRONZE AWARD**

North Star Housing won the bronze award in the innovation category of the inaugural Housing Technology 2024 awards. Sean Lawless and James Walder from North Star Housing explain more about their award-winning programme.

At North Star Housing, we embarked on a transformative journey to replace our legacy housing management system with Microsoft Dynamics, with the goal of implementing a module which would provide immediate and significant benefits to the business. We decided to go live first with our complaints module, allowing users to familiarise themselves with Dynamics, before transitioning to our compliance module.

Compliance administration, particularly without a direct labour organisation (DLO), can be intricate and cumbersome. Our existing reporting system was slow and our entire compliance process was perceived as being too complicated. Internally, compliance has always been a challenging area, requiring in-depth knowledge of our

legacy system. The complexity of this process added a layer of difficulty to compliance reporting. To ascertain compliance status, lengthy reports had to be generated, filtered and summarised.

### Creating a streamlined solution

Understanding these challenges, we aimed to streamline the compliance process to enhance the efficiency of our compliance team. Our objective was to standardise the compliance process across various items and improve the overall management of workloads.

Collaborating with Infinity Group, we developed a solution focused on all aspects of compliance. Our new system follows a comprehensive cycle:



- 1. Job ticket generation** – The system generates a job ticket for a contractor to attend a property for servicing a compliance area 90 days in advance.
- 2. Tenant contact and escalation** – The contractors contact tenants to gain access. If immediate access isn't possible, the contractors use a simple system connection to update us on the escalation phase, including any letters sent.
- 3. Certificate upload** – Once the job is complete, the contractors upload their certificates to SharePoint.
- 4. AI-assisted assurance check** – Microsoft AI performs an assurance check on the certificate, verifying the UPRN, matching property address, validity date, signature and specific compliance details (e.g. verifying boiler details for gas compliance).
- 5. Automatic processing** – If the certificate passes all checks, details are automatically uploaded to Dynamics, the job moves to a 'ready to invoice' stage and the certificate is saved against the property and tenancy in Dynamics, resetting the compliance cycle.
- 6. Error handling** – If any checks fail, the certificate moves to a failed folder for review and correction by our compliance team.

In addition to these steps, the AI scans the certifications for any remedial measures required. For example, in fire risk assessments, the AI extracts details of each recommendation, priority and deadline for the compliance surveyor's review.

#### Comprehensive coverage and real-time reporting

This new process covers most compliance areas including: gas certification; commercial gas certification; electrical installation condition reports (EICR) for minor and major works; fire maintenance; fire risk assessments; portable appliance testing (PAT); lift testing and regulations; and legionella.

Our reporting for each compliance area is now real-time and user-friendly. We've created views for each compliance area, indicating if a property is compliant, non-compliant or nearing non-compliance. Additionally, all data is connected to a live PowerBI dashboard, offering a comprehensive view of compliance data for our entire business.

#### Impact on the compliance team

We manage over 4,000 properties and our compliance team includes a manager, surveyor and two administrators.

Before this transformation, the team spent a lot of time (around 24 hours per week per administrator) manually uploading, checking and logging compliance items.

Since implementing the new module in November 2023, the team now only spends nine hours per week on these same processes. This shift allows the team to focus on assurance checking rather than being overwhelmed by bulk data-processing.

The increased efficiency has enabled the team to tackle additional projects. For example, we have initiated a new tree management programme for a forest on one of our estates, a task previously earmarked for external consultants but now handled in-house. The compliance team will also manage the new damp, mould and condensation (DMC) module in Dynamics, enhancing the monitoring and reporting of DMC beyond the day-to-day repairs team.

#### Revolutionary results

By leveraging AI, we have introduced a level of assurance to our certification checking that was previously unattainable. This innovation mitigates the risk associated with compliance management and focuses the compliance team's attention on critical areas, while efficiently processing satisfactory certificates in bulk.

The time savings achieved have allowed our compliance team to concentrate on other essential areas with greater detail and dedication. This transformation underscores the power of AI in revolutionising compliance management and creating a more efficient, effective and focused team at North Star Housing.

*Sean Lawless is the director of insight and transformation and James Walder is the executive director of finance and business support at North Star Housing. The housing provider won the bronze award for innovation at the inaugural Housing Technology 2024 awards.*

# Raven Housing's award-winning Better Connected project



Mark Baker (l), Executive Director of Resources & Deputy Chief Executive, and Rachel Irvine (above), Business Systems Manager, Raven Housing Trust

CUSTOMER/TENANT SERVICES

GOLD AWARD

Raven Housing Trust won the gold award in the customer/tenant services category of the inaugural Housing Technology 2024 awards. Mark Baker, executive director of resources and deputy chief executive at Raven Housing Trust, explains the digital transformation and customer experience programme behind its 'Better Connected' programme.

Raven Housing Trust has spent the past three years delivering a digital transformation programme which has revolutionised how we work by improving efficiency, cost effectiveness and customer experience.

### The challenge

In such a fast-moving digital age, we have been keen to explore how technology can help us keep pace with changing customer expectations, make better use of our resources and ultimately be more effective in delivering our core purpose.

Our key focus has been on delivering our customer experience strategy; to design valued and trusted services to meet customers' needs and priorities. As part of this commitment, we wanted to make it easier for customers to deal with us online or by phone, get their queries to the right person and have issues speedily resolved.

Another objective has been to harness automation to reduce the need for manual processing of data, thereby freeing up colleagues so their time can be better spent dealing with more complex customer inquiries.



With the shift towards home or hybrid working, and to make the best use of field-based employees' time, we also need to ensure we have a secure system which allows colleagues to access information and work from any location on any device.

### Our solution

Our 'Better Connected' digital transformation programme was an all-encompassing change in our IT infrastructure and systems, which essentially developed simpler-to-use, more integrated systems with cloud-based solutions.

We began with the overhaul of our IT infrastructure to support our move to cloud-based services, the decommissioning of our legacy systems and enhancements to our cyber security. We have shifted from over 60 applications to just six core systems, creating a simpler and more integrated IT infrastructure.

We developed a data lake and warehouse to secure information as well as moving all our documents to SharePoint for online accessibility.

We teamed up with technology partner TechLabs London to deliver its Microsoft-based iProperty Cloud platform, PwC to deliver a Microsoft Dynamics finance system and other partners to deliver payroll, learning and development, and other applications.

We use AI Builder to automatically update documents such as gas certificates and calculate the next inspection date due. We have linked documents to processes so that all information is available to colleagues, regardless of where they are working.

The implementation of a new CRM system has mobilised over 100 front-line colleagues using Microsoft's Field Service app, incorporating built-in notifications to keep customers up-to-date.

Our telephone system has been designed, delivered and integrated with our CRM so colleagues can instantly identify customers and open their contact record. Customer queries are then automatically logged and distributed to the appropriate colleague.

The iProperty Cloud platform is integrated with our new finance system so that supplier data only needs to be entered once and is then maintained across the systems.

All this has streamlined and automated our internal processes, allowing progress on jobs to be tracked and customers kept informed via our newly-updated MyRaven self-service portal.

The re-launched MyRaven portal now allows customers to pay rent, set up direct debits, view documents, chat with us, report anti-social behaviour, make complaints and raise, schedule and track repairs, as well as being able to upload documents, photos and videos.

We have also revamped our website and developed an easy-to-use portal for contractors, linked to our asset

management system, enabling them to receive work orders, update, feedback and invoice completed work.

### Business impact

Our multi-award-winning 'Better Connected' programme and the underlying iProperty Cloud platform have streamlined systems, boosted efficiency and improved customer experience.

MyRaven's portal functionality has resulted in:

- 45 per cent increase in digital customers (approx. 5,000);
- 50 per cent of complaints and ASB cases raised online;
- Twice as many repairs raised online (over 20 per cent);
- 50 per cent of payments made online as well as 20 per cent by direct debit;
- 100 per cent of users satisfied that MyRaven is easy to use;
- The Housing Ombudsman sharing our work as best practice.

Our telephone and CRM system integration has led to:

- A reduction of three minutes per call to the contact centre;
- A 25 per cent reduction in call handover.

Our colleagues' ability to see progress on existing tasks and book future tasks while with a customer has reduced our administrative costs by 20 per cent. With all areas on a common platform and data in one place, we have removed the need for spreadsheets and other manual processes in an estimated 65 per cent of operational areas.

### Future plans

Better Connected has also put us in a strong position to implement evolving technologies. We will soon fully manage rents, service charges and arrears end-to-end through MyRaven, along with making asset data available to residents (e.g. when their kitchen is due for renewal).

We also plan to develop a self-service app, automate solutions to tackle problems such as damp and mould, and investigate how generative AI could transform how we access and interrogate our data through natural-language processing.

While we are delighted with Better Connected's impact so far, we are excited about the future opportunities it presents to further enhance the customer experience while keeping us at the forefront of our sector's digital journey.

*Mark Baker is the executive director of resources and deputy chief executive at Raven Housing Trust. The housing provider won the gold award for customer/tenant services at the Housing Technology 2024 awards.*

# Designer Software & Housing Online's HMS & portal

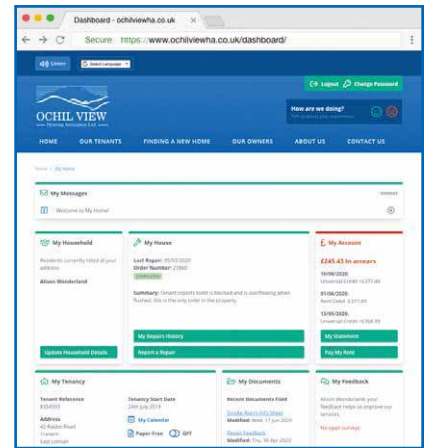
*Housing Online and Designer Software have teamed up to offer the two companies' products as a combined system.*

The joint offering comprises Designer Software's HomeMaster housing and finance management software seamlessly connected with Housing Online's My Home portal for tenants, staff and contractors.

Ian Thompson, CEO, Designer Software, said, "Our migration pathway from legacy systems is enabling our customers to benefit from the productivity gains and cost savings afforded by HomeMaster, and our

alliance with Housing Online brings together two organisations with a common purpose."

Phil Sorrell, development and customer relations director, Housing Online, said, "We're bringing together two industry-leading products tightly integrated in one place, and we've been delighted at how well our two organisations work together."



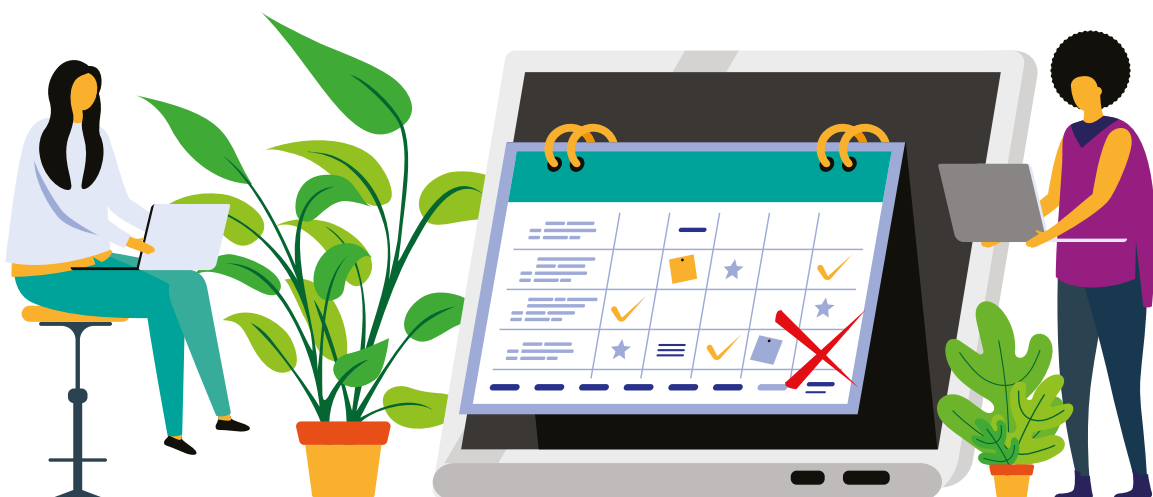
## FINANCE MANAGEMENT

# 'Missing week' could cost £220m in arrears

Housing providers could see a £220m spike in arrears this year, according to Housemark, due to this financial year having 53 'rent weeks' while the governments' universal credit payments only cover 52 weeks.

Jonathan Cox, director of data and business intelligence, Housemark, said, "This 53-week problem comes at the worst possible time for tenants as households continue to face challenges due to the cost-of-living and price rises.

"While the social housing sector is generally very good at managing and collecting rent arrears, housing providers need to monitor the impact of policies, events and circumstances that might push their tenants into debt and affect their income management."



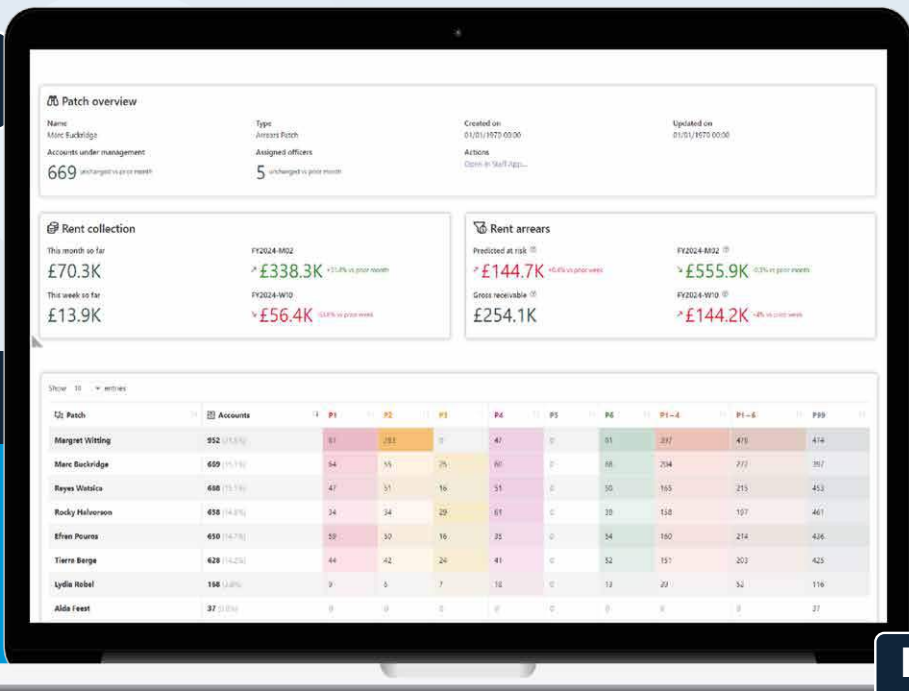


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# Procurement & innovation

Neil Butters, Head of Procurement, Procurement for Housing

*Procurement usually gets the blame when innovation is blocked in social housing. Public-sector buying teams, with all their perceived rules and regulations, are branded as spend controllers, not disruption enablers.*

I've worked in housing procurement for nearly ten years so I recognise this label only too well. Sometimes it is justified (rigid public procurement laws don't make it easy to source the latest solutions from proptech SMEs and IT start-ups) but I've never met anyone in housing procurement who went into it for the bureaucracy and red tape.

### Day-to-day procurement

Apart from larger housing providers, most procurement teams are underfunded and overworked with day-to-day sourcing. There just isn't the headroom or expertise to proactively scan emerging markets and buy things that have never been bought before.

And that's where the problem lies. Public-sector procurement is predicated on the contracting authorities knowing the type of product or service they want to buy. But with cutting edge technology, that's not usually the case.

### Bureaucratic barriers

Instead, it's largely entrepreneurs who identify a problem and create a solution. However, they find it hard to enter the market. Extensive tender documentation puts them off and they can't scale their solutions because housing organisations don't know how to procure them compliantly.



I've heard this story countless times and it's why we set up Social Housing Emerging Disruptors (SHED) in 2021, a framework that helps housing providers to procure non-traditional solutions from fledgling firms compliantly. We designed a light-touch, SME-friendly tender and awards process so smaller enterprises aren't scared off and housing providers remain compliant.

So far so good. We're now on the third generation of SHED with over 60 suppliers offering pioneering solutions.



Every year the number of suppliers and housing providers involved increases significantly.

### Sector-wide changes

But in all honesty, we've not seen the demand we expected, particularly now the procurement barriers are gone. Over recent months, I've reflected on why that is and what we can do to change it. I've realised that procurement isn't to blame; it's the wider social housing sector that needs to change.

There is a high barrier to entry if you want to supply products to local authorities and housing providers. You need public, product and employers' liability insurance in the millions, along with ISO-14001, ISO-9001 and ISO/IEC 27001.

These standards and cover levels are routine because they're thought to mitigate organisational risk. What isn't considered is that in most instances, innovators are small businesses with fewer than 10 employees. They don't always have three years of accounts, a fully-fledged DR plan and a long list of certifications.

### Balanced decisions

In contrast, when a supplier applies to join the SHED, we don't insist that they already have these. Instead, if they don't, we highlight this to the housing providers so they can make their own balanced decisions based on a specific supplier's risk profile.

And that's the crunch point. We're finding that housing providers aren't prepared to accept risk outside their standard tolerances. They might have identified the perfect supplier with the perfect solution but they can't bring themselves to press 'go' due to increased risk.

It's now no longer procurement saying 'no'; it's the people responsible for an organisation's risk profile. When tolerance levels are set, extensions for innovation procurement aren't built in.

Of course, I don't advocate a 'carte blanche' attitude to risk. But there are questions to ask and decisions to make

in individual cases – it can't be a one size fits all approach. Here are three points to consider:

- 1. Standards and certifications:** Do you really need every box ticked? For example, if you want to procure from a service-based organisation, is £2 million product liability insurance necessary? Do you really need ISO-9001 if a solution doesn't access personal or confidential data? Could you instead ask for other controls to provide assurance? Take time to engage with a supplier in order to understand their business proposition and develop a more nuanced risk profile this way.
- 2. Responsibility for innovation:** Housing providers, particularly smaller ones, don't normally employ someone who looks after innovation. Instead, cutting-edge solutions are assessed on an ad-hoc basis and this approach doesn't lend itself to developing an effective procedure for evaluating risk. We need brave people to make informed decisions based on what they believe to be right. One answer is to have someone at board level who is accountable for innovation. They won't necessarily identify emerging solutions but they will at least understand the market, be able to make sound decisions and be a contact point in the business.
- 3. Educate the innovators:** Over the past three years, I've learned the value of supporting proptech SMEs and IT start-ups. We've tried to simplify the tendering and onboarding process but there are still queries and obstacles that innovators need help with. They may need pointing out, for example, that if you're going to supply a public-sector body, your data can't be hosted anywhere else other than England. Housing providers must be good customers here, helping micro-firms to navigate the complexities and vagaries of working with local authorities and housing providers.

With housing providers facing ever-increasing scrutiny as they tackle challenges around building safety, net zero and development, the best-performing organisations will be those looking to innovate.

I don't think there is anyone who hasn't bought into the power of innovation; it's more the practicality of adopting it that is the problem. Now that we've created an environment where procurement says 'yes', I hope the lingering systemic blockers can also be overcome.

*Neil Butters is the head of procurement at Procurement for Housing (PfH).*

# Interview

## Warwick Council on slashing arrears & improving tenants' financial support



Andy Nott, Landlord Operations Manager for Housing Services, Warwick District Council

*Warwick District Council's landlord operations manager for housing services, Andy Nott, explains how the council's use of Mobyssoft's software has cut arrears and improved financial support for tenants.*

### Mobyssoft: Why did you choose Mobyssoft's Automated Arrears Prevention (AAP) software?

Andy Nott: Warwick District Council had previously done well in terms of arrears reduction, with our use of Mobyssoft's RentSense contributing to a 10 per cent reduction in arrears (July 2022-June 2023), a 10 per cent reduction in average household arrears and 139 households out of arrears and into credit over the past 12 months.

We wanted to improve further so opted for the AAP platform. This is an AI-based system that flags tenants who are likely to fall into arrears within the next three months and automates contact with them with needing the involvement of council staff.

### How did RentSense originally help?

RentSense helps us to identify patterns of arrears and then prioritise cases that need immediate attention. This data-driven approach meant that our income-maximisation officers could focus their efforts more effectively – after all, RentSense's ability to process and analyse vast amounts of data far exceeds our manual capabilities.

### What prompted the addition of AAP?

Despite our success with RentSense, increasing financial pressures on tenants meant that more proactive measures were necessary – we noticed that some tenants were slipping into arrears despite our best efforts.

The challenge was to predict those cases early enough to prevent arrears from escalating. AAP did this by using AI to forecast the potential cases of arrears and automate the initial contact. This allowed us to intervene much earlier and offer support before the situation worsened.

### What impact has AAP had?

Since we've started to use AAP, we've seen an ongoing reduction in arrears and a notable decrease in the number of tenants falling into arrears. The automation of initial contact has freed our officers to focus on more complex cases, improving overall efficiency. Furthermore, our tenants appreciate the timely reminders because they help them manage their finances better.

Since integrating AAP with RentSense, we've seen some remarkable results. For example, we have achieved our lowest-ever arrears of £997,000 (the first time arrears have been below £1m) as well as a 10 per cent reduction in the average arrears value. In addition, around 20 per cent of tenants messaged via AAP made an immediate payment.

### What feedback have you received from end-users?

Our staff really appreciate how the automated processes reduce their caseloads, allowing them to spend more time on direct tenant engagement and support. AAP's predictive analytics also help them to feel more confident in their decisions, knowing those decisions are backed by reliable data and insights.

*Andy Nott is the landlord operations manager for housing services at Warwick District Council.*

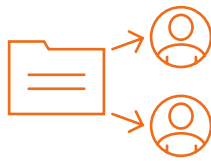
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# Apex Housing cuts arrears with Mobysoft

Apex Housing has partnered with Mobysoft to use its RentSense analytics platform to reduce its arrears and sustain its tenancies.

Mobysoft's RentSense platform uses AI and data science to analyse trends and payment patterns from across two million social tenancies, enabling housing providers to make ultra-early interventions and identify potential rent payment problems at the earliest stage.

## Mobysoft & Aareon's partnership

Mobysoft and Aareon have announced a strategic partnership, with the aim of helping housing providers to access best-of-breed housing platforms, reducing the need for housing providers' IT departments to connect and manage multiple solutions.

Mobysoft will join Aareon's Connect ecosystem, with its RentSense arrears management software directly available through Aareon.

Paul Evans, CEO, Mobysoft, said, "We are thrilled to be working with Aareon and becoming a key partner for its Aareon Connect platform. Through this partnership, Mobysoft and Aareon aim to empower housing providers with the actionable insights that they need."

Lee Burke, chief revenue officer, Aareon UK, said, "We are delighted to add another sector-leading company to our Aareon Connect ecosystem. Providing additional choice and access to best-in-class solutions connected directly with Aareon QL is pivotal in supporting our customers' success and delivering exceptional value."

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## CUSTOMER MANAGEMENT

# Home Group takes on Calabrio ONE with Business Systems

*Home Group has recently partnered with Business Systems to help transform its contact centre operations.*



Taking advantage of the UK government's Crown Commercial Framework, Home Group chose Business Systems to implement Calabrio's ONE workforce management system on the basis of its forecasting, scheduling and analytics capabilities.

Following the implementation of the Calabrio software, the housing provider has already achieved a return on its investment within six months (against an original two-year target), increased the volume of its handling of customer contacts by 12 per cent and saved around £16,000 per month. Home Group has improved its scheduling efficiency by 20 per cent.

Gavin Rogerson, resource planning manager, Home Group, said, "I've been involved in four other implementations of this scale, and this project with Business Systems has been the most straightforward, seamless and assured – the whole process has been fantastic.

"Our goal has always been to provide the best end-user experience. The functionality we now have with Calabrio ONE, coupled with Business Systems' support, has transformed our contact centre."





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# Data-driven strategies for tenants' well-being & compliance



Mike Llewelyn, Social Housing Development Manager, Aareon UK

*Since the Social Housing Regulation Act (SHRA) came into effect last year, a key focus for social housing providers has been how to make the best use of their data. Leveraging data is essential to proactively address tenant well-being, meet stricter consumer standards for repairs and enhance information sharing with residents.*

Better data access, management and use don't just allow a proactive approach to management, they also enhance social housing providers' abilities to remain compliant with the SHRA, avoiding potential fines and ensuring positive outcomes during surprise inspections.

## Proactive maintenance and tenant well-being

Collecting data is crucial, but it's only the beginning. The analysis and application of the insights gained unlock possibilities for proactive maintenance and improved tenant well-being. Housing staff can leverage data to go beyond reactive repairs and create positive living environments for their tenants.

Analysing maintenance records leads to identifying recurring issues (such as leaks and faulty appliances) in specific properties. This enables preventative interventions before problems develop and disrupt tenants. Imagine spotting a pattern of boiler failures in a housing development; this could point to a lack of servicing, problems with a contractor or the type of boiler installed. These insights can be used to ensure pre-emptive servicing or replacements to reduce breakdowns in the middle of winter.

Tenant complaints are another valuable data source. Categorising complaints enables the faster identification of widespread issues such as damp or poor ventilation. This empowers housing staff to address common problems before they affect larger numbers of tenants. For example, a surge in complaints about damp might prompt an inspection that exposes underlying structural issues or the need for ventilation upgrades.

Data analysis goes beyond historical records. By combining data sets (such as complaints, inspections and

property details), reliable predictions about future failures become possible. This allows for targeted preventative maintenance and resource allocation, focusing efforts on those properties most at risk. Predictive maintenance benefits tenants by minimising disruption and saves housing providers money in the long run.

This data-driven approach empowers a shift from reactive repairs to proactive maintenance, ultimately leading to more comfortable and healthy living environments for tenants.

## Improving data collection for better decision-making

Effective data collection for housing providers goes beyond what's gathered during routine inspections. Actively soliciting additional information through surveys, recording feedback from tradespeople and incorporating tenant vulnerability factors empower better decision-making for compliance, financial security and, ultimately, tenant well-being.

Different tenants have different needs. Considering tenant vulnerability during data collection is key to achieving compliance around the timeliness of repairs. Housing providers should consider collecting data relevant to timescales for repairs. Offering surveys in multiple languages and accessible formats for those with disabilities allows for more robust datasets. This means housing staff can gain a better understanding of their tenants' needs so they can become proactively compliant.

Feedback from tradespeople contracted for maintenance and repairs is another valuable data source that's often overlooked. By soliciting insights and encouraging them to flag situations requiring urgent attention for vulnerable

tenants (for example, a faulty lift that needs immediate attention for a disabled resident), housing staff can identify recurring issues and ensure a more proactive service for tenants in need.

This broader, needs-based approach to data collection allows housing providers to create a comprehensive picture of their properties. It also means that their services can be tailored to specific tenant vulnerabilities. This richer data set leads to better decisions on property management, resource allocation and investment strategies, not to mention improved compliance with the SHRA, increased financial sustainability and a more positive and responsive living environment for all tenants.

#### Timely decisions from better information

The point of data analysis is to make better, faster and more proactive decisions that benefit both housing providers and their tenants. It's not only about being compliant with the current SHRA standards for tenant well-being and stricter consumer standards for repairs, it's also about accurately reporting on our data and exceeding KPIs confidently.

Data analytics tools such as Power BI make it easier to gain inspired insights by making it fast and simple to compare properties, time periods or other categories. This means spotting trends that might otherwise go unnoticed becomes easier. Aareon's QL Power BI Reporting empowers housing providers to configure user-friendly dashboards that make it simple for staff at all levels to generate insightful reports. Housing managers can see at a glance which properties have the highest number of outstanding repairs or quickly spot areas with a significant backlog of tenants' complaints. This transparency of information allows housing providers to make faster decisions and allocate resources effectively.

Ultimately, ensuring timely and accurate information is collected and data is effectively leveraged for insights allows housing providers to move away from reactive decision-making. This shift leads to the proactive addressing of issues, improvements in long-term planning and ensures the efficient use of resources for properties with specific needs. The result? A more responsive service for tenants and a more sustainable future for social housing.

#### Transparent communication for better service delivery

The SHRA emphasises the importance of transparent communications between housing providers and their tenants. Secure data access allows housing providers to create more responsive and resident-centric approaches.

One key aspect of transparent communication is ensuring tenants have easy access to information about their homes and the services they receive. Self-service solutions, such as Aareon's Customer Portal or App, provide tenants with 24/7 access to key details, including repairs, maintenance, and billing information. This level of transparency fosters a sense of control and lets tenants manage their tenancies effectively.

Furthermore, these portals create a convenient channel for tenants to report problems direct to their housing provider. This allows for accurate details about issues, faster response times and a more streamlined process for addressing repairs and maintenance requests. Additionally, these platforms automatically record any communication or actions taken, creating a clear audit trail. This improves accountability and transparency throughout the process.

Ultimately, a data-driven approach to communication empowers housing staff to deliver a more responsive service to tenants. By leveraging data to understand tenants' needs and concerns, housing providers can prioritise repairs effectively and address maintenance work promptly.

#### Better technology leads to higher housing standards

As the housing landscape evolves, so too will the regulations and expectations for social housing providers. The good news is that advances in technology aren't just keeping pace, they're actively paving the way for a brighter future. For example, low-code integration platforms such as Aareon Connect simplify the integration of diverse software systems, enabling the rapid streamlining of operations without the need for specialised expertise.

By embracing a data-driven approach, housing providers can leverage the power of information to proactively address tenant needs, prioritise repairs and deliver a higher standard of living. Of course, it also enhances their ability to remain compliant.

Secure data collection, actively involving all stakeholders in gathering relevant data, insightful analysis and transparent communication are no longer luxuries, they're essential tools for success in the ever-evolving social housing sector.

*Mike Llewelyn is the social housing development manager at Aareon UK.*

**Aareon**



# Poplar HARCA's smart devices to empower residents & beat mould

Fransiska Greene, Asset Data Coordinator, Poplar HARCA

*Poplar HARCA won the bronze award in the customer/tenant services category of the inaugural Housing Technology 2024 awards. Fransiska Greene, Poplar HARCA's asset data coordinator, explains how the housing provider is using Aico's IoT devices to empower its tenants and tackle mould.*

Improving our customer services is an ongoing aspiration for Poplar HARCA. With over 10,000 homes across east London, we're committed to making sure every resident's home is safer, greener and smarter. Therefore the emergence of technology which monitors air quality at home and can raise an alert to potential emergencies seemed an obvious thing for us to roll out.

Valesca Wilton-Smith, head of asset compliance, Poplar HARCA, said, "Over the years, our sector has been rocked by tragic instances of deaths and serious injuries caused by domestic fires, smoke inhalation, carbon monoxide and mould and damp. Our partnership with HomeLink/Aico offered an ideal solution that allows a better form of prevention and protection against these dangers."

### Timeline of rollout

In 2019, we began a trial of environmental sensors in four properties to test and learn from this emerging technology. These were installed alongside smoke and carbon monoxide detectors.

We then expanded the trial in 2021 to homes where there were historic mould and condensation problems. As part of the trial, residents were given access to HomeLink's Resident app to give them real-time information about the health of their homes.

In 2022, we introduced the HomeLink Connected Home solution to the mix and began rolling this out to properties as standard. The solution includes environmental sensors, optical alarms, and carbon monoxide and heat detectors. We've also installed additional devices in some properties with heightened functions for residents who might have visual or audio impairments.

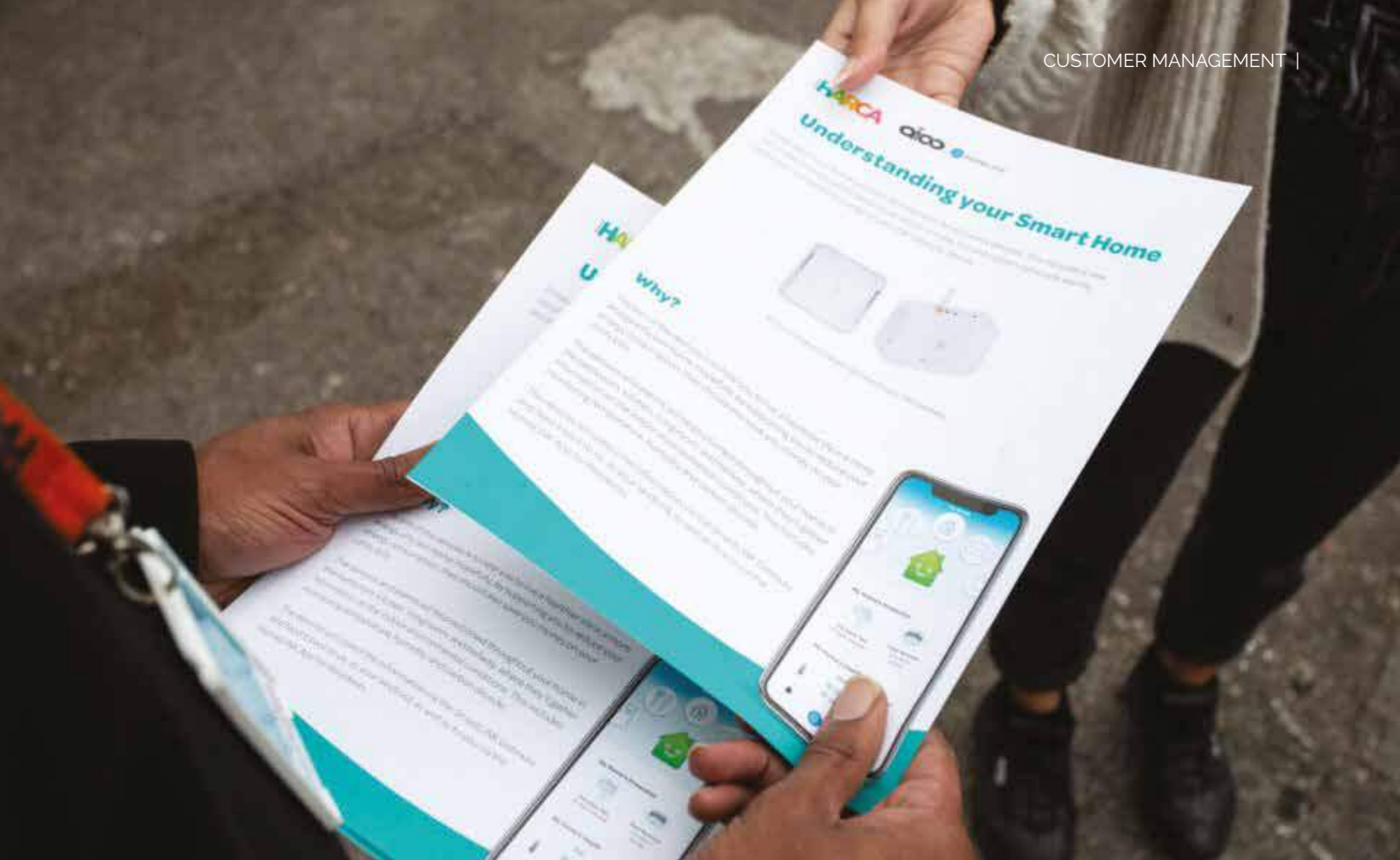


Poplar HARCA now has over 29,000 linked devices in nearly 3,500 of our tenants' homes; these have helped to offer a smarter approach to tackling and preventing mould. We've also been able to identify faulty smoke and carbon monoxide detectors and responsively arrange for servicing, something we were unable to do before.

We can also identify trends and patterns in particular types of homes which puts us on the front foot when it comes to dealing with mould. This data helps us to shape our response to treating and preventing mould in the future and we can now also forecast opportunities for investment or retrofitting.

### Engaging residents

Understandably, some residents were worried about this new technology being installed in their homes. Working with Aico to allay these concerns, we held a series of events that allowed residents to meet us, interact with the technology and understand how it works. The Aico team supported this work with detailed guides, explanatory videos and advisers to talk to residents ahead of fitting the devices.



As a result of doing this, our residents were more willing to embrace the new technology. One local resident said, "I found it really easy to get to grips with it and I'm a bit of a technophobe... I can quickly go into the app, read the environmental information, spot which rooms aren't happy and hopefully do something about it."

### Future plans

The technology is a true game-changer because it allows us to be more responsive to any concerns about the health of residents' homes. We will continue rolling out the HomeLink Connected Home solution and will work with residents to keep their homes healthy and safe.

The smart-home devices are fitted alongside our regular domestic electrical testing programme and we expect to have fitted them in most of our tenants' homes by the end of this financial year.

### Key benefits to residents:

- Residents have a real-time view of the overall health of their home and make informed decisions based on that information.
- In-app advice can help residents avoid mould and air-quality issues from fully developing.
- The HomeLink app keeps track of device testing and reminds residents to test their alarms.
- Regular testing and the real-time status of alarms reduce the risk of fire or carbon monoxide events by making sure key devices are working correctly.
- Residents can use the information they hold on their home's health to ensure Poplar HARCA follows up problems and addresses them accordingly.

### How the HomeLink devices help Poplar HARCA:

- **Proactive maintenance** – Identifying the conditions conducive to mould and organising site visits to investigate and prevent the problem worsening.
- **Compliance and asset management** – We can see in real time the lifespan of alarms and detectors to maximise their use and replace when necessary. We can also identify any problems with key devices (e.g. smoke and carbon monoxide alarms) and either fix or replace them before a fire, smoke or carbon monoxide event happens.
- **Identifying trends in data** – We can now use historical data to identify potential trends around factors such as property type, construction type and age of stock.
- **Inform long-term investment and retrofit** – Poplar HARCA can use the historical data and potential trends to inform our investment decisions to improve our housing stock and address long-term problems.
- **Better understanding of our housing stock** – We now have more confidence in our knowledge of how our housing stock performs, which areas need more attention and the assurance that our information is accurate and up-to-date.

*Fransiska Greene is an asset data coordinator at Poplar HARCA. The housing provider won the bronze award in the customer/tenant services category of the inaugural Housing Technology 2024 awards.*



# Smart solutions vs. the data deluge

John McEwan, Head of Systems Development, FireAngel

*John McEwan, head of systems development at FireAngel, explores how housing teams can automate and leverage data from smart devices to make informed decisions, enhance property management and ensure residents' welfare.*



From temperature and humidity sensors to water leak detectors and smart smoke alarms, the range of interconnected devices available for housing providers continues to expand. These sensors support a data-driven, risk-based approach by monitoring various factors and providing real-time insights into property conditions and tenants' welfare.

However, the sheer volume of data generated by these smart devices can be overwhelming for under-resourced, busy housing teams.

### Automating data monitoring

Real-time data aggregation from multiple devices offers potentially life-saving opportunities to proactively address problems before they escalate.

For example, connected smoke alarms can detect patterns, such as alarms activating at night or devices

being removed, that often precede serious incidents, allowing for early interventions by highlighting properties at high risk of a future fire. However, these interventions often rely on manually-monitored data in spreadsheets, which must be passed to various departments before any action is taken.

Instead, centralising data integration through a single platform automates data collection and risk stratification for properties and tenants. These platforms aggregate data from different smart solutions, offering a holistic view of property conditions and enabling informed decision-making.

Harnessing data from connected smoke, heat and carbon monoxide detectors, smart boilers, utility meters and temperature sensors can enable housing teams to streamline and automate processes such as predictive maintenance, compliance checks and resource allocation.

### IoT-powered protection

With FireAngel Connected, a cloud-based solution purpose-built for social housing, landlords can remotely monitor interlinked safety and environmental sensors, access real-time status and compliance updates, and view instant diagnostic reports for a more efficient and intelligent way to manage their properties and protect residents.

Through the addition of a FireAngel Gateway in the network, data is monitored in real-time to alert housing providers about the status of alarms in their properties, whether removed, triggered or needing maintenance. This eliminates wasteful visits, saves staff time and reduces administrative costs. The Connected dashboard



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automatically captures and logs every aspect of a device, including installation training and compliance records, ensuring adherence to the Hackitt report's 'Golden Thread.'

trends logged by smoke and heat alarms and data from temperature and humidity sensors. This allows properties to be categorised as high or low risk. FireAngel Predict is the only technology of its kind on the market to provide this type of real-time insights.



FireAngel Predict processes, sorts and structures real-time data, instantly pinpointing those most at risk in our communities and eliminating the need for manual data-trawls through spreadsheets by housing teams.

**Harnessing data for smarter, safer communities**

Having data that automatically highlights potential hazards is key to enhancing safety in our communities, but it's crucial that this information actually leads to timely and effective interventions.

Every day, resident safety teams and local fire and rescue services across the UK use this data to conduct resident-centric interventions to mitigate risk and prevent life-threatening incidents.

While Connected offers substantial insights via its dashboard, open APIs also allow for full integration with a housing provider's existing core business applications if required. Either option enables device and property data to be accessed in a single centralised location, removing the burden of manual data-trawls or the need to train staff on multiple tools.

With our market-leading technology, FireAngel will continue to support the UK fire and rescue services in their mission to prevent fires and help housing providers in pinpointing properties at risk of problems such as damp and mould.

The Connected app also involves tenants in fire safety, enabling them and their family members to be aware of the fire protection network in their properties and play an active role in mitigating their risk level.

By leveraging and automating data-driven insights, housing teams can collaboratively ensure safer, healthier living environments for all residents.

**Pinpoint risk in communities**

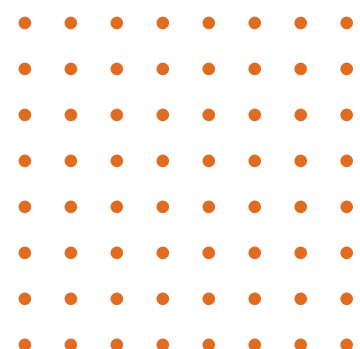
When paired with FireAngel Predict, Connected gives visibility of previously-hidden trends within properties.

*John McEwan is head of systems development at FireAngel.*

FireAngel Predict is a step-change in the fire industry which protects residents, properties and communities from preventable fire risks using unrivalled insights.

**FireAngel**

Developed with support from the UK's fire and rescue services, FireAngel Predict employs a unique algorithm with a patented application to identify behavioural







## Keeping vulnerable residents safe

Trevor Hampton, Director of Housing Solutions, NEC Software Solutions

**With social need at critical levels in the housing sector, it's more important than ever for housing providers to use technology and tools that enable them to better meet the needs of their most vulnerable residents.**

As I write, the general election looms. By the time this article is published, the results will be clear and levels of uncertainty are likely to be higher than ever across the housing sector. Whichever way the ballot fell, housing providers will now be getting to grips with new government priorities.

The sector will be concerned about further financial belt-tightening. There may be additional steps to take if further regulation is introduced to make housing providers more accountable for the safety of their most vulnerable tenants as well as the condition of their property assets.

It's likely that the Housing Ombudsman Service's call earlier this year for a Royal Commission to rethink housing policy as a health intervention will remain very much on the housing agenda, whoever wins the election. The views of residents and landlords were sought to build a picture of how our sector was performing; among the key recommendations in the resulting report was for housing providers to improve the way they respond to vulnerable residents' needs.

What can housing providers do to better understand and serve the needs of vulnerable residents while keeping a grip on rising costs?

### **Prioritise the basics**

Small changes to ways of working can make a big difference to residents' experiences of the services they receive from their housing provider.

For example, if repair schedules are typically held in one database and key information on tenants in another, without linking the two there will be no understanding of whether maintenance needs to be prioritised for vulnerable residents. This could result in a disabled tenant having to wait weeks or months to have the handrails fitted in their bathroom.

Having joined-up IT systems across a whole organisation reduces the possibility of errors, improves data security and simplifies processes. When staff can find the information they need quickly and easily to get a full picture of tenants and their homes, they can better support their most vulnerable residents in a timely way.

### **Tailored channels of communication**

A key challenge for housing providers is how to meet the needs of the broad mix of residents they serve. The way they communicate is an important factor that needs consideration.

There will be some tenants who prefer to be left alone. They want to manage their rent account online and may even like to carry out their own minor repairs if, say, their property has a leaky tap or a shelf that needs replacing.

Other individuals and families might have more complex needs, such as money concerns, health issues or caring responsibilities. Then there are those who simply want to speak to a human being if they have a query about their latest rent statement, want to make a complaint or need help reporting a problem.

Offering a mix of channels for communication is key to supporting different groups of residents. Digital channels may not be the simplest way for tenants with visual impairments to contact their housing provider, and using the telephone can be difficult for those people who are hard of hearing. With a variety of options, residents can choose to communicate in the way that best suits them, and those who prefer to self-serve online can do. Staff are then freed up to support residents who want to communicate by phone or in person.

### Streamlined working

Managing administration in the provision of social housing can be time-consuming. Tasks such as identifying missed rent payments, crunching data for monthly reports or managing invoices are important, but they add little to the relationship between housing provider and tenant.

The automation of many of the repetitive processes typically carried out by housing staff reduces workloads, improves efficiency and cuts costs. Automation built into systems and processes can identify missed payments, produce reports and update residents' direct debits in a fraction of the time a human could and with much less risk of error. These tools can add value by enabling staff to focus more time on helping residents.

Giving housing maintenance teams the ability to buy tools and building materials via e-trading cards on their mobile phones and having those items delivered direct

to the properties in an Amazon-style manner provides an efficient and cost-effective solution for managing repairs. Although the price for materials may be a little higher than if buying in bulk and storing them until needed, the added cost is more than offset by the savings achieved through eliminating the need to pay for additional storage space. Repairs can be carried out faster too, and costs will be lower because maintenance teams aren't waiting around for materials to arrive.

Technology that delivers on the basics will provide the firm foundations and flexibility needed to respond to the almost inevitable changes just over the horizon.

With a solid technical grounding, housing providers can achieve operational efficiencies and pave the way for greater innovation in the months and years ahead to improve the safety and experience of their most vulnerable residents.

For more information on how technology can make it easier for housing providers to save time, cut costs and meet the needs of tenants, please download our white paper: [nec.e.necsws.com/better-homes](http://nec.e.necsws.com/better-homes).

*Trevor Hampton is the director of housing solutions at NEC Software Solutions.*

**NEC**

## INFRASTRUCTURE



# Aico's Southend retrofit show home

*Aico has had a longstanding relationship with Southend-on-Sea City Council for many years, supporting the installation of its fire and carbon monoxide (CO) alarm systems.*

The council aims to reach net-zero emissions by 2030 and is now launching a proactive retrofit programme for its 6,000 homes. These properties comprise 46 per cent of the council's carbon footprint.

Supported by Ben Harrison, a finalist for Aico's 'rising star' award in its 2024 community awards, the programme is currently implementing a range of projects from internal

training and data improvement to insulation projects including the Social Housing Decarbonisation Fund (SHDF).

The standout initiative within the council's programme is its retrofit show home which opened in November 2023. By partnering with several council departments and obtaining support from the DEFRA-funded 'Catchment to Coast' project, the housing team led a comprehensive

retrofit of a solid-wall, 1950s semi-detached home which included:

- External wall and loft insulation;
- Triple glazing;
- De-centralised mechanical heat-recovery ventilation;
- Air-source heat pump and electrical appliances;
- Solar panels with a 6kW battery;
- Grey-water recycling Hydraloop which recycles shower water for toilet flushing;
- Sustainable drainage and Hydrorocks to reduce the risk of flooding;
- Low maintenance bio-diverse and drought-tolerant garden planting;
- Aico's 3000 Series fire and carbon monoxide alarms and HomeLink environmental sensors.

The project stands out for its holistic approach to sustainability. This included using recycled materials, local products and future-proofing the home from overheating and drought risks in the home.

### Showcasing exemplary practices

Hosting 250 visitors, the show home served as an educational resource for the entire community and enabled the council to showcase exemplary practices. The test-and-learn approach to the show home also allows the project to inform which measures to roll out to the council's wider programme.

All retrofitting carried out in the show home adhered to PAS 2035 and will undergo ongoing assessment with Aico's HomeLink environmental sensors. These were used both before and after the retrofit to ensure that there were no unintended consequences and that the indoor air quality is being maintained.



Southend Council's show home is fully equipped with a Category LD1 fire and CO system using Aico's Grade D1 3000 Series multi-sensors, future-proofing it for any revisions to BS5839-6. By using Aico's HomeLink gateway and

environmental sensors, temperature, humidity and CO<sub>2</sub> levels can be monitored, giving insights into issues such as damp and mould, indoor air quality, fuel poverty and void properties. This information is seamlessly transmitted to the online HomeLink portal so that the council and its property management company, South Essex Homes, can see in real-time exactly how the house is functioning and can intervene before any problems occur.

Ben Harrison, housing sustainability officer, Southend-on-Sea City Council, said, "The retrofit show home involved taking a holistic approach to sustainable housing which meant that we installed a wide range of interventions.

"The project is designed to test the latest innovations to inform us on where we should focus our efforts in

the wider retrofit programme. Aico's environmental sensors are crucial for understanding the impact of these measures and ensuring that we continue to evaluate the performance of the home beyond installation."

### Revolutionising the home environment

The use of Aico's HomeLink app for residents has played a significant part in this project, enabling residents to take control of their own environments and take a proactive approach to their health and well-being. The app facilitates real-time communication between Southend Council, South Essex Homes and the tenants through its messaging feature.

In addition, Southend Council and South Essex Homes have collaborated with Aico on smart-meter integration to offer the tenants and the council an additional dimension to the app.

This system has received positive feedback and is not only being implemented in SHDF trials and void properties equipped with environmental sensors but has also prompted a Category LD2 upgrade programme across all of the council's properties. This initiative underscores the commitment to prioritise tenant safety and compliance for both the council and South Essex Homes.

Southend Council's retrofit programme has enjoyed considerable success, with numerous awards and nominations:

- Winner of ACES Retrofit Housing award 2023;
- Highly commended (retrofit) at Essex Housing awards 2023;
- Shortlisted for RICS' Eastern Region;
- Shortlisted (innovation in delivering sustainability & social value) for MJ Awards;
- Shortlisted in the Unlock Net Zero awards.

Steve Morl, mechanical and electrical engineer, South Essex Homes, said, "Following the success of our show home, we've been very impressed with the information that we're receiving. We're now extending this to all of our SHDF homes because we can now monitor and manage our stock by using the data on the HomeLink portal."

Matt Golding, regional specification manager, Aico, said, "Southend Council and South Essex Homes' retrofit housing project has yielded some great insights across all aspects of the show home. Their use of our environment sensors has future-proofed this property for the eventual tenants and will provide them with great insights into how the property environment is working and also how efficient the council has made the property.

"Maintaining their focus on sustainability and compliance, Southend Council and South Essex Homes are now rolling this process out to all of their SHDF properties, including the installation of Aico gateways in all properties over the next few years."





# An anti-phishing recipe – MFA & security awareness

Gareth Renaud, Senior Information Security Officer, Link Group

*Link embarked on a transformative cyber-security journey in 2019 by implementing mandatory multi-factor authentication (MFA). This initiative empowered all colleagues to combine their password with a one-time code provided by SMS, voice call or authenticator app. This article delves into the strategic approach taken by Link to fortify its cyber-security posture and reduce the threat of business email compromise.*

## Phishing threat

Phishing is an incredibly common initial step in cyber attacks. It is estimated that around 90 per cent of all cyber attacks begin with a phishing email. A recent ICO report noted that "56 per cent of businesses and 62 per cent of charities that reported having had breaches or attacks in the past 12 months felt phishing attacks were the most disruptive type of attack."

The ICO's report also noted that over 90 per cent of the UK companies responding to its survey had experienced at least one successful email-based phishing attack during 2022, with around a quarter having also reported direct financial losses as a result.

## Link's cyber-security strategy

We continually improve our cyber-security posture across all layers of our defence-in-depth strategy, and at the core of our approach is security awareness to reduce the effectiveness of social engineering attacks. Link maintains a culture that encourages a cyber-conscious workforce which has proven to directly improve our security posture.

## Implementing mandatory MFA

The introduction of mandatory MFA had the potential to be disruptive, so careful planning and support was essential to the success of this change. Creating the 'rails' to support colleagues required cohesion between our group leadership team, digital services, communications and learning and development.

Recognising the diverse roles and working patterns within Link, a comprehensive roll-out plan was developed, accounting for office- and field-based roles. The digital services team drafted instructions, facilitated in-person support sessions and had support from across the business which ensured universal adoption of MFA. The chief executive of Link Group, Jon Turner, showed his support by communicating the importance of MFA to the entire workforce. This multifaceted approach kept the change to MFA high on people's agendas.

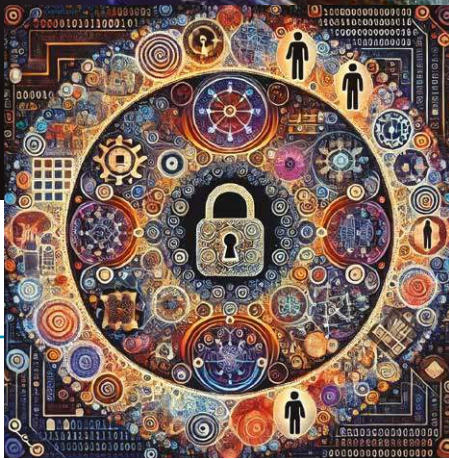
## Fostering cyber-security awareness

Link prioritises cyber-security awareness training. This is achieved through e-learning paired with instructor-led and web-based annual training which conveys the rationale behind security controls and empowers employees to identify and report potential cyber threats.

Thanks to our tailored approach to security awareness training, we secured a finalist spot at the Chartered Institute of Housing Excellence Awards in 2019 and at the Housing Technology Awards in 2024. The University of Abertay has also previously shared our security-awareness training materials with the NHS Cyber Fraud Unit.

## Phishing reduction efforts

Link is subject to continuous phishing attacks. We have noticed that many 'credential harvesting' phishing emails now also try to harvest MFA tokens. Thanks to our colleagues across Link consistently and diligently



reporting phishing emails, the reports have informed threat analysis techniques which serve to inspect all emails for suspicious markers.

This iterative and continuously-improving technical process means that most phishing emails never reach an inbox; suspicious emails are quarantined where they are reviewed multiple times per day by our digital services team. The purpose of the control is to shift the phishing assessment effort toward digital services and reduce the impact of phishing on the wider business.

For example, over a 30-day period we tracked 2,009 suspicious emails sent to Link. 914 were quarantined, 981 were sent to 'junk' and only 112 were delivered to mailboxes. Critically, in every case where malware was sent to colleagues (37 times over the past month), every infected email was directed to quarantine.

### Phishing playbook

If we widen our view to six months, 430 phishing reports were made using an integrated phishing 'reporting button'. In cases where a phishing email is confirmed, we search all mailboxes for the email to remotely remove them. This action meant that another 492 phishing emails were remediated and due to these reports, we identified and neutralised around 30 phishing campaigns where multiple colleagues were targeted. Following our 'phishing response playbook', phishing email threats are mitigated, removed and blocked.

### Continual improvement

In October 2023, Link enhanced the security and convenience of MFA by eliminating support for insecure methods such as one-time codes provided by voice or text. Drawing on recommendations from Microsoft and industry best practices, we decided to move to support app-based MFA only.

With app-based MFA:

- The threat of SIM-swapping attacks and SMS interception is avoided.
- The 'replay attack' window is reduced due to the lifespan of one-time MFA codes being reduced from 300 seconds to just 30 seconds.
- 'Number matching' displays a two-digit number during login, which is then entered into the authenticator app.
- Authenticator apps enhance usability by generating one-time codes without needing a connection, making them functional in poor signal areas.

Link Group remains committed to strengthening its security controls around identity management and continually refining our defence-in-depth approach to cyber security. By adhering to industry best practices and fostering an inclusive culture of cyber awareness, Link strives to uphold the trust placed in us by our customers and stakeholders, safeguarding data integrity and confidentiality.

*Gareth Renaud is the senior information security officer at Link Group.*



Shamsu Rahman (r), Digital Security and Infrastructure Specialist, Kingdom Housing with Housing Technology's George Grant

# Kingdom Housing's cyber-security award



Kingdom Housing won the silver award in the cyber-security category of the inaugural Housing Technology 2024 awards, with its foundation of using AI, automation and IT standards.

Kingdom Housing's security strategy focused on:

- Strategic risk management;
- Leveraging cloud solutions from world-class IT security providers;
- Managing compliance with NCSC guidelines and ISO standards;
- Innovative security practices using AI to reduce threats and reactive work;
- Formation of an operations team, with continuous reviews of systems and practices;
- Collaborating and leading the way with our suppliers and streamlining security;
- Fostering a security-conscious culture at Kingdom;
- Driving staff awareness using training and campaigns.

Winning Housing Technology's silver award for cyber security is a tremendous achievement, given how many housing providers there are in the UK. Security is

knowing your home and all of its assets inside-out, hence we've taken a 'belts and braces' approach when it comes to security.

Threats are ever-changing and tying in intelligent systems helps us to manage our risks better. Our commitment to keeping our systems accessible, secure and compliant for our customers and our colleagues guides the work we do and helps us to deliver an exceptional digital customer experience around the clock.

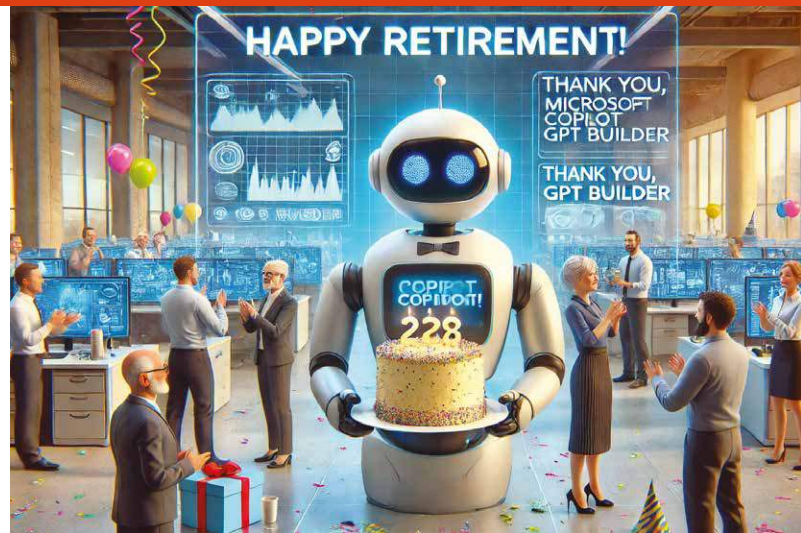
*Shamsu Rahman is a digital security and infrastructure specialist at Kingdom Housing. The housing provider won the silver award in the cyber-security category of the inaugural Housing Technology 2024 awards.*



# Reshuffling the shadow IT cabinet

Aidan Dunphy, Chief Product Officer, Esuasive

*Please excuse the pun in the title of this piece, which may well refer to a different shadow cabinet by time of publication... The term 'shadow IT' has been around for a couple of decades – it's an interesting concept, usually seen as a problem by IT teams, but perhaps worthy of closer examination.*



In my recent Housing Technology article 'D.I. Why?' (May 2024 edition), I pointed out that every organisation has perceived needs that can't be met by packaged solutions. There are also occasions when the organisation doesn't know that the package could be a solution or has chosen not to use it for other reasons, such as cost and priority. These needs might go unanswered, perhaps denied by IT, or a custom solution might be sought. If the custom solution is developed without the knowledge of or permission from IT, then it's deemed to be 'shadow IT'.

## F.U.I.T.

There's a common view among people working in (especially large) organisations that the technology they have to use at work is awful; slow, difficult to use, visually unappealing, poorly specified and overly complicated.

Even when your IT team has been repositioned as a 'digital, data and technology service provider', inevitably they have to lay down the law regarding what's legal, safe and strategic. The limited choice of sector-specific applications and the team's limited capacity to respond to business needs often results in unflattering comparisons between the technology that people use at home and the clunky old corporate stuff they have to use at work. And like any body of authority in lean times, the IT team starts to look like the enemy of responsiveness and progress.

The somewhat-rude subtitle of this section neatly describes an attitude that can arise among colleagues. If they come to think that they can't do their job effectively using the tools given, then they can rebel and choose their own tools. The ubiquity of low-cost SaaS products, mobile

apps and now AI-driven products presents a tempting array of world-class 'point' solutions (many available free of charge) which can get a job done much faster than by following the authorised route. What's not to like?

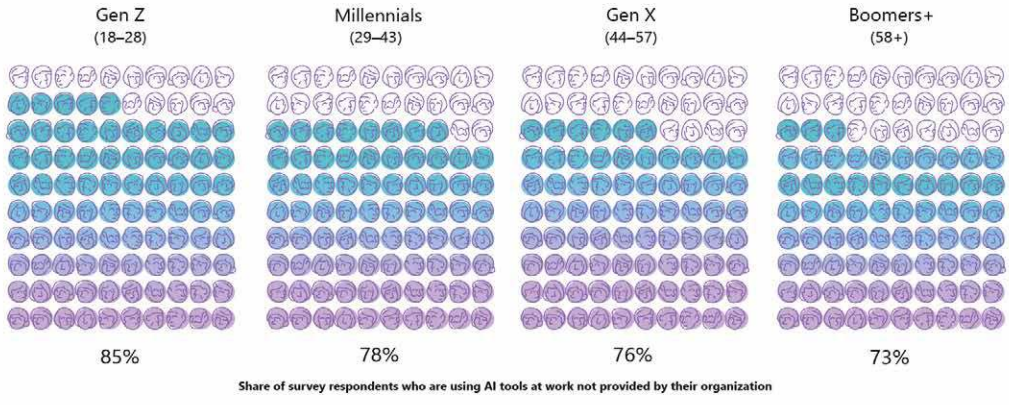
## The phantom menace

The problem is that these tools, particularly when used in this way, are often not designed with corporate needs in mind. They present a huge risk to the organisation, in a number of ways:

- When signing up to any software tool, you always have to accept their terms and conditions. Of course, nobody reads these (a 2008 study from Carnegie Mellon University found that to read all the T&Cs one is presented with would take 72 years), so it's safe to say that your colleagues are routinely signing contracts with suppliers unknown, terms unknown.
- Your colleagues are probably uploading private data belonging to employees, customers or suppliers to servers owned by third parties. Under GDPR, these become data processors, and without permission this is a breach.
- Most SaaS products are hosted outside the UK. This means that corporate data, and probably your customers' data, is being uploaded to servers outside the jurisdiction of the UK's privacy laws.
- The products being used are behaving in ways unknown to the people in the organisation responsible for process, security and safety. They could be altering your data or performance in damaging ways without detection.

# BYOAI Is Not Just for Gen Z

Employees across every age group are bringing their own AI tools to work.



2024 Work Trend Index Annual Report from Microsoft and LinkedIn

Survey question: Are the generative artificial intelligence (AI) tools you use at work provided by your organization?

The most concerning development in this space is a term I heard only recently: BYOAI (bring your own AI). A report last month by Microsoft and LinkedIn found that 78 per cent of employees are using AI tools not provided by their employer.

### A new hope

All is not lost. To bring balance to the situation, we need to find a way to make the computer say “yes” to non-standard but legitimate requirements without recourse to secret or unsafe means. This is the whole point of low/no-code platforms; to bridge the gap between professionally-produced solutions and specific organisational needs, quickly and at low risk.

Microsoft is the technology platform vendor of choice for most housing providers, and its focus is organisational productivity in a secure cloud environment. Microsoft's Power Platform, and in particular Power Apps, enables you to rapidly develop custom applications. These are natively integrated into the Microsoft Dataverse, the backbone of the Power Platform. Microsoft isn't the cheapest technology vendor, but the value for money and time to value offered by Power Apps are very compelling compared with the cost of custom software development or indeed competing ERP development platforms (e.g. SAP).

Crucially, Microsoft is also at the forefront of development in the burgeoning AI market. Its Power Virtual Agents precede the release of ChatGPT by several years, and Microsoft was quick to forge a strategic partnership with OpenAI, undoubtedly the leader of the pack in the GenAI space.

Microsoft's launch of Copilots was an early move to commercialise and integrate GenAI assistant technology into its platform, and in my view it was an astute strategic move. Interestingly, it recently (and quietly) announced the retirement of Microsoft's GPT Builder utility, which enables you to build your own customised version of GPT for specific tasks. This seemingly-retrograde move signals Microsoft's vision for GenAI as it develops; my understanding of it is that Microsoft regards GPT Builder as an example of the

'Wild West' character of GenAI to date and therefore unfit for enterprise environments going forward.

### Your focus determines your reality

While Power Apps greatly speeds up the creation of apps and reduces technical risk, it's not entirely without risk. Any technical development represents a 'bet' of sorts; an investment of time and energy from the people creating the app, those using it and those later supporting it. Also, being able to build something more easily in no way guarantees that you're building the right thing.

However, it does offer you the opportunity to validate what you're building faster and to course-correct (or abort) if necessary. This is where the real power of low-code lies; it's not about producing more stuff per pound spent, it's about producing it faster so that you can deploy and check quicker.

You're better off making an app and then revising it three times than making four apps that don't deliver sufficient value. When it comes to product development (which is what this is, make no mistake), less is more!

This is why at Esuasive, we provide a comprehensive suite of ready-made components to shorten time-to-value and reduce risk, and advocate our 'true agile' approach to low-code development; outcomes-focused, short delivery-validation cycles and measurable success criteria.

Working this way enables you to quickly square the often-competing demands around what the business needs, strategic IT necessities such as cyber security, device management and information governance, and what is provided by your packaged product vendors, thus removing the temptation for your colleagues to build their own gap-fillers.

*Aidan Dunphy is the chief product officer at Esuasive.*

**Esuasive**



# Unlocking the potential of dark data

Colin Sales, CEO, 3C Consultants

*It's often said that UK social housing providers are 'data rich but insight poor'. The Social Housing Ombudsman stressed in last year's Spotlight Report that there is a desperate need for the improved management of data, stating that it was "the closest thing the social housing sector has to a silver bullet". Data-related risk is also now recognised as one of the primary threats to the sector. And yet, improved knowledge and information management also presents us with a considerable opportunity, the benefits of which will make the lives of tenants and those working in our sector measurably better.*

## A hidden opportunity

Within the vast expanse of data held in the sector's housing and data management systems lurks a silent but significant component of this problem and opportunity – dark data. This term refers to the colossal amount of unstructured, untagged and untapped information that's generated and stored by housing providers but not used to its full potential. To provide an idea of the scale, research by Gartner and IDC indicated that up to 80 per cent of an organisation's data is dark, unstructured and not analysed and that almost 40 per cent of that data will have value once it has been analysed. Research also indicates that better management of dark data can reduce data storage costs by almost 60 per cent.

As our sector grapples with increasing demands for improved governance, efficiency and transparency, understanding and using dark data provides the key to unlocking a wealth of opportunities for improvement and innovation.

The accumulation of dark data is not without its challenges. Housing providers and local authorities often struggle with disparate data stores, legacy systems and complex data ecosystems. These lead to difficulties in maintaining data quality, governance standards and, ultimately, in making informed decisions that affect tenants' lives.

## Shining a light on dark data

By shedding light on dark data, organisations can gain insights into tenant demographics, housing conditions and improved financial management. This informs strategic thinking and is critical to addressing governance, risk and compliance challenges, thereby improving the overall quality of life for residents.

The new regulatory regime, introduced in April 2024, reinforces the importance of good data governance, leading many housing providers to focus their attentions on initiatives to tackle the issue of dark data. Indeed, 3C Consultants has seen a significant increase in requests for the development of information governance strategies and frameworks aligned with strategic objectives.

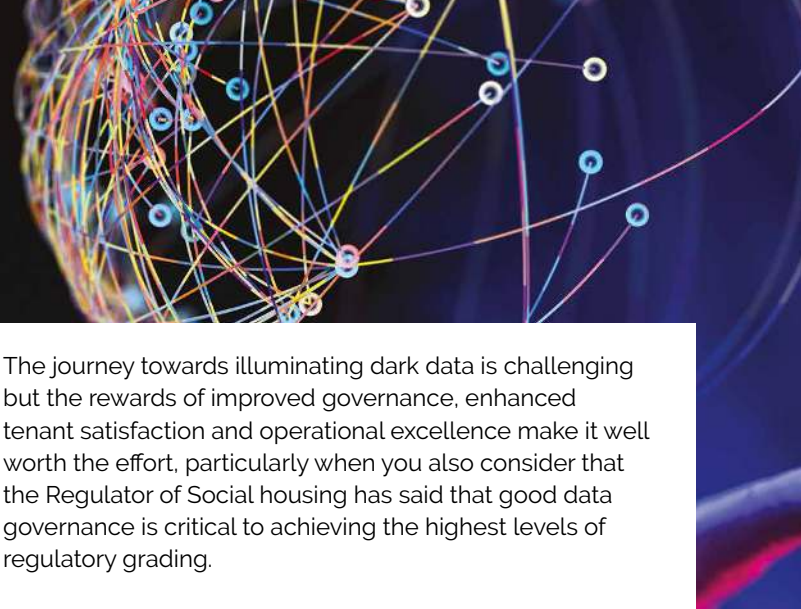
## Focusing on TSMs

We're seeing a particular focus on such areas as tenant satisfaction measures (TSM), health and safety, property disrepair and rent setting assurance, where enhancing data accuracy, completeness and consistency across different systems and data stores is critical. Critical components of the required data prove to be 'dark' and unstructured (i.e. data that's not held in housing management software but in places such as spreadsheets, emails and shared drives).

If we take TSMs as an example, there is the need to determine the accuracy of data, often held in multiple data sources, and check the corresponding data flows in order to provide assurance around TSM calculations. Gas appliance management provides an example of health and safety assurance. In our experience, it's not uncommon for the analysis of dark data to highlight properties where there are gas components but no record of servicing; where there are gas appliances but no carbon monoxide alarm; or where there are incorrect servicing cycles. Such analysis reveals inconsistencies between data stores, far too often due to spreadsheets that aren't properly controlled.

## The road ahead

As UK social housing continues to evolve, the role of dark data will become increasingly significant.



Successful digital transformation strategies are reliant on the adoption of robust data management practices which, if implemented correctly, will not only streamline operations but also enable housing providers to deliver better services. Indeed, in our experience, transformation initiatives will fail to fulfil their potential unless data and information management transformation is a key component.

The journey towards illuminating dark data is challenging but the rewards of improved governance, enhanced tenant satisfaction and operational excellence make it well worth the effort, particularly when you also consider that the Regulator of Social housing has said that good data governance is critical to achieving the highest levels of regulatory grading.

*Colin Sales is the CEO of 3C Consultants.*

# The dark side of housing data

Kevin Allder, Head of Business Solutions, VerseOne Group

*The storage and usage of poor data can be life-threatening when it comes to social housing. Housing providers are responsible for vast amounts of both tenant and property management data, and the struggle to keep this up-to-date is proving too much for the majority of the sector.*

The Housing Ombudsman's 'Spotlight on: Knowledge & Information Management' report revealed that over 90 per cent of survey respondents had problems accessing and using their data. The report highlighted significant issues, particularly around residents with vulnerabilities which haven't been accurately recorded and housing providers not using the data they've stored.

Furthermore, of the seven per cent who reported no problems with data cleanliness or usage, studies have shown that the quality of this data degrades at a rate of two per cent per month. Each year, around a quarter of their clean data will become dirty unless they have good processes in place. This applies not only to structured databases such as housing management and CRM systems but also to the unstructured data in emails, spreadsheets and social media.

## **Dark data's organisation-wide impact**

For most housing providers, millions of data points are

spread across multiple systems and the data is often out of sync due to inefficient processes and poor data cultures. Paper records are not being digitised, plus organisations are dealing with inconsistent data-entry processes and legacy systems. There really is a mass of data out there but volume isn't the (only) issue; it's the quality of data and how it's used that's crucial.

The incorrect use of this data has a knock-on effect that ripples through the organisation. Operational inefficiencies, such as wasted resources or service delays due to inaccurate information about maintenance and repairs, are common. Inaccurate data also affects residents' safety, with information such as emergency contact details often wildly out-of-date or missing entirely. This can also result in regulatory issues through non-compliance with safety standards.

Research from Royal Mail Data Services (RDMS) shows that the potential impact and associated cost of poor-quality data can be six per cent of an organisation's annual revenues. If this is true across social housing, that's a significant amount of money that dwarfs the relatively small investments needed to make a major difference in improving information management and service delivery.

## **Westward Housing – Leading the charge**

In 2017, Westward Housing embarked on a data transformation journey. Its experience was similar to most housing providers, with multiple systems and many years of unstructured data spiralling out of control.



The housing provider knew this needed to change and looked to technology to identify gaps in its data and once identified, it worked with both staff and tenants to help fill them. However, it knew that unless its culture and processes changed as well, the data would become dirty once again.

This attitude, along with staff briefings on the importance of data and a CEO who is passionate about data and has constantly tabled the subject on the board's agenda, contributed to the organisational shift.

Westward's focus on data has allowed it to achieve a 'grade 5 data maturity' score, the highest level when measured against the government's data-maturity criteria. Its journey has highlighted three top tips which have steered it on the path to success and could help other housing providers mitigate the risks associated with poor data quality and the presence of dark data.

### 1. Instigate cultural change

There is a need for top-down commitment from boards and executives to change the culture towards data. Senior executives need to communicate the importance of data quality and how this drives positive outcomes for tenants.

This shift in mindset isn't easy but when paired with the right technology to make data collection and validation as easy as possible, clean data that can drive decision making is possible. And, if this initiative is driven from the top and the benefits are clearly communicated to teams on the ground, tenants will benefit from higher levels of service and staff can provide tenants with the information they need without looking at multiple systems and incorrect data.

### 2. Structure promotes accuracy

Westward benefited from implementing processes that saw it move away from using spreadsheets as a management tool; systems and structured data should be used instead, only importing spreadsheet data as needed.

Breaking the dependence on spreadsheets must be part of a core data-improvement project and if certain spreadsheets still have to be used, you need to understand how to validate and audit those spreadsheets. This reliable structure promotes a higher level of data quality which can then feed into systems such as Microsoft Power BI for data visualisation. Once it is set up and the dashboards are built, it's easy to use, and improved decision-making and increased operational efficiency will be the direct outcomes.

### 3. Use digital tools at your disposal

Understanding the strain on resources that physical property inspections can cause, Westward had to think outside the box when it came to data collection. By using forms to report on the findings of each property visit, contractors and staff can report data inaccuracies while visiting the property for other reasons such as maintenance and repairs. Alternatively, residents can provide feedback themselves via a self-service portal. Using a form allows you to capture a wide array of data, not only about your properties but also about factors such as diversity or residents' additional support needs.

### The data challenge never ends

When it comes to defeating dark data, there is still work to be done. Only robust information-management processes and systems will solve the data dilemma, and there's considerable scope for quick wins and small improvements that make a big difference.

Crucially, action must be taken now. There are already inspirational examples of excellence along with the advice and tools to provide the 'silver bullet' housing providers need; they just need to take the leap and follow suit.

*Kevin Allder is the head of business solutions at VerseOne Group.*



# Remain in light (part one) – Shadow IT

In the first part of a two-part article (orig. planned as a single feature), Housing Technology asked Howell Technology Group and Infinity Group about housing providers' use of shadow IT (i.e. the unsanctioned use of software/web services, usually without IT teams' knowledge) and whether it's a significant problem, an inconvenience or a great way of moving faster.

## What is shadow IT?

Howell Technology Group's operations director, Niall Quinn, said, "Shadow IT refers to the use of IT systems, software and applications without explicit approval from the organisation's IT department.

"Shadow IT typically includes tools and solutions adopted by housing staff to increase their productivity or solve specific problems, but aren't vetted or supported by the organisation's official IT infrastructure."

## Is shadow IT a problem, an inconvenience or a great way of moving faster?

Infinity Group's head of sales for housing, Sarah McRow, said, "The adoption of shadow IT is typically a consequence of having business systems that aren't fit for purpose or aren't connected to other systems.

"One of the ways we assess the state of a housing provider's software ecosystem is to count how often the word 'spreadsheet' is used in any initial conversations; the more

frequently it's used, the higher the probability that formal systems aren't delivering against the business's needs.

"For example, one housing provider we worked with had no formal system to manage its planned maintenance so a spreadsheet was used to manage all of the works. Over time, the spreadsheet was used by more and more people and eventually became the most important 'system' in property services, to the extent that it was referred to as 'The Mother' by the entire team."

HTG's Quinn said, "Shadow IT can be a double-edged sword. On one hand, it can lead to significant security and compliance risks, making it a significant problem if unmanaged.

"On the other hand, it can be a great way of moving faster and fostering innovation because it allows employees to use the tools that they find most effective. The key lies in finding a balance and managing it effectively (i.e. the security vs. usability debate)."

## What are the advantages of shadow IT?

Infinity's McRow said, "In most instances, shadow IT isn't as nefarious as the name suggests and is used with good intentions, whether that's to deliver a better service to residents, to manage processes more efficiently or to communicate information to colleagues more effectively."



**"We all have the battle scars from support tickets for an application you didn't even know existed but was apparently business-critical."**

Niall Quinn, Operations Director,  
Howell Technology Group

Quinn said, "While it goes against all my cyber-security principles, there are advantages to shadow IT. Organisations may see increased agility and productivity because employees can quickly implement solutions tailored to their immediate needs, and it can foster innovation and lead to the discovery of more efficient tools and practices.

"I've seen some amazing PowerApps that help to gather unseen data (or data you were unaware of). Additionally, it can fill gaps in official IT infrastructures, providing functionalities that the sanctioned tools may lack."

## And what are the disadvantages of shadow IT?

Quinn said, "The obvious disadvantages include significant security risks because unsanctioned tools might not comply with the organisation's security policies or, more importantly, legal compliance.

"Shadow IT can lead to data silos and inconsistencies, making data management and integration challenging. Shadow IT also complicates IT support and maintenance because the IT department may not be aware of all the tools being used, leading to conflicts and inefficiencies. For people involved in service management, I'm sure we all have the battle scars from support tickets for an application or system you didn't even know existed but was apparently business-critical."

## How can housing providers mitigate the effects of shadow IT?

McRow said, "Understanding the extent of any shadow IT is the first step towards addressing the broader issues effecting the business. One housing provider used this approach to great effect when moving to a new housing management system.

"Before starting the project, the housing provider instigated a 'spreadsheet amnesty', where all staff were encouraged to hand over any spreadsheets that they used to manage their day-to-day work to the project team on

a 'no questions asked' basis. The project team ended up with 200 spreadsheets; this led to greater clarity on what was actually needed from the new HMS."

Quinn said, "First of all, you need to understand what is in your IT estate; once you know where you are, you can then plan for where you want to be. Use an RMM to compile an inventory of the apps installed on devices and use a cloud-scanning tool (e.g. Defender for Cloud) to understand what SaaS applications are being used or accessed. You won't see everything but 80 per cent of something is better than 100 per cent of nothing.

"IT departments can mitigate the effects of shadow IT by fostering a culture of open communication and collaboration, such as implementing a flexible IT policy which allows for the evaluation and integration of new tools. Regularly educating staff about the risks of unsanctioned IT and providing them with safe, approved alternatives can also reduce the occurrence of shadow IT.

"Embracing shadow IT means acknowledging its benefits (I can imagine a sharp intake of breath from CISOs) and incorporating the most useful tools into the official IT infrastructure after proper vetting."



**"One housing provider had a 'spreadsheet amnesty', where staff could hand over any spreadsheets that they used for their day-to-day work on a 'no questions asked' basis."**

Sarah McRow, Head of Sales for Housing,  
Infinity Group

## Examples of good and bad shadow IT

Quinn said, "An example of 'good' shadow IT could be the use of a project management tool such as Trello by a team to enhance their workflow which, after evaluation, gets officially sanctioned by the IT department.

"Bad shadow IT might involve staff using unsecured file-sharing services that expose sensitive data to potential breaches and violate data protection regulations. Some questions I ask customers are: do you know where your data resides; do you know how your data is classified; and if an auditor came in tomorrow, could you articulate your data management processes and procedures?"

**Housing Technology would like to thank Niall Quinn (Howell Technology Group) and Sarah McRow (Infinity Group) for their comments and editorial contributions to this article.**

# Remain in light (part two) – Dark data

In the second part of a two-part article (orig. planned as a single feature), Housing Technology quizzed Askporter and Howell Technology Group about dark data and how and why housing providers collect, process and store it yet don't (or can't) use dark data for insights or decision-making.

## What is dark data?

Askporter's head of business development, Ben Yexley, said, "Dark data is the vast amount of information that organisations collect, process and store during regular business activities but fail to use for other business-efficiency gains.

"In housing, this can include data types such as resident communications, maintenance records, security footage, sales data and market insights. This data remains largely untapped despite its potential to provide valuable insights and efficiency savings.

"Dark data exists because organisations embrace the notion that all information must be stored so they accumulate massive data-lakes, but most housing providers don't have the tools they need to use even a fraction of this data."

## How does 'normal' data become 'dark' data?

Niall Quinn, operations director at Howell Technology Group, said, "Normal data becomes dark data when it isn't integrated into a housing provider's data-analytics



**"Dark data exists because organisations embrace the notion that all information must be stored so they accumulate massive data-lakes, yet they don't have the tools to use even a fraction of this data."**

Ben Yexley, Head of Business Development,  
Askporter

framework or used for decision-making. This can happen because of a lack of awareness about its potential value, weak data-management practices or technical limitations that prevent its analysis."

Askporter's Yexley said, "Normal data becomes dark data when it's collected and stored but not used. This usually happens when there's no strategy for data collection, data silos exist or there are legacy systems.

"Data is inherently messy, and most data collected is unstructured and found in a range of disparate sources and formats, making it difficult to use for quick analysis. In short, without a sound strategy or analytical capabilities, normal data automatically turns into dark data."

## How much dark data does a typical housing provider have?

HTG's Quinn said, "Quantifying the volume of dark data is difficult because it varies greatly depending on the size and data practices of each organisation. For example, I've seen entire departments, predominantly front-line workers, using any means necessary to communicate and share valuable data; there is a treasure trove of data being captured but it is usually 'dark'."

"Instead of using cumbersome CRM tools and processes which, for frontline workers, don't work well on mobiles or tablets, they turn to other methods to enhance productivity."

Yexley said, "We estimate that 40-90 per cent of enterprise data remains dark data, meaning a very large amount is simply unused. If this data could be used, it would drive significant improvements at scale, such as autonomously updated asset registers, improved tenant experiences and better regulatory compliance. Housing providers also have a lot of old redundant data; processes are therefore needed to extract meaningful data, keep it up-to-date and create actionable outputs."

"AI technologies for housing, such as Askporter, are changing this. AI can help to engage residents, gather the right diagnostic information and then, in their back-office systems, pull out the meaningful data on residents and property, record it and allocate it to the right staff to take the necessary actions."

## How can housing providers prevent dark data?

Quinn said, "Housing providers should implement robust data governance frameworks that include regular data audits, clear data management policies and the integration of data analytics tools."

"IT departments need to understand the 'personalities' of their end-users; it sounds easy on paper but it's usually hard to implement. We often suggest 'day in the life' sessions where someone from IT sits with an end-user within a particular department for a couple of days and studies how they work, helping out where possible and getting their hands dirty too, obviously."

Yexley said, "Making use of dark data requires adopting a technology solution that can process and store this data, structuring it in a way that allows it to be reviewed and actually used. Our AI platform provides centralised analytics that can be accessed by housing providers and fed into their existing systems. With this, they can track business-critical workflows in a dashboard that

hosts intelligent real-time data. Askporter integrates with housing providers' existing systems so insights are unlocked across each organisation, solving the problem of under-used data."

"AI-driven tools efficiently process unused data. By integrating these tools, housing providers can automatically sort and classify unused data. AI and large language modelling (LLM) can do the heavy lifting by classifying and categorising dark data."



**"I've seen entire departments using any means necessary to share valuable data; there is a treasure trove of data being captured but it is usually 'dark'."**

Niall Quinn, Operations Director,  
Howell Technology Group

"Leveraging LLMs can provide housing managers with valuable insights into trends by analysing vast amounts of unstructured data, leading to enhanced decision-making and improved resident satisfaction."

## What are the risks of dark data?

Quinn said, "Aside from the storage, staff and licensing costs of retaining dark data (even if it's not being used), it represents a missed opportunity to gain a range of insights and efficiencies that could improve housing providers' operations and decision-making processes. Dark data can also lead to compliance problems if it includes sensitive information that isn't being properly managed."

Yexley said, "For best business practice, it isn't a good idea to have unknown data points in your data repositories. For example, improperly storing resident information, without proper analysis, can mean missed opportunities for improved service and unresolved problems. At its core, transforming dark data into insightful data involves streamlining knowledge and communication to enhance the efficiency and well-being of residents, staff and properties."

**Housing Technology would like to thank Ben Yexley (Askporter) and Niall Quinn (Howell Technology Group) for their comments and editorial contributions to this article.**



To celebrate our 100th edition, Housing Technology invited a few of our longest-standing contributors to share their views on how the technology and business landscape has changed over the past 15-20 years, the milestones along the way, and what they think the future holds. Our sincere thanks to Aidan Dunphy (Esuasive), Steve Dungworth (Golden Marzipan & Open Data Exchange), Nas Hayat (Housing Insight), Roger Birkinshaw (NEC Software Solutions), Mark Woosey (Notting Hill Genesis & Two Saints Housing), Richard Hawkes (Platform Housing) and Douglas Silverstone (Southern Housing) for their editorial contributions.

### What was the IT landscape in housing like towards the end of the 2000s?

Aidan Dunphy, chief product officer at Esuasive, said, "I'd characterise the late 'noughties' as a period in which the IT systems that had dominated the previous decade were beginning to feel their age. The systems were all similar in functionality, none of them were cloud-based, and all of them were weighed down by years of cumulative development.

"There were very few IT start-ups or genuinely innovative propositions, and they faced a difficult market to enter because the smaller housing providers couldn't afford them and the larger ones were preoccupied with grand ERP experiments (e.g. Oracle at Home Group, Dynamics at Affinity Sutton and SAP at Sanctuary) or attempts to build their own solutions. At the time, I couldn't see a realistic vision for the future of IT in the sector, seeing the ERP and DIY projects as misguided vanity projects (I still do)."

Richard Hawkes, head of data, analytics and AI at Platform Housing Group, said, "When I joined the housing sector in 2005, I was fresh out of school and amazed at the sight of five physical servers and Windows 2000. Academy (now-retired) was the HMS of choice, and mobile working through PDAs was becoming a reality. Desks had CRT monitors on them and Blackberry devices offered email on the move."

Nas Hayat, founder and CEO of Housing Insight, said, "Technology in social housing was very different when I started – for example, paper-based systems and manual (offline) processes were still commonplace. Digital transformation wasn't high on people's agendas and, consequently, innovation was lacking."

Roger Birkinshaw, executive director of government and housing at NEC Software Solutions, said, "During the 2000s, most of the IT used across the housing sector was fragmented, with large legacy systems dominating and integration a significant pain point. It was an era of proprietary software, locking housing providers into their IT suppliers' ecosystems and limiting compatibility with other solutions.

"Systems were often procured by individual departments, and sometimes built in-house. Any attempts at integration were messy and complex, leading to unstable systems with gaping security problems by today's standards. Mobile devices such as smartphones and tablets were still in their infancy – clunky, hard to navigate and often unreliable."

Mark Woosey, director of information technology at Notting Hill Genesis and vice-chair of Two Saints Housing, said, "Compared with now, everything was old-fashioned! IT kit was housed in on-premise racks in rooms with poor security, inadequate air-conditioning and little or no fire suppression.





**“When I started, paper-based systems and offline, manual processes were still commonplace.”**

Nas Hayat, Founder & CEO, Housing Insight

Data backups were on tape (rarely tested and often failed) and DR times were measured in days and weeks.

“Digital, as we know it now, wasn’t on the agenda, and cyber security wasn’t yet an enterprise threat. Blackberry phones were the pinnacle of mobile technology, with housing staff often using their own Nokia ‘brick’ phones, if they had one.

“Google and AWS were a long way from being the ‘mega vendors’ we know today – Microsoft dominated the sector, even though Microsoft considered social housing to be insignificant, selling all its licences as on-premise charitable licences.

“All of the housing management systems were old-fashioned in terms of functionality and usability, solidly embedded with their housing customers. Consequently, investment and innovation faltered.”

### How has the role and importance of technology changed?

Douglas Silverstone, director of technology at Southern Housing Group, said, “Technology has increasingly become ‘the business’; if we turned off our systems today, how long would a housing provider last? We’ve seen some major cybersecurity breaches that prove the answer is measured in hours, not weeks.

“What has changed is that every part of the business now fundamentally relies on IT; when technology isn’t fully aligned, costs spiral, staff become ineffective and customers get poor service. This complete dependence on technology has meant that digital and data strategies have become board-level conversations and an important differentiator for our core business capabilities.”

Steve Dungworth, director of Golden Marzipan and chair of Open Data Exchange, said, “Since I started consulting five years ago, the first question I’m asked by clients is ‘what’s the best housing\* management system?’ (\*or asset, finance, scheduling, mobile, etc).

“Well, pick a card, any card... your system is the best system because you’ve bought and paid for it, so make the best of it. However, the emphasis has now changed from systems to data; the role of technology is to serve you data, information and insights.

“Sadly, the majority of systems are poor at providing data out of the box (or boxes). Our quest for ‘the’ system has caused data quality and integrity problems, not least because we’ve treated the box like a box room or attic; just stuff things out of the way in case we need them one day.”

Housing Insight’s Hayat said, “Housing providers and their staff are now well aware of the role that technology can play in making their organisations more capable and efficient, with more dedicated roles for technology and digital transformation projects.

“The perception of technology has changed because there are many more proven use-cases of technology to complement their activities and improve efficiency, all demonstrating a positive impact on the business.”

NHG’s Woosey said, “The pandemic, when businesses were forced to change and work remotely or cease to exist, opened senior management’s eyes to the capability and agility that IT could provide, resulting in so-called ‘digital IT’ and latterly automation and AI moving ahead at a rate that no-one could have imagined pre-pandemic. At the same time, housing management systems, once a mainstay of housing operations, are no longer the core of housing providers’ IT portfolios.

“Technology has finally reached housing providers’ executive teams in the forms of CIOs. How long before a successful CIO becomes a CEO? That would be my barometer of when IT has truly reached the level of maturity it is capable of achieving.



**“As a sector, we don’t seem to like the idea that somebody will make money from us, whether it’s big tech or big consulting.”**

Steve Dungworth, Director of Golden Marzipan & Chair of Open Data Exchange

“Lastly, IT is now seen as being wholly business-critical. For example, a few minutes’ downtime is now considered a problem whereas in the early 2000s systems were often down for days at a time. I would add that the criticality of IT to the housing sector is precisely what makes it an increasingly attractive target for ransomware and other cyber attacks.”

NEC’s Birkinshaw said, “There has been a strong move over the past two decades to integrate disparate systems and automate manual processes. Modern housing management systems should streamline operations and give housing officers a more complete picture of tenants



**“We’ve now passed a watershed; computer says ‘no’ became computer says ‘don’t panic, here’s a solution.’”**

Aidan Dunphy, Chief Product Officer, Esuasive

and their homes so that informed decisions can be made on how to best support them.

“We’ve seen huge growth in the adoption of digital portals, mobile apps and social media platforms for engaging with tenants and making it easier for people to contact their housing provider, pay their rent, report ASB and book repairs online.

“The housing sector has finally become much more data-driven. For example, predictive analytics are helping housing providers to identify households at risk of arrears, and smart devices are being used to alert housing providers to homes at greater risk of problems such as damp and mould, fuel poverty and other environmental changes that might affect residents’ wellbeing.”

**What have been the most significant milestones?**

Platform Housing’s Hawkes said, “The ubiquitous adoption of broadband and the internet is the most important milestone. When I started in housing, we had a ‘blisteringly fast’ 2mbps leased line, and the internet was mainly about consuming content and email communications.

“Over the last 20 years, this has evolved so much, encompassing cloud-based computing, SaaS products, social media and the creation of true mobile working – the list could go on!”

Esuasive’s Dunphy said, “We’ve now passed a watershed and I suspect it was the pandemic that did it, forcing organisations to divert attention and resources to their technology functions. Computer says ‘no’ became computer says ‘don’t panic, here’s a solution’.

“For example, Housing Technology’s recent ‘Proptechs & IT Start-ups 2024/25’ report (available now from housing-technology.com) is fascinating because of the sheer number, variety and credibility of the IT suppliers that the report covers; in the current IT and business environment, they no longer feel like plucky outsiders trying to get their first client.”

Southern Housing’s Silverstone said, “In my time, GDPR, the Grenfell Tower tragedy and the pandemic all fundamentally changed the way we deliver technology and the way we serve information to our business teams.

“When done properly, GDPR gave us a framework to deliver and build data services. It drew out the need for HACT’s data standards and it made data something that we as businesses needed to manage.

“Grenfell shook us all; it was a day that changed our world and it highlighted where our systems failed to spot predictable failings. It triggered a regulatory step-change which in turn meant we needed better systems, better data and better understandings.

“The pandemic brought us forward, as with other sectors, into a world we’d already been looking at. It gave us the flexibility to deliver services wherever we needed them and it shone a light on technology teams who excelled in keeping the show on the road. I would also give an honourable mention to cybersecurity; it hasn’t had a ‘milestone moment’ but it has consistently increased in importance (and cost) year-on-year.”



**“How long before a housing CIO becomes CEO? That’s my barometer of when IT has truly matured.”**

Mark Woosey, Director of Information Technology, Notting Hill Genesis & Vice Chair, Two Saints Housing

Golden Marzipan’s Dungworth said, “All of the notable changes in housing IT have been reactions to the wider workplace – Grenfell, fire safety and compliance records, the pandemic and tools for hybrid working, consumer regulations and the Housing Ombudsman’s focus on data. These are all alongside the big IT stuff that’s driving the wider commercial world – generative AI, IoT, blockchain, cloud and big data.”



**“The 2000s were the proprietary era, locking housing providers into their IT suppliers’ ecosystems and limiting their compatibility.”**

Roger Birkinshaw, Executive Director of Government & Housing, NEC Software Solutions UK

Birkinshaw said, “The internet of things is gaining traction in the housing sector, with smart devices increasingly being used to help housing providers predict more accurately when maintenance is needed to address problems such as damp and mould, and smart appliances help housing officers to spot residents who suddenly stop using their heating in the winter, a possible indication that they are struggling financially or physically.



"Technology suppliers are making technology more accessible, efficient and responsive to the needs of both housing providers and their tenants. These tools offer new opportunities to improve service delivery and support people in ways that just weren't possible before."

Woosey said, "The significant milestones are digitisation, cybersecurity, AI, cloud computing, and low/no-code development, in parallel with the decline of the 'old guard' of monolithic systems providers and rise of the 'mega vendors' characterised by Microsoft, Amazon and Google.



"When I joined the housing sector in 2005, Academy (now-retired) was the HMS of choice and PDA-based mobile working was just becoming a reality."

Richard Hawkes, Head of Data, Analytics & AI, Platform Housing Group

"A less-noticed change is the generational shift of senior management retiring, having worked in housing since, say, the 1980s and the next generation of management for whom change and transformation have become their primary goals."

### What do the next five years hold?

Dunphy said, "AI is the 'buzzword du jour' but make no mistake, it may be hyped but it's not over-hyped; I firmly believe that we're just scratching the surface of how LLMs and other AIs will transform how we use technology.

"Expect to see solutions become conversational, much more automated, less concerned with process and precision and more with outcomes, and customisable by people with no technology skills. It's a brave new world!"

Dungworth said, "Salesforce, Microsoft and Amazon Web Services are the emerging platforms. Aside from anything else, they provide safety and security in numbers, minimising cyber threats and curating accessible data.

"In some ways, I'm sad that we haven't settled on some technologies that align with our culture. As a sector, we don't seem to like the idea that somebody will make money from us, whether it's big tech or big consulting. We think that any spare money needs to go on front-line services and residents. There's sometimes a feeling that more investment in technology doesn't improve health, education or housing and only serves to increase suppliers' profits."

Hawkes said, "We're now at a pivotal point in the hype of AI. There are now lots of innovative products and exciting tools so it will be fascinating to see how AI matures to become



"We won't develop in-house AI solutions but we do expect our IT suppliers to bring AI as a fundamental part of their core offer."

Douglas Silverstone, Director of Technology, Southern Housing

production-ready and truly embedded and trusted within customer journeys and business transactions.

"As we evolve to deliver more personalised products and services that meet our customers' needs, I expect that AI will help to bridge the gap between our existing and future solutions which put the customer at the heart of everything we do."

Hayat said, "Ultimately, it will be the continued improvement of service delivery to residents through the advance of complementary technologies, with data at the core of defining the best approach.

"AI will play an important role in improving technology in the future. We're already seeing it being used to understand data better, improve processes and improve efficiencies in the business. This will continue to advance, with some processes being entirely automated and handled by AI leading to even more efficiencies."

Silverstone said, "Dare I mention AI? On its own it won't change our world but I suspect it will fundamentally change our technology supply-chain. I doubt that we'll develop in-house AI solutions but I do expect our technology suppliers to bring AI as a fundamental part of their core offer and without increasing costs. Google, Microsoft and AWS, as well as other giants will increasingly make that capability more and more viable, so those suppliers that don't move fast enough will become increasingly irrelevant.

"Finally, I'm hopeful that the government will take the housing crisis seriously and build social housing like none of us has ever seen before. It's the key to unlocking so many of our social challenges."

**Housing Technology would like to thank Aidan Dunphy (Esuasive), Steve Dungworth (Golden Marzipan & Open Data Exchange), Nas Hayat (Housing Insight), Roger Birkinshaw (NEC Software Solutions), Mark Woosey (Notting Hill Genesis & Two Saints Housing), Richard Hawkes (Platform Housing) and Douglas Silverstone (Southern Housing) for their editorial contributions.**



# 15 years of That Housing IT Guy

Tony Smith, Independent Housing IT Consultant, Acutance Consulting

Many of you will know me as 'ThatHousingITGuy' from my blog ([tonysmiththathousingitguy.blogspot.com](https://tonysmiththathousingitguy.blogspot.com)), which has been running for almost as long as Housing Technology magazine, with over 500 posts. My experience in the housing sector spans almost 30 years working for suppliers as well as housing providers, so not much escapes me. Most of my work involves 'procuring the right solution,' acting as a 'critical friend' and then helping to make it all work.

## Supplier consolidation

One big theme across the sector over the past 15 years that I've noticed has been the consolidation of systems and suppliers. Not only has this reduced choice, it has also caused frustration for some users because helpdesk knowledge gets watered down and suppliers can easily be labelled by their customers as unresponsive or just uninterested.

It's therefore been no surprise, as often documented in my blog, that there has been an emergence of new solutions available on Microsoft Dynamics and other CRM platforms. However, although I've come across many housing providers using Dynamics, it's rare to see it totally displacing a traditional housing management system (available in both 'classic' and 'legacy' versions!).

## Microsoft Dynamics

There are so many housing providers where Dynamics development has struggled to replace an HMS that might be almost 30 years-old, is still licenced for another 5-10 years and in full daily use.

In my view, Dynamics is definitely up to the job; perhaps the problem is ICT teams not being bold enough or budgets not large enough. Among the housing providers I've worked with, it's not unusual for them to have taken stock, looked at their HMS situation and decided that going back to a modern, web-based HMS is a better and more cost-effective option.

## Loving spreadsheets...

I've not noticed the love of spreadsheets by both end-users and senior management to have significantly dwindled, nor levels of training on Excel. This way of working still keeps islands of data outside housing providers' primary systems of record, leading to difficulties around GDPR and accurate reporting.

Over the past 15 years, my blog has revisited many themes, often covering technologies that are 'just around the corner', such as drones, augmented reality, Google Glass (remember that?) and, of course, the internet of things (IoT).

## Internet of things

Disappointingly, IoT always seems to be on the cusp of wider adoption, despite no end of small-scale trials and regulators driving housing providers to further monitor and protect their properties and residents' wellbeing. With hindsight, IoT might have saved lives at Grenfell Tower (as would have landlords and contractors not cutting corners) and possibly the life of Awaab Ishak in Rochdale. Again, are budgets holding back 'real life' deployment of these technologies or is it just a lack of boldness in our sector?

15 years on, we still see far too many media exposés on large housing providers (often the same ones) failing their residents regarding maintenance and repairs. I have a few hundred residents among my 16,000 housing-sector followers on X/Twitter and I probably help at least three each month with whatever useful advice I can give.

## Helping residents

I recently published two articles on my blog, one to help residents complain to their housing provider in a structured way and another relating to systems for serving customers better. There is no shortage of solutions to help housing providers, although low respect for data, inconsistent processes and organisational cultures still let many organisations' delivery down.

In my view, data is and has been a constant factor across our sector over the past couple of decades. We now have the best-ever data analysis tools, often coupled with huge, expensive teams to identify problems with our information.

However, without the right culture (and even with the best solutions), housing providers will still struggle to provide the right service to their residents and find it difficult to complete every interaction right first time.

*Tony Smith is an independent housing IT consultant at Acutance Consulting and is the author and founder of the ThatHousingITGuy blog ([tonysmiththathousingitguy.blogspot.com](https://tonysmiththathousingitguy.blogspot.com)).*

# Some things change, some stay the same



Tony Blows, CIO, The Riverside Group

Towards the end of the decade known as the 'noughties', it wasn't uncommon to still find green-screen systems, probably encased in a more friendly GUI, running at the heart of your typical housing provider. These business-critical systems would be fed and watered in a datacentre typically located in your head-office, and always accompanied by onerous business-continuity testing, fail-over systems, UPSs and overpriced and oversubscribed data links. In short, an endless major headache for heads of IT and the like in the quest for zero downtime.

Smart phones weren't pervasive and were only found in the hands of the flush or a few tech-heads. End-user software had to be delivered via the 'magic' Citrix or remote installation on a PC, so IT support involved a lot of walking.

The idea of customers' journeys traversing multiple systems to offer seamless service was much talked-about but the actual capability in the systems of the day to do so wasn't. Likewise, the concepts of data-driven decision-making while driving insights and value from our data were being discussed but the costs were high and the technology a tad over-sold.

Thankfully, new opportunities in the form of global software players have emerged that support workflow, automation and integration.

Mobile working and big data are some of the many great benefits of our sector's recent general migration to the cloud, contributing towards better staff retention, greater access to information and cost reductions. Similarly, the in-house datacentre is thankfully a thing of the past for most people.

So now we have ever-green integrated platforms closely aligned to business processes and customer journeys, don't we? And have we thus enhanced customer satisfaction and created business efficiencies in the process of doing so?

Thanks to advances in mobile technology, our colleagues are much more confident to self-serve whether researching online, using websites, company portals and BI tools. However, they also expect more from us as their in-house purveyors of IT systems and services (that's a good thing, by the way!).

The Pretenders' lead singer Chrissie Hynde once sang, "some things change, some stay the same" and that pretty much sums up my reflection on the past 15-20 years.

While there has been much positive change, data quality is still a challenge and considered a risk to customer safety, a source of many inefficiencies and the primary hurdle for the effective use of AI.

Cyber-security threats are still around, just more prolific and more vicious, it would seem. And finally, no matter which part of the business we're trying to improve by deploying better technology, we still need to understand our customers and the processes driving our services really well to make the RoI ultimately stack up, and that's not always a given.

And if you don't know who Chrissie Hynde is or who The Pretenders are, just say "Hey Google...".

*Tony Blows is the CIO of The Riverside Group.*

# Omni-channel or omni-shambles?



*Housing providers are increasingly talking about adopting a multi-channel communications strategy, but how should it be done, what are the benefits to tenants and housing providers, and are the IT suppliers ready with the right solutions? Housing Technology interviewed a panel of multi-channel experts to find out their views.*

Most housing providers already have multiple ways to communicate with their tenants and most tenants have a choice of how they contact their housing providers, such as by post, email, online or by telephone. However, the 'Holy Grail' of multi-channel communications (MCC) is to not integrate their existing channels but also offer new channels such as apps, text and social media.

Alison Davies, group change programme manager at GreenSquare Group, said, "For us, MCC is a transformation agenda which will drive an increasing use of new platforms and devices to deliver services and information to our residents. As a Universal Credit pilot, traffic into our organisation has increased so we need to exploit the potential of MCC to service this growth in demand.

"Routine housing services therefore need to be delivered using low cost, accessible and easy to use platforms so that we can focus our premium contact methods to support specific tenant groups."



"The merits of developing in a web application architecture using HTML5 far outweigh the approach of developing specific applications for each channel."

Chris Potter, Director of Uniclass, ROCC Computers

Mike Eckersley, a senior consultant at Capita, added, "MCC is the ability for a housing provider to communicate with its tenants through whichever medium they prefer – whether that's post, email, telephone or Twitter – and clearly the more channels that an organisation opens up, the more choice its tenants have."

A concise definition of MCC was provided by Paul Miller, head of contact centre at PCMS Group, who said, "It's about providing tenants with a 'Martini' service – any time, any place, anywhere."



"Routine housing services need to be delivered using low cost, easy to use platforms so that we can focus our premium contact methods to support specific tenant groups."

Alison Davies, Group Change Programme Manager, GreenSquare Group

## Technical considerations

Adding new channels, such as social media or mobile apps, is relatively easy to do. The difficulties lie in joining up all of the channels so that all communications are visible and actionable from any channel, regardless of from which channel the query or complaint originated. Furthermore, MCC isn't a standalone technology infrastructure; to work successfully, it must have close integration with other business systems.

Paul Swannell, sales manager for social housing in Ciber UK's SAP practice, said, "As well as integrating communications across channels, MCC itself should be linked to other business systems such as repairs and maintenance systems. Moving to this 'single business platform' approach is the most efficient means of achieving two-way communication of requests, updates and outcomes between the tenant and housing provider."

The importance of viewing MCC as an integrated part of a housing provider's technology and business infrastructure was echoed by Rob Fletcher, group head of ICT at GreenSquare. He said, "Our MCC solution needs to be delivered through a single platform and a single user interface, making it easy to deliver the same solution to any device. However, the key point is that MCC should be integrated with back office, call centre and housing management systems. Without this, MCC doesn't get off the ground."

Eckersley added, "The most important technical implication is being able to manage the inbound and outbound contacts effectively – it is one thing to open up all the available channels, but quite another to ensure that contacts on these channels are automatically dealt with and fed into the correct workflows within the organisation. In essence, this means a multimedia call-centre solution which 'receives' and assigns the contacts to the relevant agent, alongside a CRM system to manage the workflows and responses."

## Benefits to your tenants

For tenants, MCC means more choice, both in terms of which channels they choose to use and when they contact their housing providers, faster responses and problem resolutions and, in many cases, more opportunities to 'self-serve' so they become less reliant on their housing provider.

Swannell said, "When MCC is effectively integrated with tenant history, preferences and data analytics, it has the potential to truly impress tenants with the timeliness and relevance of the responses and information they receive. Furthermore, when MCC is fully integrated with back-office systems, tenants will be absolutely delighted to find that an engineer has already fixed the faulty lift that they reported the night before via a mobile app."



"Multi-channel communications are a reality and in fact, the solutions are ahead of the marketing hype. The new East Village community that we're involved in shows that it's already happening."

Mitesh Patel, Managing Director, Fifosys

Chris Potter, director of Uniclass for ROCC Computers, added, "MCC gives tenants additional methods to communicate with their housing provider, which saves time and money for tenants in terms of travel time and expenses. In addition, MCC improves tenant access and supports housing providers' digital inclusion agendas."

Furthermore, universal credit and welfare reform will significantly change how tenants engage with their housing provider. As Eckersley from Capita said, "As the impact of welfare reform hits, the effect on telephone contact is likely to be heavy, so tenants able to bypass this using new channels will be at an advantage."

## Advantages of MCC to housing providers

The main advantages to housing providers of implementing MCC are to increase efficiency, reduce costs and increase tenant satisfaction.

Eckersley explained, "The main advantages are business-related; a true MCC strategy will enable more efficient handling of tenant communications and it will streamline contact management activities. Efficiencies will also be made through

## Omni-channel or omni-shambles?

Continued from opposite page



"When multi-channel communications are integrated with tenant history, preferences and data analytics, it can truly impress tenants with the timeliness and relevance of the responses they receive."

Paul Swannell, Sales Manager for Social Housing, Ciber UK's SAP Practice

operational staff always having access to the latest chapter of the tenant's story – whatever channel that came through. Up to date and accurate information means less repeated work, fewer missed appointments and fewer missed opportunities."

Mitesh Patel, managing director of Fifosys, said, "From a service point of view, MCC enables better communication with tenants, and these multiple touch-points can drive engagement and activity across the tenant community. But the approach also brings benefits to the wider community. It is not uncommon for new property developments to encounter resistance from the local community when they are first introduced – but multi-channel communication provides a powerful platform for community engagement."



"Multi-channel communications should be integrated with back office, call centre and housing management systems. Without this, it won't get off the ground."

Rob Fletcher, Group Head of ICT, GreenSquare Group

Miller added, "Social media and email channels can be far more efficient to run than traditional call centres – one person can handle multiple conversations. At the same time, a far greater benefit may be the ability to communicate personally with an individual through their mobile device or personal email address. There is an opportunity to build relationships with individual tenants which will not only improve satisfaction but also help with revenue protection."

### Which channels first?

Having decided to adopt MCC, one of the first steps for a housing provider is to establish which channels it wants to operate, and the only sensible way of doing so is to ask its tenants. However, this approach should come with the caveat that as many tenants may not use or even be aware of things like mobile apps or social media, they may need additional information and education before they can make full-informed decisions.

Miller from PCMS said, "Anything which is channel-related must be tenant-led. It should be possible to identify the priority of channels to be implemented, but also the times that they should be available and the services which should be provided. Successful implementations of MCC are always based on providing choice, not forcing tenants to change."

Ciber UK's Swannell added, "There are two aspects to this: first, find out what channels your tenants want to use; second, determine which channels you are technically and operationally ready for. The launch of an ineffective channel will create dissatisfied tenants and an increased burden on the contact centre."

### Code once, use many times

When implementing MCC, housing providers have the choice of either developing dedicated applications for each channel or using tools such as HTML5 to 'code once, use many times' across the various channels. While the adoption of HTML5 and similar development tools is relatively recent, research firm Gartner expects more than half of all mobile apps deployed by 2016 will be based on HTML5.

Swannell said, "The merits of developing applications per channel can seem attractive, but caution is required due to the cost of ownership and siloed solutions. 'Code once' means just that, providing applications that can run on any operating system and mobile device, and HTML5 is a cost effective way to deliver a consistent look and feel across relevant channels. Alternatively a mobile platform offers a more advanced solution, simplifying cross-device development without forcing a one-size-fits-all approach."

Patel from Fifosys added, "The advantage is you don't just develop applications for each channel. You plan for a single, centralised source of information that is accessible from any device, but brought together into a portal."



"It is one thing to open up all the available channels, but quite another to ensure that contacts on these channels are automatically dealt with and fed into the correct workflows."

Mike Eckersley, Senior Consultant, Capita

There was additional support for HTML5 from ROCC's Potter who said, "The merits of developing in a web application architecture using HTML5 far outweigh the approach of developing specific

applications for each channel. Modern web application development results in an excellent user experience and offline capabilities are provided using browser caching so it doesn't matter if the mobile signal drops out."



"It's about providing tenants with a 'Martini' service – any time, any place, anywhere."

Paul Miller, Head of Contact Centre, PCMS Group

### Hype or reality?

For all the benefits of MCC to tenants and housing providers alike, opinion seems to be divided regarding whether MCC systems are properly ready yet.

Greensquare's Fletcher said, "Our vision for MCC is way beyond what the IT suppliers seem to be providing at the moment. The end-to-end technical ecosystem simply doesn't appear to be available to deliver what we want. Vendors talk a lot about multi-channel benefits but are very silent on how this is delivered as a coherent solution. Much of the integration between systems, including CRM and housing systems, is at best patchy or even completely missing."

Miller added, "Overall the leading solutions do exactly what they promise; they make handling communications across multiple channels more efficient. However the initial outlay for true multi-channel packages is high and they generally aim at managing inbound and outbound telephone calls, email, SMS and social media through Twitter and Facebook."

"However, there will be a significant amount of work to integrate them with housing management systems and also to integrate channels such as post and emerging channels subsequently."

On a more positive note, Patel said, "MCC is a reality and in fact, the solutions are ahead of the marketing hype. The new East Village community that we're involved in shows that it's already happening."

*Housing Technology would like to thank Mike Eckersley (Capita), Paul Swannell (Ciber UK), Mitesh Patel (Fifosys), Alison Davies and Rob Fletcher (GreenSquare), Paul Miller (PCMS Group) and Chris Potter (ROCC Computers) for contributing to this article.*

# MOBILE WORKING 2.0



*Housing Technology interviewed mobile working experts from 1st Touch, Incom Business Systems, Intercity Telecom and Waterstons on the new wave of mobile working practices, their predictions for the future and merits of the different technology platforms.*

It is safe to say that the use of mobile devices such as smartphones and tablets, is now well established across most of the UK's social housing sector. In the past five years or so, the most obvious changes have been a combination of the ubiquity of mobile devices and the functionality of the software running on them, with a much greater blurring of the distinction between historically office-based applications and mobile applications (and apps, in many cases).

With many housing providers on their second or even third generation of mobile technology, what are the latest developments as we move towards mobile working 2.0?

1st Touch's CEO, Robert Dent, said, "The first main development is the higher number of what were traditionally office-based staff who are now spending more time in the field. The second is that the role of the traditional field worker has become less siloed; specialist skills are still needed, but an engineer will be expected to report if a tenant is vulnerable and a neighbourhood officer will be expected to arrange repairs."



*"Mobile working will be linked to a wider range of devices and data metrics so that tasks will become more automated and booked to pre-empt issues before they arise."*

Robert Dent, CEO, 1st Touch

As recently as around 2010, many field-based workers needed a panoply of separate devices, perhaps comprising a PDA, mobile phone, laptop and lone-worker device, whereas now in most instances they only need one. As James Hayward, Incom Business Systems' corporate sales manager, explained, "Cloud-based collaborative apps and network-neutral unified communications

mean that workers only need a single device for the majority of work tasks. As a result, they can be more productive and housing providers gain more from expensive assets such as people, buildings, vehicles and IT infrastructure."

However, data access and security can sometimes be overlooked in the rush to enable mobile working. Waterstons' executive transformation consultant, James Alderson, said, "Recently, there have been significant advances in access to data and data security, with mobile application management providing secure data access and storage on any device; this allows many devices to be pushed out without ever having to worry about what is on them. Furthermore it offers a secure method of data access for those employees wanting to use their own smartphone or tablet (BYOD), providing a device-neutral approach to mobile working."

### Mobile in five years' time

Peering into our contributors' crystal balls, in five years' time, not only will even more housing staff be using mobile devices for a greater part of their work, but data connectivity and coverage will be massively improved so that it will be possible to carry out more complex processes out in the field. Furthermore, 'wearable tech' and the Internet of Things will both contribute towards dramatic and often-unimaginable changes.

Waterston's Alderson said, "Looking ahead, we're going to see super-high speed, wide-area coverage for data connectivity; this will enable better access to mobile video, collaborative services and the cloud so that teams can work on large, complex documents wherever they are. And as more data and services move into the cloud, machine learning will push data to context-aware devices, giving you the information you need when you need it.

"Furthermore, using cloud-based services frees users from being reliant on any particular device, resulting in a combination of either having all information available on every device or, as computational power continues to increase, users will have 'one device that does it all' in their pocket but which also

wirelessly connects to interface devices and screens in the office when needed."

*"Cloud-based collaborative apps and network-neutral unified communications mean that workers will only need a single device for the majority of tasks."*

James Hayward, Corporate Sales Manager, Incom Business Systems

Dent from 1st Touch said, "In future, an even wider range of users will be using mobile devices for their day jobs. Just as desktops have largely given way to laptops, laptops will give way to tablets and smartphones. Also, mobile working will be linked to a wider range of devices and data metrics so that tasks will become more automated and booked to pre-empt issues before they arise. For example, a gas engineer will receive a notification that a boiler in a nearby property is not running efficiently and that the tenant is currently in. This means that the engineer can then go and service the boiler, without any intervention from back-office staff."

### New areas for mobile working

The growth of mobile working in housing began in the obvious area of housing providers' field-based staff and in particular their repairs and maintenance teams. As technology has improved and become more pervasive, it has spread inwards from the field and is being used for a much more diverse range of roles.

Nayer Sultana, Intercity Telecom's housing communications specialist, said, "Technologies that enable 'presence' will continue to evolve onto mobile and wearable tech and that could lead to field workers being able to engage with more information than is possible today. For example, rather than calling for urgent assistance and having to wait for an expert to arrive, a first-line support worker could video conference the expert via a mobile device to diagnose any issues remotely and guide the people on the ground to resolve issues rather than having to travel there themselves.

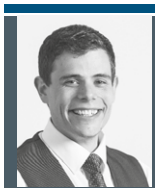
"And with the introduction of universal credit and the likely need to collect rent





payments via a wider range of channels, the ability to turn a mobile device into a mobile POS will become more widespread."

From the point of view of tenants and mobile services, Waterstons' Alderson said, "Housing providers should look at creating a channel shift with their tenants, moving away from the traditional inbound-only call centre model to a more interactive service where tenants can self-serve and engage with their housing provider on their terms via mobile apps or the internet. In addition, freeing housing officers from their desks and empowering them to make decisions is also key to enabling this; this shifts the emphasis from just delivering access to information remotely to providing context-aware information on multiple devices."



*"As more data and services move into the cloud, machine learning will push data to context-aware devices, giving you the information you need when you need it."*

James Alderson, Executive Transformation Consultant, Waterstons

1st Touch's Dent added, "The next generation of mobile working will provide access to information and processes to people on the move as well as to traditional field workers. Users such as supervisors will be able to have access to real-time information pertaining to their teams and even department heads and directors will use mobile technology to view the KPIs and information relating to their areas."

#### Choosing the right platform

Windows, iOS or Android; which is the right platform for mobile working? While iOS has its typical Apple devotees, Android tends to be seen as more open and has a larger number of apps available from Google Play Store and Android Market.

Hayward from Incom Business Systems said, "Currently, Android is a more open operating system than iOS and Windows from a developer's viewpoint. Android allows developers to maximise the flexibility designed into mobile devices.



*"Technologies that enable 'presence' will continue to evolve onto mobile and wearable tech, leading to field workers being able to engage with more information than is possible today."*

Nayer Sultana, Housing Communications Specialist, Intercity Telecom

This is both a good and bad thing, because while it provides flexibility, it also makes Android more vulnerable to mobile malware. A big change from Windows and Android vendors has been the introduction of mobile security platforms for managing enterprise mobility, such as Samsung Knox."

Intercity Telecom's Sultana added, "The key is to have additional solutions to secure the devices such as mobile device management (MDM) software. In my experience of working in the housing sector, I see housing providers using all of the operating systems and there is no one preferred system. However, there has been an increased demand for MDM software as more and more organisations realise the importance of securing their data."

And in terms of particular platform-specific applications, 1st Touch cited a few interesting examples relevant to the housing sector. Google's Project Tango is a new Android development that makes a mobile device accurately aware of the size and shape of its surroundings and where the device is within it. This could streamline stock condition survey and voids or allow lone workers to accurately report not just GPS locations but also which floor, flat and room they are in.

Dent said, "Apple Pay has become phenomenally popular in the US, and when it launches in the UK, it could revolutionise the way that rent is collected. And while Apple usually keeps its cards close to its chest when it comes to development, the launch of the Apple Watch could very well jump-start the wearable technology market.

"Microsoft's approach is the unification of Windows across all of the hardware platforms. For example, with Windows 10, a user will be able to start one process on

their laptop, check updates on the process on their smartphone, and continue with the process on a Windows tablet."

#### Leap-frogging to mobile 2.0

According to 1st Touch, mobile 1.0 was very much about moving tasks and processes away from paper and onto devices, whereas mobile 2.0 is about providing a wider, more holistic view to mobile workers, anticipating and prompting actions and providing a full mobile workspace. With that in mind, can housing providers 'leap-frog' over mobile 1.0 and go straight to the new world of mobile 2.0, or do they need the basic infrastructure first?

Incom Business Systems' Hayward said, "No, housing providers don't need a platform right now. In fact, not having a mobile platform means the housing provider isn't constrained by existing processes. Housing providers need to identify a strategy based on an understanding of the long-term needs within their service model. The key is to identify the primary drivers for the mobilisation of staff and processes and not to try to do too much at once."

Alderson from Waterstons added, "Mobile technologies are becoming much cheaper and therefore accessible to all, and as further services move into the cloud, which inherently supports mobility, the need for particular devices and specialist technologies is diminished.

"It is much more about having an integrated information at the backend which allows the right information to be served to the end user on any device. Integrating data from different cloud providers, or from on-premise legacy systems is a significant challenge and should be given special consideration by any organisation looking at mobile working."

*Housing Technology would like to thank Robert Dent (1st Touch), James Hayward (Incom Business Systems), Nayer Sultana (Intercity Telecom) and James Alderson (Waterstons) for their editorial contributions to this article.*

# GIS & MAPPING IN HOUSING



*Housing Technology interviewed experts on geographic information systems (GIS) from Ancoris, Civica, Northern Ireland Housing Executive, Orbit Group and Orchard Information Systems about how housing providers can use GIS to improve business performance, save money and boost tenant services.*

## Understanding GIS and mapping

As a brief one-sentence summary of GIS before we cover how it can help housing providers, Steve Ainsworth, managing director for community protection at Civica, said, "A geographic information system (GIS) is a software application that enables a clear visual representation of data on a map, allowing people to easily see, analyse and understand trends to make better business decisions."

Craig Tither, Orchard Information Systems' marketing officer, added, "GIS is based on three fundamental components – mapping data, software, and people; one without the other two will not succeed. It's also important to understand that GIS will only provide useful answers to scenarios if the user has asked the right questions and is then able to analyse and interpret the resulting data in order to understand relationships, patterns and trends."

## GIS examples in housing

The power of GIS is that it can be used for so many areas of housing providers' operations, from short-term, day-to-day aspects such as ASB and fly-tipping, through to long-term new-build programmes and planned maintenance cycles.



*"Large housing providers will continue to use full-blown GIS, but we expect to see another stream emerge that we call 'business mapping'; easy-to-use mapping, visualisation and analysis tools that are available to the entire organisation and don't require specialised training."*

Luke Stewart, Geo Practice Manager, Ancoris

Patrick McGarry, GIS manager for the Northern Ireland Housing Executive (NIHE), said, "GIS can be used to answer so many questions, such as where are our properties, what land do we own, how do we know which grass to cut, where are the most

deprived communities, are there hotspots of ASB in an estate, and are there any viable properties available for a tenant within a five-mile radius of their current home?"

"GIS can also be used to analyse patterns and geographic distributions of data to show, for example, concentrations of void or vacant properties, areas with an above-average elderly or youthful population from the census, locations of utility networks when designing a new scheme, and showing hotspots of house prices."

Luke Stewart, geo practice manager, Ancoris, said, "GIS can be used by housing providers to visualise all the information they need to manage their property portfolios. It can hold data such as property locations and information about properties or an area in order to drive better decision making, improve staff productivity, and better communicate with tenants. Housing providers can also use GIS to improve operations, and specifically reduce rent arrears, ensure repairs are completed on time, reduce voids and better manage their maintenance programmes."

Orbit Group's GIS consultant, Steve Litchfield, added, "Some of the areas that we use GIS for include re-tendering for ground maintenance and resurfacing contracts, property ownership queries, resource management and identifying potential sites for new-build developments."

## Saving money with GIS

While the initial investment in GIS and the associated mapping licences may be relatively high, the consensus is that GIS provides a fast and measurable return on investment, aside from any additional qualitative benefits derived from the use of GIS. For example, one of Ancoris's housing customers reported that by using GIS to enable them to increase their housing officers' visits from six to seven per day, they immediately saved up to £70,000 per year in that area alone.

NIHE's McGarry said, "It really makes sense to invest in a technology [GIS] that shows you where your assets are, enables the overlay of other relevant geographic data, such as census information, deprivation rates and house prices, and

has the functionality to analyse that data to produce customised outputs in the form of maps, reports or dashboards. In my experience, the common feedback from staff who now use GIS is that they can't imagine how they got by before."

*"Modern web-based GIS require only overview training to gain familiarisation because of the trend towards creating interfaces that are closer to the common mapping applications, such as Google Maps, which most people use on a daily basis."*

Steve Ainsworth, Managing Director for Community Protection, Civica

Orchard's Tither said, "For example, if information about maintenance, rent or repairs is in one place, any member of front-line or customer-service staff can handle tenants' queries without needing to refer or pass callers between different departments. As another example, you can reduce costs by only maintaining what you own by using GIS to map and visualise ground maintenance areas for more accurate cost analysis and calculation of service charges."



*"GIS shouldn't be seen as purely a piece of software. It should be a way of optimising an organisation's locational data and integrating that with other corporate information management systems."*

Patrick McGarry, GIS Manager, Northern Ireland Housing Executive

## Related benefits

GIS also offers additional qualitative and quantitative benefits beyond basic mapping and costs savings. Civica's Ainsworth said, "GIS can add both accuracy and efficiency benefits to otherwise laborious processes. For example, if it's essential to know which properties are within a conservation area, housing providers can use GIS to create a spatial query, which is much easier and faster than manually cross-referencing property records. Spatial searches can also be combined with text-based searches to allow housing providers to speed up searches of housing records. For example, with GIS you can quickly access data on houses built during a certain year or when they were last inspected, rather than trawling through a mass of paper-based records."

McGarry from NIHE said, "People like to view information via graphics and maps. A skilled GIS professional can work with business units and their specific data sources to produce mapping and associated reports that can reveal hidden spatial relationships or highlight an issue that could save time and resources."

Orbit's Litchfield said, "Some of the other areas for GIS include stock rationalisation, whereby plotting all properties in a portfolio may highlight remote properties which should be sold off, identifying more efficient 'patches' for housing officers, and making service charges more transparent and fair."



*"Orbit has chosen to integrate its GIS in-house and receives a daily extract from our housing management system which then gets imported into a specific GIS database. This frequency reflects any changes to the existing portfolio the following day and is adequate for our current needs."*

Steve Litchfield, GIS Consultant, Orbit Group

### Integration with core applications

GIS and mapping applications need to be closely integrated with housing providers' existing core business applications, such as housing and finance management systems, mobile and scheduling applications, CRM and other tenant-facing applications.

Stewart from Ancoris said, "Integrating GIS and mapping with housing providers' core applications is essential. For example, visualising rent arrears from a housing management system and anti-social behavioural patterns from a CRM, combined with demographic data, can give real insights into an area."

Civica's Ainsworth said, "GIS can be used to plot the location of any record with coordinates on a map. This means that, at the most basic level, GIS can be used to show the distribution of assets just by accessing the housing stock or premises database. Additionally, by integrating the GIS with the housing management system, tenants can raise service requests direct because the software will simultaneously update the housing management or CRM systems as part of the process."

Commenting on the actual integration process, Litchfield from Orbit said, "There are several ways GIS can be integrated, each dependent on the range of in-house skills and resources. Orbit has chosen to integrate its GIS in-house and receives a daily extract from our housing management system which then gets imported into a specific GIS database."

This frequency reflects any changes to the existing portfolio the next day and is adequate for our current needs. There are two GIS specialists dealing with administration and data analysis on a desktop GIS, while users across the business can access a web-based GIS via Orbit's intranet and via mobile devices."

### GIS training

The use of GIS was previously only really the preserve of highly-trained users, in part due to the complexity of the software itself. Nowadays, most GIS are very user-friendly and don't require specialist geo/mapping skills. However, depending on how much GIS and mapping are intended to be integrated into housing providers' operations, dedicated GIS professionals are sometimes needed.

Civica's Ainsworth said, "Modern web-based GIS require only overview training to gain familiarisation, rather than specialist training. This is mainly because of the trend towards creating an interface that is closer to the common mapping applications, such as Google Maps, which most people use on a daily basis."

"McGarry from NIHE said, "If an organisation needs a fully enterprise-level GIS infrastructure, it needs to invest in GIS professionals who have the experience of using GIS software and data and understand the business requirements of the organisation. A centralised GIS team can produce custom applications that require minimal staff training and can also provide analytical services to the organisation via the more complex desktop solutions."

Orchard's Tither added, "In order to benefit from the maximum capability of GIS, well-trained professionals knowledgeable in spatial analysis and skilled in using GIS software are essential to the GIS process. Nevertheless, GIS are continually transforming and, through their evolution, have become increasingly intuitive."

"For our sector, it means that housing providers are no longer restricted by the need to have an in-house GIS expert in order to use GIS and see a return on their investment. A specific example of how developments in GIS are benefiting those in our sector is the growth of self-service GIS. This enables all employees to now view, find and work with the geographic information they require, quickly and easily via a customised portal application that serves as a single point of entry."

### Future directions

Five years ago, GIS was only being used

by the larger and more technologically-advanced housing providers but its ease of use and lower cost has opened up the market to smaller housing providers.

Stewart from Ancoris said, "Large housing providers will continue to use full-blown GIS to help manage and analyse their properties and grounds. However, we expect to see another stream emerge that we call 'business mapping'; easy-to-use mapping, visualisation and analysis tools that are available to everyone and don't require specialised training. These tools provide the same high level of insight as traditional GIS, but are much simpler to use and better able to expose, distribute and visualise geographic information."

Orchard's Tither said, "GIS provides a platform for better planning and decision making. Not only mapping and visualisation but also modelling, spatial analysis, data management, web services and mobile solutions. The consensus is that GIS will play a greater role in housing as a sophisticated operational and strategic tool. An example of this is evidenced by Orchard's business partner ESRI's Drone2Map. The use of this technology will enable the creation of ortho-mosaics, three-dimensional meshes, and more, in ArcGIS from your drone-captured still imagery, in hours rather than days."



*"GIS provides a platform for more effective planning and decision making. Not only mapping and visualisation but also modelling, spatial analysis, data management, web services and mobile solutions."*

Craig Tither, Marketing Officer, Orchard Information Systems

Last word goes to NIHE's McGarry. He said, "GIS shouldn't be seen as purely a piece of software. It should be a way of optimising an organisation's locational data and integrating that with other corporate information management systems. In this context, there are so many more opportunities for GIS in housing in future. Other future benefits include 3-D mapping of planned housing developments/estates, integration with building information modelling (BIM) and visualising geographic data along with data analytic dashboards."

*Housing Technology would like to thank Luke Stewart (Ancoris), Steve Ainsworth (Civica), Patrick McGarry (Northern Ireland Housing Executive), Steve Litchfield (Orbit Group) and Craig Tither (Orchard Information Systems) for their editorial contributions to this article.*

## DIGITAL TRANSFORMATION

# Sticking plaster or in-depth surgery?



*With digital transformation projects of all sizes, complexity and ambition being considered or undertaken by housing providers at the moment (see elsewhere in this issue), Housing Technology interviewed senior executives from Appello, Community Fibre, Comparex and Northgate Public Services around the theme of ‘digital transformation - sticking plaster or in-depth surgery?’*

### Does digital transformation require a complete rethink of IT and business operations?

Comparex’s public sector director, Chris Bartlett, said, “An important barrier to overcome is ‘legacy thinking’. Too often, digital initiatives are approached without considering the needs of either tenants or staff. When this happens, grassroots ideas are often killed in the weeds and projects become misaligned or poorly-defined.

“Often, housing providers are not asking the fundamental questions at the start, such as what are we trying to achieve, what is our strategy and how does technology help us achieve it, so that projects fail to deliver tangible benefits and IT teams lose confidence in embarking on bigger transformation projects.”



“An important barrier to overcome is ‘legacy thinking’. When this happens, grassroots ideas are often killed in the weeds and projects become misaligned or poorly-defined.”

Chris Bartlett, Business Unit Director – Public Sector, Comparex

Roger Birkinshaw, housing director for Northgate Public Services, said, “Rather than honing in on individual business

processes that are causing pain, the focus should be on getting the overall strategy behind digital transformation right from the start. That means looking at the customer journey from start to finish, what channels should be added, how you can staff new ways of working, and which (if any) channels you can switch off once transformation has taken place.

“An umbrella digital strategy provides focus and ensures you avoid a patchwork of short-term fixes that deliver only temporary efficiency gains and result in an assortment of IT solutions that further fragment your data.”

### Can a piecemeal approach work?

Community Fibre’s CEO, Jeremy Chelot, said, “There used to be a time when a digital transformation team had to search for a ‘killer app’ that would drive sufficient savings to justify the large investment required to improve the underlying tenant connectivity issues. The best approach now is to consider the services that generate the greatest volume of offline work and investigate how they can be made available online.

“The demand from customers for well-designed digital channels can be surprising. For example, when Westminster City Council put its parking permit application process online, 97 per cent of the applications switched immediately to the online channel.” Comparex’s Bartlett said, “Housing



“In terms of technology, having an open architecture is essential. It lets you add services and applications as your strategy is rolled out and still ensure that data is brought into the centre.”

Roger Birkinshaw, Housing Director, Northgate Public Services

providers often look at digital transformation as being overly complex and daunting when considered in its entirety. For example, investigations into potential cloud migration and how it will change a provider’s infrastructure can quickly spiral into worries about the integration of legacy IT, costs and data sovereignty, eventually leading to the project being shelved. A piecemeal approach could counteract this, as housing providers would have a clear vision of the specific benefit of each project being undertaken, instead of being bogged down by the bigger picture, with no clear start or end in sight.”

### What are the ‘quick wins’?

Northgate Public Services’ Birkinshaw said, “Look at which processes eat up a lot of staff time and what take tenants a lot of time too; the temptation is to focus only on those processes that consume staff time, but if the solution is too focused on one side at the expense



of the other, it won't deliver true digital transformation.

"For instance, moving repair reporting online may make life for the housing provider, but if the online process is too laborious for the tenants, they will still contact the call centre to report a fault. A solution that delivers for both parties will encourage true channel shift to take place."



"There was a time when the digital transformation team simply had to search for a 'killer app'. The best approach now is to consider the online services that remove the greatest volume of offline work."

Jeremy Chelot, CEO, Community Fibre

Community Fibre's Chelot's said, "Improving the digital connectivity and skills of your customers not only unlocks their willingness to interact with you online, but also provides them with untold benefits and opportunities. For example, Community Fibre provides a free gigabit connection for community spaces such as public libraries and schools, so one 'quick win' is grant Community Fibre permission to install our fibre-optic cables within your estates."

### What's really important?

Northgate Public Services' Birkinshaw said, "Digital transformation needs to be realistic and achievable. It's not just about what budgets are available, but also what return there will be for any changes made. While it might be a nice idea to move some less-used services online or offer extra contact options via Twitter and Facebook, if the cost to maintain the new options outweighs the efficiency savings or the expected improvement in KPIs, then perhaps your focus should be elsewhere."

"In terms of technology, having an open architecture is essential. It lets you add services and applications as your strategy is rolled out and still ensure that data is brought into the centre. If an enquiry is dealt with on Facebook, Twitter or a tenant app, the transaction needs to be visible in the CRM record for that tenant and that can only happen with the right IT strategy laid out from the beginning."

### Measuring success

Appello's CTO, Carl Atkey, said, "The significant advantage of digital over non-digital systems is the level of data and insight that becomes available. The data we've been able to provide has enabled our housing customers to look at their operations with quantitative evidence and change processes to support their staff to deliver better services to residents."



"The significant advantage of digital over non-digital systems is the level of data and insight that becomes available."

Carl Atkey, CTO, Appello

Community Fibre's Chelot said, "Measuring the success of digital transformation can take many guises, but the best measure of success is tenant feedback and satisfaction. Having a good understanding of the experiences of your tenants is vital to address any issues that may arise in the future, and to see how your digital services are positively affecting your tenants."

*Housing Technology would like to thank Carl Atkey (Appello), Jeremy Chelot (Community Fibre), Chris Bartlett (Comparex) and Roger Birkinshaw (Northgate Public Services) for their editorial contributions to this article.*



# Women in housing IT

*Housing Technology interviewed a group of women involved in housing IT from Adra, Civica, Community Housing, Northgate Public Services, PIMSS Data Systems, Prodo Digital and Rochdale Boroughwide Housing about their various roles in IT, any challenges they've faced as women in a traditionally fairly male-dominated sector and how more women can be encouraged to consider a career in housing IT.*

## What attracted you to a career in housing IT?

PIMSS Data Systems' head of asset management, Ruth Dent, said, "Like a lot of people, I didn't set out to have a career in housing IT – it just kind of happened! It's a fascinating and fast-moving sector and I love the fact that it's problem-based – what's your issue, where are your difficulties, and how can we help you to fix them? We do some amazing work and I love being part of a team that works collaboratively to shape the way housing may look in the future."

Civica's director of social housing, Michelle Tyler, said, "I've always worked in IT but in a different field to housing. It was a real opportunity when I moved into housing, allowing me to further my career in a more complex sector, providing digital solutions for our customers and their tenants. It has definitely met my expectations, giving me the knowledge and experience to take my career further in this field while working in a fast-paced environment, both internally and externally."

Adra Housing's technical lead of its new core business system implementation, Sarah Louise Griffith, said, "My role in IT at Adra is attractive because it's an opportunity to work in a field that's continuously developing. There's a misconception that housing is very traditional but the reality is very different; there are always interesting technologies emerging and new skills to learn."

## What gender-specific challenges have you had to overcome?

PIMSS's Dent said, "I've gone to some meetings where I have to spend the first 20 minutes just proving that I know what I'm talking about before we even get onto the purpose of the meeting itself. I often conduct meetings alongside a business development manager (who is male) and on numerous occasions, despite me answering the client's questions, the next question will still be directed to my colleague."



**"I think the term 'IT' puts people off, particularly women. It's not about the techy nuts and bolts, it's about understanding the business, being analytical, approachable and developing solutions to the problems."**

Sarah Louise Griffith, Technical Lead for New Core Business System Implementation, Adra Housing

"Being younger also means that I've had to deal with questions over how I've ended up in my role and whether I got here through my skills, knowledge or even sexual favours! These comments have been made 'off the cuff' but nevertheless, they were still said."

"For less experienced women, there is a strong need to 'fit in' – when I was younger, I would even look up the football results on a Sunday night so I could join in conversations at the office the next morning. I was grateful of the praise of my colleagues for 'making the best tea' – I now realise how stupid I was and, though those experiences have made me stronger, it wasn't a path I should have gone down."

"The challenges go beyond the workplace. I have a three-year old daughter and I'm the main breadwinner in the family – I was recently asked by a neighbour when trying to arrange a play date if "I worked full time as well?" As well as what, please?"

Community Housing's transformation team comprises a group of women from across the business brought together to implement new housing and asset management systems for the group and to drive business-wide transformation.

Community Housing's transformation team said, "Things have moved on from the male-dominated world of IT. The previous experience of the more technical members of our team has been that due to other people's perceptions, they've felt that they've had to prove their abilities more than their male counterparts in order to progress. However, there has been a behavioural shift over the past few years as more women progress in IT, bringing with them broader perspectives to the roles." Northgate Public Services' housing

software development manager, Karen Scott, said, "From the very start of my career, I've been surrounded by strong female managers and directors – this has really helped me to see that I can move up the ladder. Women are represented at top levels within Northgate and their visibility in key positions engenders a real 'I believe I can do it' attitude.

"While IT does tend to be male dominated, within my own team we are all very much equals. Northgate's philosophy is, whoever is right for the job gets the job regardless of gender and I haven't experienced any barriers to moving on and upwards. Flexible, part-time and home working options are available to everyone which has meant that I've retained the skills and expertise of two of my female developers who needed that flexibility."



**"Women are represented at top levels within Northgate and their visibility in key positions engenders a real 'I believe I can do it' attitude."**

Karen Scott, Housing Software Development Manager, Northgate Public Services

Prodo Digital's CEO, Pippa Adams, said, "When it comes to gender-specific challenges, one of the best things I've found about housing is that it is incredibly inclusive. In particular, IT departments in housing tend to be very diverse, inclusive and positive environments.

"Through working with hundreds of housing organisations of all shapes and sizes over the years, we've seen at first-hand how many women are in pivotal roles. I've watched the sector evolve to the point where I don't believe gender is an issue to female success and that by talking about gender, we're actually creating a barrier that doesn't exist."

Rochdale Boroughwide Housing's head of transformation, Jan Heath, said, "In terms of gender-specific challenges, I have only



**THE TRANSFORMATION TEAM, COMMUNITY HOUSING GROUP**  
Back (L-R): Di Carter, Cat Winter, Georgina Jackson, Helen Zinzan  
Front (L-R): Mel Bailey, Helen Kennedy, Kate Lloyd-Perks

ever found the sector to be supportive and empowering for women and I've never seen gender as an issue. There are more women than men in our IT department and I'm surrounded by a strong female-led team, with plenty of opportunities to learn and develop. Our gender pay gap figures show that women at Rochdale Housing are paid on average five per cent more than men across the society."

#### **Which aspects of your role are more suited to women?**

Civica's Tyler said, "As a senior leader, I don't believe there are aspects of the role that are better suited to women, although the way in which I approach an issue might be different. Encouraging conversation allows me to make the most of my team's combined knowledge and skills. The ability to multi-task, empathise, value relationships and, vitally, listen and make your team feel they are valued and making a contribution are all crucial."

Community Housing's transformation team said, "To successfully deliver a project of this size and complexity, there are some key skills the team demonstrate every day, such as patience, sensitivity, innovation and communication. Because our project is as much about transformation as it is about IT implementation, the team needs to constantly challenge the status quo – this requires excellent listening skills, tact, diplomacy and a huge amount of emotional intelligence to reassure colleagues about the changes and giving them the confidence to be accountable for the design and testing of the new systems."

Northgate's Scott said, "I don't know if you can necessarily attribute this as a 'female

skill', but I love to draw out who people are and match them to the best project for them. I'm a big believer in looking at personality types – are they talker or not, do they think outside the box or take a literal view? I must be doing something right because we have a very strong development team here at Northgate that has worked together for a number of years, so we all know our individual strengths and weaknesses."

#### **Are there enough opportunities for women in housing IT?**

Adra's Griffith said, "I think the term 'IT' puts people off, particularly women. It's not about the techy nuts and bolts, it's about understanding the business, being analytical, approachable and developing solutions to the problems. We need a huge variety of skills, such as data analysis, and there are opportunities for a much wider skillset than women realise.

"From a wider perspective, we're very lucky in Wales because there are a number of women in prominent IT roles and this can only be good to encourage more women to become involved."

Community Housing's transformation team said, "At a practical level, the housing sector is moving to a much more flexible and agile approach to service delivery which enables both men and women to achieve a positive work-life balance.

"In addition, the generational change to non-gender specific education and the growing use of technology in our daily lives means that the mysteries and technicalities

surrounding IT are less of a challenge and women have more confidence to contribute and make an impact."

Northgate's Scott said, "Flexible working has been a game changer for women, who in my experience, tend to be the ones juggling home and work responsibilities. The key is to find a company that recognises the need to invest in and retain their staff."

"A member of my team recently considered leaving because she was finding it hard to combine full-time work with caring for a young family and an elderly relative. I was able to offer her part-time working, which meant she could continue to work and we didn't lose her skills and experience."

"For women to pursue opportunities in IT, it's crucial for them to see other women in senior leadership roles that they can aspire to and which show a clear career path. At Northgate, we've women represented at every level, which is hugely encouraging to other women. Across housing IT as a whole, I think the opportunities are there but visibility is a key issue."

Rochdale Housing's Heath said, "Gender diversity is essential in any organisation, and an inclusive workplace helps us to make sure that we recruit the right people with the right values. If you have the technical knowledge and skills combined with empathy and insight, there are plenty of opportunities within housing IT and you can make a real difference. At Rochdale Housing, we make sure that we put our values around equality, diversity and inclusion into practice, from internal workshops on dealing with the menopause to supporting 'Rochdale in Rainbows'."

### What are the most important factors in recruiting more women into housing IT?

Community Housing's transformation team said, "Make it pink? Clichés aside, as with any role in housing, to encourage more female employees there are some basics that an employer should offer – flexible working, equal pay, assurance of equalities and offering 'learn as you earn' opportunities."

"We do a lot to encourage women to take up roles in areas of the business that are historically male-dominated, offering apprentice opportunities, working closely



"I've watched the sector evolve to the point where I don't believe gender is an issue to female success and that by talking about gender, we're actually creating a barrier that doesn't exist."

Pippa Adams, CEO, Prodo Digital

with the local schools and an increase in female role models in senior positions. Over the past two years, we have recruited our first two female IT specialists, created the transformation team to design and build our new business systems and recently become members of 'Women into Construction' to reduce the skills gap and create a more gender-equal work force."

Adra's Griffith said, "I strongly believe that flexible working is the way forward! Companies should offer flexible working where you can choose when and where to work. I'm lucky that Adra offers exactly that – working hours that suit my family life, helping me to find the right work-life balance. Flexible working results in happier staff and greater productivity, and it would help to attract more women into housing IT and, equally importantly, retain them."

Civica's Tyler said, "Employers now realise that mixed gender teams improve communication, collaboration and innovation so it's important to attract the best talent. Any woman pursuing a job in IT should actively seek out employers who encourage and promote diversity such as Civica (a Financial Times Diversity Leader). Additionally, customers appreciate partnering with organisations whose employees represent a workforce as diverse and inclusive as their own."

PIMSS's Dent said, "Awareness of the size and scope of IT in the housing sector and making opportunities accessible are both vital. If more women were aware of the possibility of roles, then more would do the necessary training to get the right skills. I have been lucky, but the sector is almost hidden and still seen as a male career."

### What are the benefits of gender diversity in housing IT?

Northgate's Scott said, "Gender diversity in technology is a hot topic right now, and rightly so. For me, the difference between a good product development team and an excellent one is how closely it reflects its varied customer base. It's important for the team to be able to represent a range of viewpoints and perspectives."

"I lead a team of seven men and five women and for me, it's the mix of personality types which fosters the creativity we need to make successful products. We have strong female product leads who work very closely with the customers to understand and translate their needs and then input them into the development of the design. Working as a team, we balance out each other's views to create products that are both functionally strong and pleasing to the eye."

PIMSS's Dent said, "All diversity brings about new ideas. A group of white 'gen-X' men are likely to have the same ideals, training and backgrounds, so bring in people from a different path and new ideas can spark. It prevents organisations getting stuck in a rut and creates innovation in a way that might not be possible otherwise."



"I've gone to some meetings where I have to spend the first 20 minutes just proving that I know what I'm talking about before we even get onto the purpose of the meeting itself."

Ruth Dent, Head of Asset Management, PIMSS Data Systems

### Should more be done to encourage girls to study STEM subjects?

Civica's Tyler said, "Absolutely – more women in STEM would provide a larger pool of resources. With the resulting different views and wider perspectives, we would see increased creativity, innovation and a positive impact on all organisations. For example, that's why Civica partners with schools via our Coding for Schools programme, runs hackathons and supports Young Enterprise and the Tech Talent Charter."



Northgate's Scott said, "I would love more girls to study STEM subjects and to consider jobs in technology and engineering. I see some of my friends' children in primary school writing computer programmes and I am blown away – it's really encouraging to see this starting from an early age. In my day, the emphasis was on home economics and childcare!"



**"If you have the technical knowledge and skills combined with empathy and insight, there are plenty of opportunities within housing IT and you can make a real difference."**

Jan Heath, Head of Transformation, Rochdale Boroughwide Housing

Adra's Griffith said, "Introducing more STEM subjects through workshops and practical learning in primary education would ignite a spark in more young girls and show them that STEM subjects aren't boring! STEM learning such as coding workshops will help to nurture talent at a young age and set them on a STEM-related career path."

PIMSS's Dent said, "For me, this is all about understanding where STEM subjects can lead you. If girls don't know about the careers available, they probably won't understand why they could study those

**"More women in STEM would provide a larger pool of resources, so we would see increased creativity, innovation and a positive impact on all organisations."**

Michelle Tyler, Director of Social Housing, Civica

subjects in the first place. I went back to university at 30 to do a degree in a subject related to what I then knew I wanted my career to be. I'd also like to see more apprenticeships and hands-on learning opportunities in STEM subject areas."

**How can women mentor and support other women to encourage them to pursue housing IT careers?**

Civica's Tyler said, "As a woman in technology, I've enjoyed many different experiences and opportunities. It's really important for me to share those experiences to allow other women to grow and further their careers as I have. I always aim to lead by example and mentor those through real-life examples and providing opportunities to grow in a role."

Community Housing's transformation team said, "As a business, we encourage positive female role models, both young and old, with women who can dispel any myths of working in a particular area or at a particular level through sharing their experiences, such as progressing with their career after having children or taking on caring responsibilities, and providing buddying opportunities and raising awareness of some of the issues women experience."

"For example, Community Housing has just had a menopause awareness campaign, not only offering direct support for women but also raising awareness for managers and our male colleagues on how they can support female co-workers – the campaign was a really positive step in encouraging an equal and diverse workforce."

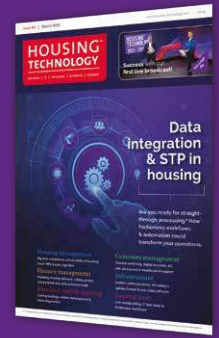
Prodo's Adams said, "To promote and encourage new female talent to join the sector, I think it's all about actively showcasing just how many women are in great roles across IT already. I'm a firm believer in role models and the phrase 'if you can see it, then you can be it' – there are plenty of opportunities out there and raising the profile of those in IT is a great way to encourage others."

"Here at Prodo, we have plenty of women applying for roles across the business, from software engineers to web developers and digital consultants, and women comprise most of our leadership team. This visible presence of women just reinforces the fact that gender isn't holding anyone back."

**Housing Technology would like to thank Sarah Louise Griffith (Adra Housing), Michelle Tyler (Civica), The Transformation Team (Community Housing Group), Karen Scott (Northgate Public Services), Ruth Dent (PIMSS Data Systems), Pippa Adams (Prodo Digital) and Jan Heath (Rochdale Boroughwide Housing) for their editorial contributions to this article.**



# Data integration and straight-through processing



*Housing Technology interviewed data integration experts from Aareon UK, Civica, FireAngel Safety Technology, IntoZetta and Northgate Public Services about how and why housing providers should be focusing on data integration and straight-through processing to improve their internal operations and tenant services.*

## What is the ultimate aim of data integration?

Aareon UK's ERP solution manager, Paul O'Reilly, said, "The ultimate aim of data integration is to both improve staff efficiency and to give a great customer journey. If we start with the experience of a customer who has requested a service from their housing provider, then this should be the thing that informs how we conceive the role of integration. Relevant data may lie in several different places, yet it all needs to combine to create the 'story' that provides the customer with a satisfactory resolution to their issue."

Trevor Hampton, director of housing solutions, Northgate Public Services, said, "There is just no room in today's digital world for rekeying information from one system to another. Data integration gives housing providers the ability to see the whole picture, ultimately enabling them to offer fully-digital service delivery. It's only when all the data is connected that they can satisfy customers, contractors and stakeholders' transactional expectations."

Andrew Eayres, solution architect, Civica, said, "The aim is to bring together data held in disparate systems. Doing this provides a single view of your data so the resulting information is accurate and ultimately allows better decision making. For example, to have a holistic view of a given asset, data is used from your asset management system for planned replacement, or for tenancy turnover, you would access data from your HMS and then add external deprivation data to create a single view."

IntoZetta's co-founder and director, Graeme Cox, said, "At the technical level, data integration transforms a housing provider's typically disparate and fragmented data landscape, sitting across multiple applications, into a coherent, consistent and accurate dataset. This integrated data capability underpins business process and service integration, increasing the levels of automation and reducing the levels of manual intervention through the

hand-cranking of stop/start, broken and siloed business processes."

## Why is data integration hard to achieve?

FireAngel Safety Technology's chief product officer, Nick Rutter, said, "We're at a stage where the digital integration of data is relatively simple; if you want to streamline datasets and reduce the number of application platforms then integration can be as simple as enabling an API transfer.

"The challenge comes when you want to integrate physical data files or data that's stored in multiple channels into this system; very often the volume of data is unmanageable and the resources available to oversee this type of integration aren't available. Add in concerns around confidentiality, GDPR and inaccurate or missing data, and the whole exercise becomes even more complex."



*I think the concept of STP is beginning to gain traction now that housing providers can see what's possible – just look at the truly online business models of companies such as Amazon or Ryanair who have been using this model for years.*

Paul O'Reilly, ERP Solution Manager, Aareon UK

Civica's Eayres said, "Data is usually held for specific purposes, in different structures and formats within different systems, from relational databases to Word documents, often in silos, all with their own data models. A housing provider will also probably supplement their core business systems with a variety of informal systems (such as spreadsheets) that become mission-critical data stores. If those challenges aren't enough, many legacy systems were not designed with data integration in mind; the



*STP supports the concept of a single source of truth and a 'golden thread' of data because all interactions can be digitally logged against the file for each property or tenant.*

Nick Rutter, Chief Product Officer, FireAngel Safety Technology

data may not share a common key and the system may not have a suitable API or other mechanism to facilitate integration.

"Most housing providers' core applications comprise the 'big three' of housing, asset and finance management systems, each with their own databases and data structures, leading to questions about accuracy, which is the lead system and legal constraints about the processing of a particular dataset.

"The challenge is designing systems that are fit-for-purpose while having the ability to integrate the data with other systems without actually duplicating the data – i.e. to integrate data there shouldn't be a need to hold the same data in more than one system."

IntoZetta's Cox said, "There are several unavoidable prerequisites that must be addressed before data integration can be successfully delivered. Unless there has already been a large-scale transformation programme that has consolidated multiple applications into a single new application, it is likely that data is strewn across numerous applications and even some undocumented 'grey IT' built up over the years.

"Typically, data is stored across many applications and in different structures, so there isn't a single view nor a single trusted source. What data sits where and how it moves around the organisation is largely unknown. The overall quality of the data is uncertain and not accurately measured, and there are often different misaligned data identifiers or 'unique keys', so linking data across applications isn't possible. All of these issues will prevent a functioning data-integration capability.

"Over and above the data issues, there is the integration platform and middleware technology itself to design, configure and implement. It must be compatible with

multiple application types and integrated with various technologies and database types. In addition, it must be capable of transforming data values and data structures 'in-flight' while data and messages are being exchanged, and of course it has to be secure and controlled as well!"

### What do housing providers need to do in order to integrate their data across applications?

Aareon's O'Reilly said, "In the old days, joining up systems and therefore data was very much a case of interfaces. Manual, unreliable and prone to problems, this was, and in some cases still is, a drain on the resources of many IT departments. Things are now changing and the majority of HMS suppliers now offer APIs to some degree or another. These enable easier data integration but they still demand a good deal of technical knowledge so some developer assistance is usually needed.

"Another area often overlooked are the dreaded spreadsheets which enable housing staff to create their own 'data islands' that are almost impossible to include in any coherent data strategy.

"A new approach that we are working on at Aareon is the concept of a 'smart platform' – a cloud-based platform with a single set of integrations back to the core HMS at one end, and an environment which allows housing providers to 'plug and play' digital products, IoT devices, third-party systems and even internally-developed applications into the platform. This approach gives a more usable and comprehensive solution to the problem of integration compared with the traditional, on-premise enterprise service bus (middleware) approach."

IntoZetta's Cox said, "Before trying to integrate data across applications and services, a detailed understanding of your data landscape is essential. The data must be fully mapped out and be of high quality, so that it can support the integration process through data linking and alignment across the applications.

"Data discovery is needed to identify what data is stored where, the data quality and data lineage, and how it flows to and from both the internal applications and to third parties. This activity, sometimes known as data archaeology, should include all data sources, systems and applications, local databases (incl. grey IT), spreadsheets and even documents.



*The key is to identify which service requests or transactional processes most lend themselves to STP, but it doesn't have to be an all or nothing situation; some processes might need only some degree of STP.*

Andrew Eayres, Solution Architect, Civica



"A comprehensive data-quality assessment is vital, ideally using an industry-standard set of business rules, to identify where the data-quality issues are across the various business processes and the corresponding impact of each error. This approach will then allow any necessary data cleansing to be carried out correctly.

"Once the data is fully understood, mapped and clean, it's ready for integration. However, for ongoing and successful integration, the data must be placed under formal data governance and data quality controls to monitor for any degradation that could lead to integration failures."

Northgate Public Services' Hampton said, "First, you need a data integration strategy if you want to integrate your data across applications and services. For example, do you use an application-to-application data integration approach, middleware technology or a common data storage approach?"

"Second, you need to have access to the right IT skills, either via external data-integration specialists or by training your internal IT staff. In the case of the latter, we'd suggest training a small team rather than an individual to avoid a skills gap if or when that individual leaves.

"Finally, put data-sharing agreements in place before the data integration begins. These include agreements with external stakeholders, such as tenants and contractors, as well as departmental stakeholders because you need an agreed policy about what data is to be shared. These are relatively easy to put together and, in a nutshell, cover what data, how often and in what format."

### How would you define straight-through processing (STP)?

Aareon's O'Reilly said, "STP is a friction-free process that needs little or no human intervention, providing an immediate resolution for the customer and optimised processing for the housing provider.

"Take the example of a tenant booking a repair. The tenant logs on to the self-service portal or app, reports the damage or fault using diagnostic tools, selects their preferred time and date for the tradesman to call, and has this selection confirmed by an automated text or email. The repair order, because it is low value (in this example), doesn't need to be authorised, and so is created and issued within the core HMS and sent via scheduling software to an operative's mobile device. The operative attends the next day, fixes the problem, marks the job as complete, which completes the order in the HMS, sending an automated satisfaction survey by the tenant's chosen

method. Meanwhile, the invoicing data is created in the finance system and readied for payment. Throughout that entire process, nobody has had to manually intervene in an IT system, and the tenant gets a speedy resolution to their problem."

FireAngel's Rutter said, "STP removes the need for manual intervention, reducing the resources needed for day-to-day functions such as payment transactions. For a housing provider, the introduction of STP allows them to benefit from automating their wider processes, such as letting tenants request maintenance visits, report ASB or access a chatbot powered by FAQs and a knowledge base."

Civica's Eayres said, "STP is all about customer requests that can be processed using automation, such as via an electronic form with no manual intervention. STP originated in the banking sector to enable payments and other transactions go through without any manual processing, but it can be applied to almost any service request."



*At the technical level, data integration transforms a housing provider's typically disparate and fragmented data landscape, sitting across multiple applications, into a coherent, consistent and accurate dataset.*

Graeme Cox, Co-founder & Director, IntoZetta



### Do housing providers understand the concept of STP?

Northgate Public Services' Hampton said, "As a specific terminology, STP is not widely known in the housing sector because historically STP has mainly applied to financial services, but housing providers are more familiar with the concept of data integration. After all, the majority of housing providers have a degree of data integration, perhaps linking their housing or asset management systems with their finance system or their rent accounting system with their tenancy payment engine, while some of the larger housing providers have more sophisticated data integration systems, such as middleware and master data management.

"While our sector is keen to enjoy the seamless experience that STP provides, housing providers know that it can't be achieved 100 per cent of the time. There will always be instances when it's impossible to have a fully automated transaction; a good example being a tenant with a pest infestation and a phone call would be needed to get a better understanding of the problem."

Aareon's O'Reilly said, "I think the concept of STP is beginning to gain traction now that housing providers can see what's possible – just look at the truly online business models of companies such as Amazon or Ryanair who have been using this model for years.

"The pandemic and past year of disruption have forced our sector to make changes to the way it thinks about technology. The housing sector has historically

lagged behind others but we're now seeing significant acceleration in housing providers' plans for digitisation."

FireAngel's Rutter said, "I think housing providers' understanding of STP is growing and, more importantly, their acknowledgement of the benefits of STP is increasing. Self-service is now commonplace in our daily lives, with online banking, chatbot customer service and online shopping driving this acceptance of STP."

### Are housing providers ready for STP?

Northgate Public Services' Hampton said, "Consolidation lies at the heart of whether or not you're ready for STP and data integration. We're still seeing housing providers who lack not only a data integration strategy but also lack a fundamental IT strategy. Having too many disparate IT systems makes joined-up data-sharing unwieldy and expensive, and continuing to rely on paper-based processes makes data integration a complete non-starter."

"Another crucial factor in determining STP readiness is whether the housing provider has mapped out its customer journey from start to finish and thought about what this now looks like in a digital world. If this hasn't been done then it will be difficult, if not impossible, to identify the consequent data integration needs. The customer journey has changed so much in the last decade that it's vital to reimagine it in order to understand what the new digital connections look like and where the data integration points need to be."

"If you don't start to invest in data integration and IT strategies now, then imagine how far you will be behind in five years' time when looking through the lens of a fully connected, transparent and integrated IoT world."



*There is just no room in today's digital world for rekeying information from one system to another. Data integration gives housing providers the ability to see the whole picture, ultimately enabling them to offer fully-digital service delivery.*

Trevor Hampton, Director of Housing Solutions,  
Northgate Public Services

### What are the advantages and disadvantages of STP?

Civica's Eayres said, "The main advantages of STP are better customer service by quickly and efficiently handling tenants' service requests, combined with lower costs from the removal of unnecessary manual interventions and more 'first-time fixes'. For example, if a tenant receives prompt automated communications about the progress of their request, it removes the need for them to contact their housing provider. STP also formalises many decision-making processes, thereby removing arbitrary choices at the same time as providing an automatic audit of the outcome."

"The main disadvantages of STP are the difficulties and cost of achieving STP across disparate systems that were perhaps never geared up for facilitating STP in the first

place. These are coupled with concerns about accuracy and the suitability of handling particular requests via STP. For example, a housing provider might want to impose manual checks when updating asset information; humans are very good at handling variations and dealing with uncertainty whereas an automated process might not be.

"The key is to identify which service requests or transactional processes most lend themselves to STP, but it doesn't have to be an all or nothing situation; some processes might need only some degree of STP, still leaving the freed-up resources to focus on exceptions management or adding human involvement where and when it's needed most."

FireAngel's Rutter said, "Housing providers have the almost-impossible task of providing residents with safer homes and supporting a higher quality of living from already-stretched resources; STP can shoulder some of that burden and reduce the volume of administrative tasks. STP can also support the concept of a single source of truth and a 'golden thread' of data because all interactions can be digitally logged against the file for each property or tenant. STP also reduces errors and concerns around GDPR and other regulatory requirement because processes should be able to be completed in full without human intervention or error."

IntoZetta's Cox said, "STP helps to drive improved service, greater operational efficiency and streamlined business processes, all resulting in higher levels of customer satisfaction. Because the need for manual interventions is reduced, operating costs fall, productivity improves and existing staff resources redirected towards more value-adding activities. However, things can go wrong if there are gaps in the STP design and missing scenarios that will need manual interventions and work-arounds until they have been fixed."

### What factors prevent housing providers adopting STP?

IntoZetta's Cox said, "Aside from any cultural barriers arising from increased automation, the typical factors preventing housing providers from adopting STP are other competing priorities, cost, complexity and the lack of a clear business case defining its benefits."

Northgate Public Services' Hampton said, "The biggest barrier is if the housing provider hasn't built the right foundations, and for that you need a housing management system that's fit for purpose. I can't bang the drum loudly enough here because if your housing systems aren't functioning as they should then linking up the data will be irrelevant because the quality of the data won't be good enough."

"Having a flexible, open system is so important, and your systems should ideally provide free APIs for the ultimate flexibility. While we might have been the first to do this, it is nevertheless encouraging to see a number of other HMS suppliers now changing their approach. That said, all housing providers should be mandating this because it's

about ensuring they have the power to control and use their data freely, easily and with no restrictions.

"You also need the vision, understanding and buy-in from top to bottom of your organisation because achieving STP isn't a short-term process. It's possible to achieve STP levels of around 15 per cent of transactions within the first year, but to get above 80 per cent of transactions and processes being completed without human intervention will take three to five years."

Aareon's O'Reilly said, "Technology can be a barrier, especially if you are trying to build an STP-based solution yourself using tools that don't lend themselves to the idea. Data integration and reliability are both critical factors, alongside the 'corporate mindset': unless you have arrived at a housing provider from another business sector and have already experienced STP in action, it can seem counter-intuitive to relinquish hands-on control of your business processes, but if executed well STP is a significant driver of both efficiency and great customer journeys."



*Housing Technology would like to thank Paul O'Reilly (Aareon UK), Andrew Eayres (Civica), Nick Rutter (FireAngel Safety Technology), Graeme Cox (IntoZetta) and Trevor Hampton (Northgate Public Services) for their comments and editorial contributions to this article.*

GENERAL NEWS

## Pennington Choices moves to FLS

Pennington Choices' team of 200 housing and property surveyors is set to use FLS – Fast Lean Smart's Visitour software for dynamic scheduling and real-time travel optimisation.



FLS Visitour will enable Pennington Choices to streamline its operations by offering optimal time slots and dynamically adapting to real-time changes and traffic conditions throughout each day. In addition to appointment scheduling and route optimisation, Pennington Choices will also use FLS Tracking and FLS

Portal for self-service customer appointments and real-time tracking of surveyors' arrivals.

Greg Davies, managing director, Pennington Choices, said, "With our new FLS system, we aim to become more efficient by maximising our building surveyors' productivity."

Pennington Choices' 800 customers span social housing, healthcare, education and rail, with its services covering building and fire safety, damp and mould, asbestos management and project management.



# Platform Housing's innovation award

Jon Cocker, Group CIO, Platform Housing Group



INNOVATION

GOLD AWARD

Platform Housing Group won the gold award in the innovation category at the Housing Technology 2024 Awards; in this article we take a look at the importance of these awards and what the accolade means to both Platform Housing Group and the wider housing sector.

Housing providers like Platform Housing Group are in a fantastic position to make real use of the amount of data they hold on customers. With innovative thinking and a positive, adoptive culture, there's a real possibility of solving problems in a targeted and resource-conscious manner.

Following the Peabody report, we successfully used machine learning to identify customers who were otherwise at risk of becoming 'silent'. We performed hundreds of tenancy health checks, stepping in and helping where, in some instances, serious self-neglect and isolation could have resulted in life-threatening problems.

## AI success

We are really proud of our success in using AI over the last 18 months. This has had a very positive impact on customers and how we allocate our resources effectively, particularly in times where we need to do more for customers and under increasing financial and operational pressures; it provides a key solution to the sector doing better work for the people who need it most.

What it has also done is encourage the rest of our organisation to see what is possible with technology. To that end, we're very proud of the culture of innovation we've fostered; our colleagues in our information directorate are allocated time each month to think about how we can innovate to improve our services.

As these projects grow across the rest of our organisation, it means other business areas start to see technology more as an enabler for their work. For example, our increased use of Power BI dashboards for all teams, including property defects and safeguarding, means we're doing better work for our customers.

The most innovative steps we've taken in the past 18 months are where we've used AI, machine learning and predictive analytics to make better use of the amount of data we hold to give us real, human-focused solutions.

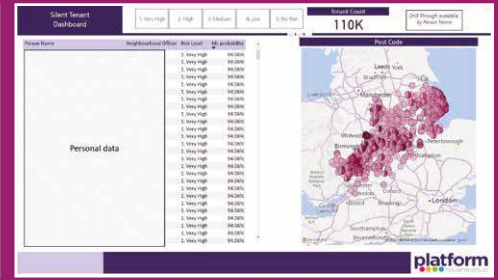
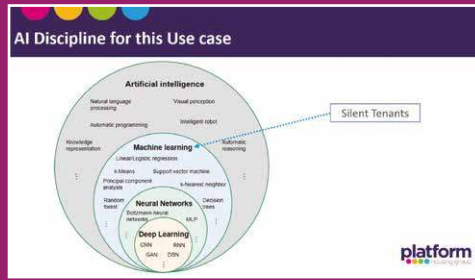


Richard Hawkes (l), Head of Data, Analytics & AI, and Jon Cocker, Group CIO, Platform Housing Group

## Silent customers

Following the Peabody report, we wanted to ask which of our 110,000 customers are more likely to be classed as silent and therefore who we should perform urgent tenancy health checks on first.

We applied the machine-learning discipline of AI to this question and experimented with both supervised and unsupervised subsets of machine learning. We trialled the 'k-mean clustering' algorithm based on pre-defined factors that would influence the final outcome. For example, this included asking whether they had had their gas capped, had they contacted us for a repair, had they made a complaint and if anyone else was registered in the house. To predict the likelihood of a customer becoming silent, we used a logistic regression model.



### Spotting the right patterns

The benefits in our use of resources were countless. With such a large customer base, using AI helps us to direct resources in the right place and at the right time. In the case of our silent-customers work, the risk scores we produced helped us to prioritise which customers to contact first by phone and then, if necessary, in person.

Between December 2022 and June 2023, more than 500 potentially vulnerable customers were identified and contacted. Although the majority were safe and well, the contact helped us to schedule repairs and assess the different levels of support needed.

In one instance, we had a customer who hadn't contacted us for a number of years and was found to be living in poor conditions, sleeping on the floor in a sleeping bag. We were able to open safeguarding and property condition cases and adult services began supporting the customer.

With the k-mean clustering algorithm, we used this to identify any natural groupings or patterns in the dataset to produce a risk score on customers who needed to be contacted. The logistic regression model meant that we were able to quantify the possibility based on the number of times the algorithm flagged an instance that would lead to a customer not contacting us, hence putting them at risk of becoming silent.

### Predicting damp and mould

In another case, we asked which properties were likely to develop damp and mould problems. For this, we implemented deep-learning AI disciplines.

First, we trialled unsupervised machine-learning models in order to get a binary outcome that would indicate the presence of damp and mould, looking at which factors in a home over a seven-day period would predict whether conditions would be right for damp and mould on the eighth day. As a refinement, we used a long short-term memory (LSTM) network so that more than one observation could be taken into account for predicting what conditions in a home would be the following day.

In the case of damp and mould predictions, our eventual choice to use a LSTM network meant that we could take a sequence of observations at a time, such as outside temperature, the condition of the home and weather forecasts.

During the initial testing of our programmes for damp and mould, we found the quality of data we were working with wasn't good enough to produce reliable results so we're now refining our AI product by improving the quality of the data we hold on our properties and our customers.

### Essential databases & registers

The work to date has still been vital in creating essential databases and registers of our properties. We've made huge strides towards using AI to help tackle damp and mould, and our improved understanding of the conditions that cause it, combined with improved datasets, puts us in a great position to do more in the future.

Elsewhere, Platform Housing has innovated its systems so that our communities team can see what kind of support is needed across its geography using its 'lower super operating model' which analyses HACT data, local conditions, socio-economic factors and health and wellbeing assessments to target what activities it delivers.

For example, areas of high deprivation now get more frequent drop-in sessions on benefit applications and access to work, and areas with high amounts of loneliness are targeted with more social-led activities such as coffee mornings and group sessions.

And that's not all! Our development team will soon get better data on areas where regeneration is needed and our new business team can analyse potential modern methods of construction (MMC) sites.

We've also switched on fully-integrated cloud systems through Microsoft Dynamics 365 to link up financial services, CRM and repairs case management, giving us a 360-degree view of our services and customers for greater speed and efficiency.

*Jon Cocker is the group chief information officer at Platform Housing Group. The housing provider won the gold award in the innovation category of the Housing Technology 2024 awards.*





# Leaning towards change and innovation

Ian Crocker, Founder, LeanIT

*With conflicting priorities, no real increases in budgets, a hefty backlog of technical debt and dare I mention AI? It's understandable why IT leaders might be tempted by the allure of the cool comms-room on a hot summer's day this July. However, the days of delivering technology in isolation within the back office of the IT department are long gone.*

## Current challenges

The technical debt that has built up across the sector is significant. To really shift the dial and deliver a service that clients now expect from their housing providers, IT leaders must transition from 'lights-on' IT service management operations to becoming true business enablers.

However, internal IT teams, no matter how innovative, can't do it alone. It is therefore falling on the large HMS providers to invest in the sector and expand their cloud and true SaaS offerings to unburden housing providers from the overheads of ageing infrastructures, services and applications.

Once cloud and true SaaS offerings in the sector become the norm, IT teams will then be able to focus on value-added services for the business and the clients they serve.

The main issue with legacy housing systems is that they incur significant hidden costs of maintaining the underlying infrastructure requirements and support. This often leads to substantial revenue costs with no suitable alternative on the market.

For too long, IT teams and managed service providers have spent valuable time patching, monitoring and managing these services, which are now becoming an unwelcome overhead, detracting from the true value proposition of internal IT resources, which should be at the forefront of business transformation and operations.

## Stepping out from the shadows

'Shadow IT' is also a growing problem, typically stemming from teams with the largest budgets. In many organisations, those departments with significant financial resources can bypass IT governance and procure their own solutions. While this might offer quick fixes, it also introduces risks, including integration problems, security vulnerabilities, increased costs and support challenges, not to mention the friction it creates between the business and IT teams.

To mitigate these risks, IT leaders must foster strong communication channels and create collaborative environments where all departments align their business and technology initiatives with the organisation's overall business strategy. By implementing a clear framework

linked to business strategy for initiatives and workstreams, it can encourage open communications, which in turn can help bring these disjointed activities out of the shadows and into a clear programme for all to buy into and benefit from.

### Role of IT leaders

The most successful strategic IT leaders and innovators in our sector always have a wide-angle view of the entire business, ensuring their expertise extends beyond being just the technology delivery agent. The biggest challenge facing IT leaders in the sector today is juggling their ageing housing management systems, end-of-life infrastructure and the demands of the business to deliver the latest and greatest technology while also contending with limited resources.

### Firm foundations

To drive change across a business, core infrastructure, business systems and data sets need to be built on solid foundations. Without this, businesses risk inefficiency, failed projects and frustration.

It's essential that strong IT leadership (both at board and leadership levels) is displayed to bring all areas of the business together before engaging in the next wave of technology and hype. If IT leaders can't do this, they risk becoming irrelevant and shadow IT teams with larger budgets and ambitions will lead, resulting in disjointed projects focused solely on quick wins rather

than comprehensive housing service delivery and transformation.

Historically, the role of an IT leader has been about delivering technology and ensuring the business's needs are met. However, with the rise of new technologies, such as AI, and the need for businesses to transform and do more with less, IT leaders must expand their focus beyond merely implementing technology. Best practices in IT service management, such as ITIL, emphasise the importance of considering the '4Ps' of people, processes, partners and products and not being led by the shiniest new thing in town.

### A question for your business

Seasoned IT leaders ensure a strategic balance by integrating business needs, long-term strategy and emerging technologies.

The question that needs answering in your business is: where do your IT teams spend their time and resources? Are they innovating holistically across the business, sinking in technical debt or hiding in the cool comms-room on a summer's day?

*Ian Crocker is the founder of LeanIT and a non-executive director at Kingdom Housing.*



## The power of collaboration – Embracing AI in housing

Gary Haynes, Managing Director, Voicescape

*Artificial intelligence (AI) has the potential to revolutionise social housing by enhancing efficiency, improving service delivery, and increasing tenant satisfaction.*

However, to fully embrace its potential in our sector, we need to ensure a collaborative effort focused on sharing experiences, knowledge and best practices. Drawing on insights from our recent white paper (Embracing AI in Social Housing: Expert Insights and Frameworks for

Success; see [voicescape.com](https://www.voicescape.com)), this article explores the vital role of collaboration in successfully integrating AI, highlighting key advice from the report's expert contributors.

### A sector-led approach to AI

In a field that is evolving and expanding as quickly as AI, it's no secret that traditional regulatory frameworks can often struggle to keep pace. For that reason, there's a strong argument to be made that the social housing sector must take a proactive role in developing standards and guidelines for AI use. Indeed, relying solely on bodies such as the Regulator of Social Housing (RSH) for direct regulation could be seen as impractical given AI's dynamic nature.

Yorkshire Housing's CEO, Nick Atkin, summed it up when he explained the crucial need for agility: "A proactive stance is essential. AI evolves so rapidly that official guidance quickly becomes outdated."

The necessary approach requires a balance of flexibility and readiness to adapt, allowing leaders within the sector to explore AI's possibilities safely and creatively. As Platform Housing's CIO, Jon Cocker, highlighted in our report: "It's not about stifling innovation; it's about understanding the risks and safe practices."

What's more, any guidelines need to work in harmony with social housing's unique ethical demands and accommodate the rapid pace of technological change. For example, ethical considerations around data privacy and algorithmic bias must be placed at the forefront to maintain trust and integrity.

Taken together, a balanced approach that encourages innovation without being overly prescriptive is needed. Guidance must be flexible and adaptable, encouraging continuous learning and adjustment while remaining relevant and effective as AI technology evolves.

### The role of collaboration

Collaboration plays a central role in establishing the types of sector-wide AI guidelines and frameworks we need. After all, cross-sector cooperation is critical to the effective sharing of knowledge and best practices needed to help organisations avoid making the same mistakes and duplicating their efforts.

However, despite advances and positive steps in terms of knowledge-sharing, hurdles remain in achieving the necessary levels of collaboration. Hassan Bahrani, director of IT, cyber and data security at Thirteen Group, said in our report: "Collaboration is improving but it's still siloed." These siloes need to be overcome as a priority.

Platform Housing's Cocker spoke about the necessity of joint efforts, arguing that: "Cross-sector collaboration is key. We need to work together to define what good AI looks like in terms of ethics and applications."

At the same time, there is also a challenge in ensuring guidelines are applicable across diverse organisations

with significantly different challenges and landscapes. Thirteen's Bahrani stressed the difficulty of a one-size-fits-all approach: "Certain housing providers excel in data governance, for example, but their methods can't always be replicated elsewhere."

### The importance of internal collaboration

Successful AI integration into social housing also demands a concerted collaborative effort within organisations. To have a real impact and buy-in, AI initiatives need to align with broader business outcomes and reflect the collective insights and needs of various departments.

Platform Housing's Cocker emphasised a holistic approach: "AI frameworks shouldn't only be technology-driven. Our guidance involves input from HR, governance and other departments." This approach ensures that AI governance reflects an organisation's collective wisdom, rather than being the sole purview of, say, the technology department.

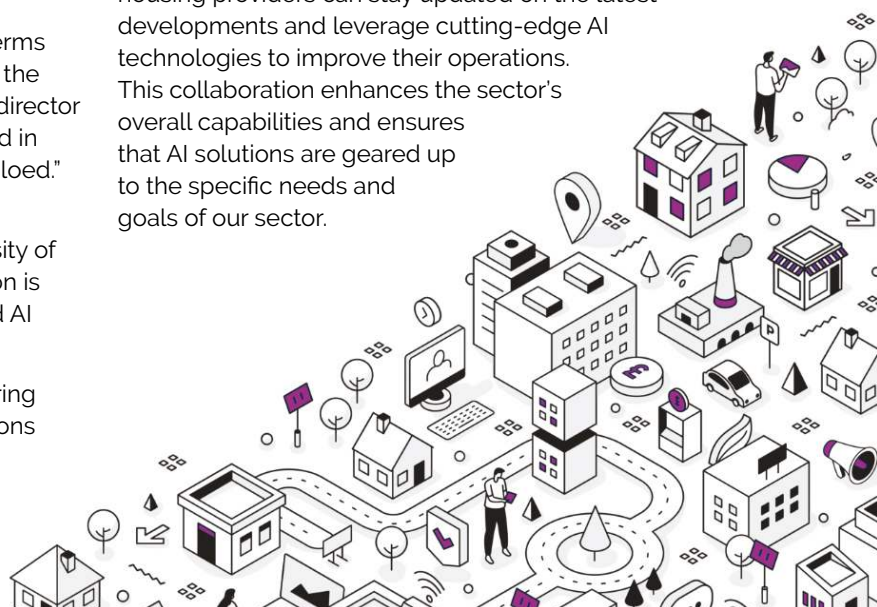
Siobhan Weightman, board member for Women In Social Housing (WISH) North East, stressed: "A strong strategic direction and a clear purpose are both essential. Everyone must know their role in delivering that vision." After all, prioritising AI at the highest levels can help fast-track positive changes in social housing.

By establishing a collaborative roadmap right across the organisation, housing providers can foster a unified approach to AI projects that elevates them from isolated initiatives into coordinated, integral components of their respective overall missions. Ideally, the framework should take the form of a strategic document and a commitment to shared problem-solving and open communication.

### Leveraging supplier knowledge & innovation

Suppliers also play an important role in sharing knowledge and innovations within the sector. They're often at the forefront of technological advances and can provide valuable insights and solutions, often based on practical applications. Thirteen's Bahrani acknowledged their contribution: "Suppliers such as Voicescape lead in sharing knowledge; their insights are invaluable."

By fostering strong relationships with suppliers, housing providers can stay updated on the latest developments and leverage cutting-edge AI technologies to improve their operations. This collaboration enhances the sector's overall capabilities and ensures that AI solutions are geared up to the specific needs and goals of our sector.



### Creating a formal forum for collaboration

The ultimate ambition for the sector should be a more formal sector-led forum for collaboration. Platform Housing's Cocker envisioned: "A sector-wide body should lead AI discussions, creating a central platform for sharing knowledge and best practices."

By establishing such a forum, our sector can create a centralised platform for sharing knowledge, best practices and innovations. This enhances the overall capabilities of the sector and ensures that AI solutions are aligned with the specific needs and goals of social housing.

In the meantime, there is a growing number of tools and platforms available to support social housing professionals in sharing their AI experiences and learnings. These knowledge-sharing resources offer both immediate support to organisations taking their first or next steps in embedding AI as well as establishing the foundations for more formal collaboration forums in the future.

For example, our report delivers comprehensive insights and advice from leading experts alongside examples of best-practice AI principles that housing providers can adapt into their own approaches.

### A shared future

The integration of AI into social housing presents both challenges and opportunities. A sector-led approach, focused on collaboration both within

and between organisations, is essential for developing flexible, ethical and effective AI frameworks.

By fostering continuous dialogue, sharing knowledge and maintaining a clear strategic focus, the social housing sector can harness the full potential of AI to better serve its communities.

*Gary Haynes is the managing director of Voicescape. Voicescape's whitepaper, 'Embracing AI in Social Housing: Expert Insights and Frameworks for Success', is available to download now from [voicescape.com](https://voicescape.com).*

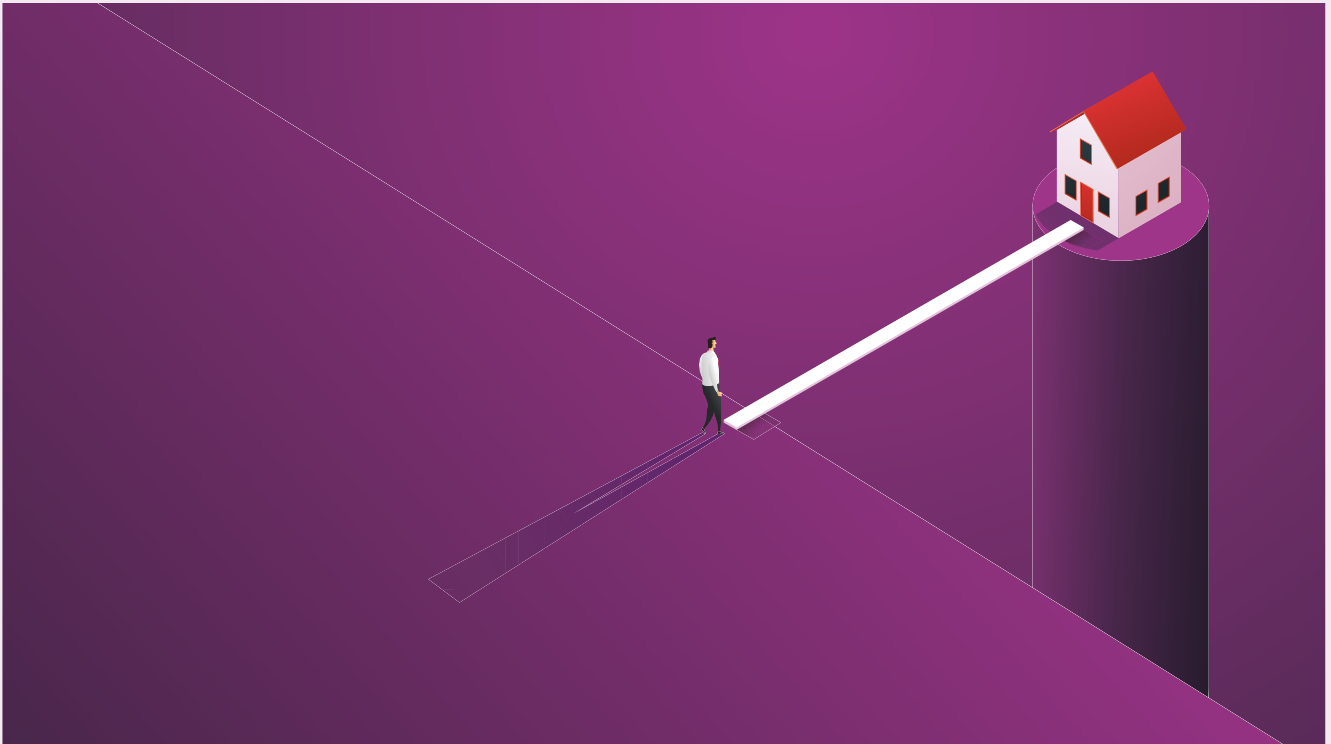


## The elephant in the room

Using AI to dismantle homelessness and poverty in housing

George Grant, CEO, Broadcaster & Publisher, Housing Technology

For decades, UK housing policy has focused primarily on financial constraints and supply issues. Policymakers have repeatedly emphasised the need for increased funding and regulatory reforms to tackle the housing crisis. However despite these efforts, the shortage of affordable housing persists, with significant challenges in planning, construction and resource management. The transformative potential of AI and technology offers a revolutionary approach to addressing these issues. To achieve this, a balanced integration of human expertise and technological innovation is crucial.



## The traditional approach

Housing policies have historically revolved around:

- **Financial interventions:** Government grants, subsidies and tax incentives aimed at stimulating housing construction.
- **Regulatory reforms:** Changes in zoning laws and building codes to facilitate new developments.
- **Public-private partnerships:** Collaborations with private developers to increase housing supply.
- **Direct construction:** Government-led construction projects to build social and affordable housing.

While these measures have had some success, they haven't been sufficient to meet the demand for affordable housing. The traditional approach often faces issues such as bureaucratic delays, limited funding and inefficiencies in resource allocation. Moreover, the lack of integration with modern technological solutions has hindered the ability to optimise and accelerate housing development.

## The transformative potential of AI and technology

The conversations between Tony Blair, Demis Hassabis and Bill Gates underscore the revolutionary impact of AI and technology in various sectors. Here's how these insights can be applied to housing policy while ensuring human oversight and expertise:

- Tony Blair, former Prime Minister of the United Kingdom and executive chairman of the Tony Blair Institute for Global Change, emphasises the need for Britain to fully embrace the technology revolution to avoid being left behind. He highlights that AI can significantly improve public services by automating processes, saving

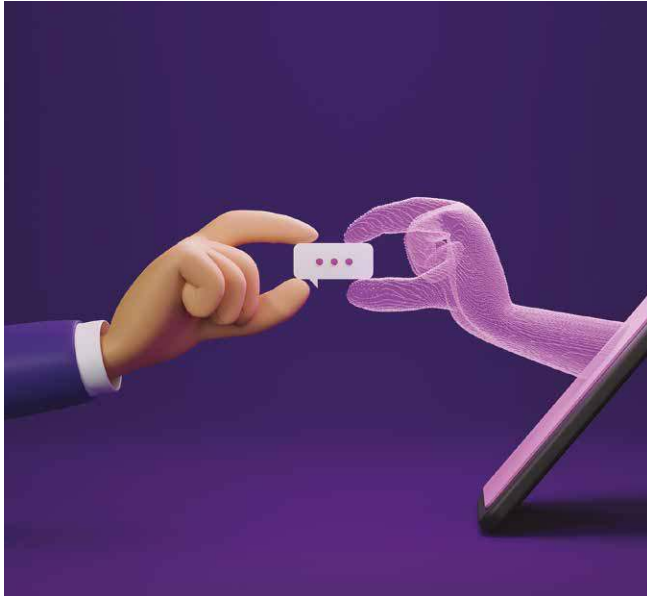
workforces time and money. Blair points out that AI's application in the healthcare sector, for example, can shift the focus from cure to prevention through better use of health data.

- Demis Hassabis, CEO and co-founder of DeepMind, discusses the broader implications of AI, particularly its ability to accelerate scientific discovery and improve productivity. He emphasises that AI isn't just a tool but a transformative technology that can fundamentally change how we solve problems in various domains.
- Bill Gates, co-founder of Microsoft and co-chair of the Bill & Melinda Gates Foundation, underscores the transformative potential of AI in various sectors, including housing. He notes that AI's ability to process and understand data at superhuman levels can revolutionise areas like healthcare and education. He highlights the importance of a strong partnership between governments and the private sector to harness AI's full potential and drive innovation.

## Implementing AI in housing policy

### Data-driven urban planning

- **AI for optimal site selection:** AI can analyse vast datasets to identify the best locations for new housing developments, considering factors such as population growth, infrastructure, environmental impact and social needs. This ensures developments are strategically placed to maximise benefits and minimise disruptions.
- **Big data analytics:** By leveraging big data, policymakers can gain real-time insights into housing trends, demographic shifts and economic factors. This data-driven approach allows for more responsive and effective policy decisions, reducing the risk of overbuilding or underbuilding in certain areas.



### Innovative construction technologies

- **Prefabrication and modular construction:** Technologies such as prefabrication and modular construction can significantly reduce building times and costs. These methods involve assembling building components in a factory before transporting them to the site for final assembly, ensuring consistent quality and minimising delays.
- **3D printing:** 3D printing technology can produce affordable housing quickly and efficiently, reducing material waste and allowing for the creation of complex structures that traditional construction methods might not achieve.

### Optimising resource management

- **Predictive maintenance with AI:** AI can predict when maintenance is needed for existing housing stock, preventing costly repairs and extending the lifespan of buildings. This proactive approach ensures better resource allocation and reduces long-term maintenance costs.
- **Energy efficiency:** AI and smart home technologies can optimise energy use in residential buildings, leading to significant cost savings for tenants and reducing the environmental impact. These technologies can monitor and manage energy consumption, making homes more sustainable and affordable.

### Enhancing affordability & accessibility

- **Dynamic pricing models:** AI can help develop dynamic pricing models that adjust rental prices based on real-time data, ensuring housing remains affordable for a larger segment of the population.
- **Blockchain for transparent transactions:** Blockchain technology can create secure and transparent property transactions, reducing fraud and making the housing market more accessible and trustworthy.

### Facilitating innovation and collaboration

- **Public-private partnerships:** Encouraging collaboration between the government, technology companies and

the construction sector can lead to innovative solutions and the sharing of best practices. This can accelerate the adoption of new technologies in the housing sector.

- **Innovation hubs:** Establishing innovation hubs focused on housing technology can drive research and development, leading to breakthroughs that can be scaled across the country.

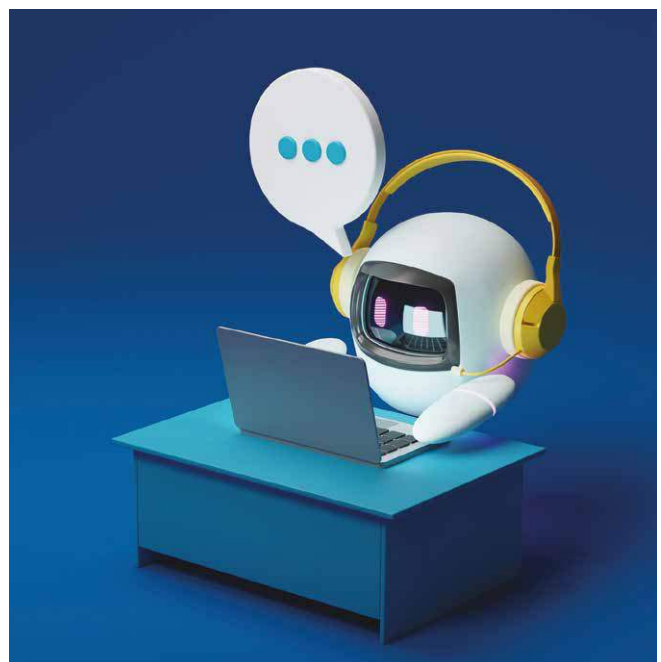
### AI for policy implementation and monitoring

- **Automated compliance and monitoring:** AI can be used to monitor compliance with building codes and regulations automatically, ensuring new housing developments meet safety and quality standards without extensive manual inspections.
- **Policy simulation and impact analysis:** AI can simulate the impact of various housing policies before they are implemented, allowing policymakers to predict potential outcomes and adjust their strategies accordingly to achieve the desired results.

### Addressing the housing crisis

The UK government has set an ambitious target of building 1.5 million homes, but current efforts are woefully behind schedule. AI and technology can play a critical role in accelerating progress towards this goal:

- **Speed and efficiency:** AI-driven construction techniques like prefabrication, modular construction, and 3D printing can significantly speed up the building process, ensuring that more homes are completed in less time.
- **Cost reduction:** By optimising resource management and reducing waste, these technologies can lower construction costs, making it more feasible to build a large number of affordable homes.
- **Quality assurance:** AI can enhance quality control in construction, ensuring that new homes meet high standards of safety and sustainability.



## Dismantling poverty through smart technology

Lord John Bird, founder of The Big Issue, fully supports the notion that technology has a big role to play in dismantling poverty. Beyond building homes faster and cheaper, the integration of AI and technology in housing policy is crucial for addressing poverty. Affordable, high-quality housing is a foundational element of economic stability and social well-being. By leveraging AI, we can create more equitable housing solutions that provide better living conditions and opportunities for all.

### A call to action

The insights from Blair, Hassabis and Gates highlight the need for a balanced integration of AI and technology with human oversight and expertise in housing policy. Governments must move beyond traditional approaches and embrace the transformative potential of AI and technology, supported by empirical evidence.

### What governments were doing before:

- Relying on financial interventions and regulatory reforms.
- Collaborating with private developers through public-private partnerships.
- Leading direct construction projects for social and affordable housing.

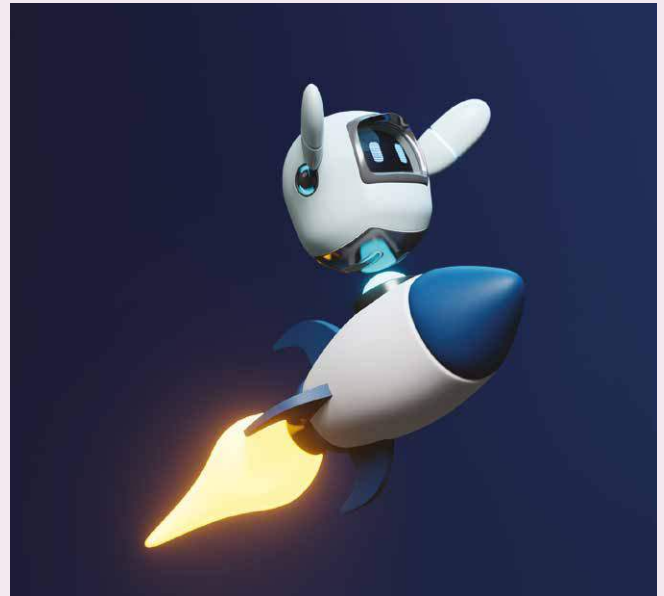
### What governments should be doing now:

- Leveraging AI for data-driven urban planning and optimal site selection.
- Adopting innovative construction techniques like prefabrication, modular construction and 3D printing.
- Using AI for predictive maintenance and energy efficiency in housing stock.
- Developing dynamic pricing models and using blockchain for transparent property transactions.
- Encouraging public-private partnerships focused on technological innovation.
- Establishing innovation hubs for housing technology research and development.
- Implementing AI for automated compliance, monitoring and policy simulation.

By integrating AI and technology with human expertise at the core of housing strategies, governments can ensure sustainable, efficient and equitable solutions that meet the current and future needs of the population. This approach minimises the risks associated with technology adoption without human intervention.

### Embracing the future

We are living in an age where, for the first time, we can discuss and solve our problems using digital assistance and innovative technological solutions. This transformative potential must be harnessed to create a future where housing is accessible, affordable and sustainable. Housing Technology's role is to bring together the world's greatest minds to address the housing crisis. By leading the charge in integrating AI and technology into housing policies, we can dismantle poverty and improve living conditions for all.



This vision requires the collaboration of policymakers, industrialists, tech-savvy individuals, consultants, urban designers and CEOs of housing associations. Together, we can create a technologically advanced, equitable and sustainable housing sector that benefits everyone. Let's embrace this opportunity to transform our sector and build a better future for all.

### The call for technological leadership

It is noteworthy that recent communications from major housing bodies such as the National Housing Federation and the Chartered Institute of Housing haven't emphasised the role of AI and technological advancements in alleviating the housing crisis. This oversight must be addressed. As leaders in the housing sector, we must advocate for the inclusion of AI-driven solutions in policy discussions and implementation strategies. By doing so, we can ensure that technological innovations are leveraged to their fullest potential, driving efficiency, cost savings and quality improvements across the board.

In conclusion, the integration of AI and technology in housing policy is not just a supplementary strategy; it is essential for meeting our ambitious goals, including the construction of 1.5 million homes and the broader mission of dismantling poverty. With the right blend of human expertise and technological innovation, we can achieve these goals and transform the housing sector for the better.

*George Grant is the CEO, publisher and co-founder of Housing Technology.*

# Proptechs & IT Start-ups in Housing 2024/25




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