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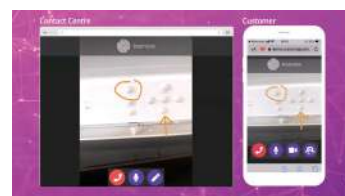
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HOUSING TECHNOLOGY

RESILIENT INNOVATION 2020

Resilient Innovation 2020

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Aareon QL Next Generation Coming Soon



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For further information on QL Next Generation, please contact our team:



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DIY or off-the-shelf software?

Do it yourself or get someone else to do it for you? That's the question many housing providers' IT teams ask themselves when considering new business applications, adding new functionalities or implementing new workflows and processes.

Our feature article on page 42, 'In-house development vs. off-the-shelf software', brings together a range of views on how, when, where and why to consider in-house software development instead of buying off-the-shelf software from external suppliers.

We interviewed senior executives from Aareon UK, Accent Group, MIS-AMS, Northgate Public Services and Weaver Vale Housing Trust to get both sides of the story; some of them are strongly in favour of in-house

development while others take the opposite view. See page 42 to read the feature article.

Resilient Innovation 2020

As with many other well-established events, we have moved our annual event at the BT Tower in London to an online-only format, which means that more of the Housing Technology community can tune in on Tuesday 22 September to join us virtually at Resilient Innovation 2020.

Housing Technology believes that in the current climate, neither business resilience nor IT innovation on their own are enough, so our new online event, supported by BT, will look at how housing providers are combining the two areas to create exciting, bullet-proof strategies that deliver inspiration, confidence and security in everything from their current day-

to-day operations through to their longer-term goals. Find out more on page 41...

IT Finance & Procurement 2020

After several months of data gathering, analysis and research, along with some incredibly helpful support and insights from numerous housing providers and specialist procurement consultancies, Housing Technology has published its first dedicated market intelligence report on IT finance and procurement in our sector.

Our 'IT Finance & Procurement 2020' report is available as a free (HAs only) downloadable PDF from housing-technology.com/research or see page 16 for some of the report's highlights.

FORTHCOMING EVENTS



Housing Technology: Resilient Innovation 2020
22 September 2020 | online event

housing-technology.com/event/resilient-innovation-2020



HOUSING TECHNOLOGY 2021
CONFERENCE AND EXECUTIVE FORUM
03-04 March 2021 | The Oxford Belfry

housing-technology.com/event/housing-technology-2021-conference

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Migrating from seven HMSs to one...

Karl King, Consultant Project Manager, London Borough of Redbridge

Managing the project of implementing one housing management system to replace seven is challenging. Add working through a pandemic at the same time, and you have the ingredients for some very interesting days ahead...

You will all be familiar with this story. A service with dated systems built up over the years without any proper integration. Data quality issues and staff having to search for the truth over several systems proving to be time-consuming and not always accurate. The frustrations of reporting across disparate data silos while trying to fulfil statutory requirements and the constant need for quality information to inform senior management and help support strategic demands. That's where we are at in the London Borough of Redbridge.

Given the absolute necessity to improve the technology that supports our housing service and the need to become digitally inclusive to serve our residents and to help staff in the field, we have embarked on a huge transformation of not only our IT infrastructure but the way we meet the needs of our residents. We thought we would detail our journey to date and some of the lessons learned in the hope we can help others with similar endeavours.

Our original project brief was to rationalise seven housing management systems to one and free up our staff's capacity so they can spend less time searching for the truth across systems and more time engaging and supporting our residents.

So where do you start?

The housing IT market is a niche one, especially if you are a local authority. A

small number of the same main suppliers have been around for a long time. These suppliers have sophisticated, functionally-rich systems and are very good at what they say on the tin, but not every council works in the same way. Depending on their demographic and what's been retained in house, each council has slightly different requirements. It is these requirements where you need to focus your attention and where the importance of soft market testing comes in.

Soft market testing

In spring 2019, we assessed the market to come up with the top six providers of housing solutions who were then invited to demonstrate their systems to our senior management. This early market engagement enabled us to understand the market and it gave the suppliers the opportunity to understand our goals, capabilities and limitations.

It became apparent early on that while some suppliers had invested considerable time and effort into bringing their systems up-to-date with the latest technology, some were still offering older client/server technology or were in the middle of moving to cloud/SaaS-based products.

Although this early market engagement was helpful, it didn't give the full picture. Housing systems are complex, wide-ranging systems serving a multitude of functions, and having each supplier in for a two-hour demo barely scratched the surface. Following feedback from staff, each supplier was invited back to demonstrate their system over two days. This allowed us to run targeted workshops on our key business areas.

The outcome of these workshops was that a 'one system fits all' approach would be challenging to achieve. This was a pivotal moment because it helped us shape our procurement approach.

Engaging the 'been there and done that'

The next step was to contact other

councils to find out what they were using, how and why they'd got there and any suggestions for what they would do differently; two main points came out of this exercise:

- Implementations of this size and nature typically take a minimum of twelve months and realistically closer to 18, excluding the procurement process itself.
- All councils we contacted were using at least two systems for their housing management needs.

Gathering the requirements

To save time, we created a hybrid list of requirements used by other councils to come up with our own base set. We then tailored this to our needs by running a series of workshops and meetings with staff across housing, IT, revenues and benefits, finance and customer services.

However, one of the challenges of putting together requirements for such a wide-ranging subject is that you invariably end up with a long list of requirements – in our case, over 1,200 requirements!

Many requirements can be problematic in trying to differentiate between suppliers in the evaluation phase of procurement. 1,200 requirements can be time-consuming for the suppliers to answer and for the evaluators to score, especially with six bids to score (7,200 answers to consider...). To avoid this, we bundled our requirements into 'just' 30 Quality Method statements.

Re-examining the benefits during the pandemic

The benefits of any project need to be regularly reviewed to ensure they still align with the needs of the business; this is particularly true in the current pandemic. Many of the original benefits listed below are even more critical today than they were pre-coronavirus:

- Enabling mobile working for the staff.
- Enabling greater functionality for self-

Migrating from seven HMSs to one...

Continued from previous page

service and improved accessibility for residents.

- Improving process automation to free up staff.
- Introducing a system which has the potential to grow with the changing demands of the housing service, ensuring an element of future-proofing.

Digital value chain

And with a shortfall of income for most councils, Redbridge will be looking at

leveraging the latest technology trends to add to our digital value chain:

- Improved data and fewer systems will give us greater insights to manage our voids better;
- Controlling the increasing costs of temporary accommodation;
- Predictive analysis for rent arrears;
- Using smart buildings and IoT;
- Chatbots and RPA for low-level, high-volume tasks.

Hopefully this has given you some useful insight into Redbridge's journey to date; we're planning a follow-up article for when we reach the implementation stage to tell you how stressed we are/how well we're getting on (delete as applicable)...

Karl King is a consultant project manager at the London Borough of Redbridge.

Aareon launches QL Next Generation

Aareon UK is launching Aareon QL Next Generation, a cloud-ready, browser-based and user-focused iteration of the company's housing-specific ERP system.

Instead of designing the new system itself, Aareon enlisted the close involvement of its customers to completely redesign the way the product works, directly based on its customers' end-users' requirements via a series of workshops covering different functional areas of the system.

During and after each workshop, once Aareon and its customers had jointly gathered the requirements for a certain process, they created a solution document with descriptions of the desired functionality which was then reviewed by the customer engagement group and signed off. Then, a development sprint was scheduled and the resulting software released for the engagement group to test and provide feedback on. By using this agile approach, Aareon was able to gain rapid feedback on

product usability, functionality and any problems then address them fast, leading to a quicker, higher quality delivery process.

The involvement of a group of Aareon customers, who were diverse both geographically and also in terms of size and profile of organisation, helped Aareon come up with a more relevant and representative way of gaining the requirements for its new system.

Julia Kelly, project manager for digital futures at Eildon Housing, and part of the engagement programme, said, "When it comes to the overall user experience and the user interfaces, it's very easy to get these things wrong. It's important to know what our actual end-users want and how it needs to work for them, and Aareon's engagement programme has really helped with that – I genuinely had the sense that Aareon's developers were actually listening to the views that were expressed by the end-users during the engagement programme.

"Aareon QL Next Generation is clean and clear, with fewer clicks to get to where you want to – that's really important for our end-users. It's easy to use and to navigate, it's intuitive, and it has a fresh look and feel which our users asked for."

Northgate Public Services' remote HMS implementation at Slough Borough Council



Slough Borough Council is replacing numerous outdated systems with a single cloud-based housing management

system from Northgate Public Services. The new NPS Housing system is intended to give the council a single view of its customers and provide more self-service options.

The pandemic threatened to slow down the implementation of NPS Housing, but with NPS's capability to manage the entire implementation without setting foot on the council's premises, the major IT overhaul will go ahead as originally intended and is scheduled to go live during the first quarter of 2021.

Colin Moone, service lead for housing, Slough Borough Council, said, "We were working with really antiquated systems which were really affecting our productivity. Moving to NPS Housing will revolutionise the way we do things by integrating everything into a single system. It will give our tenants more options to manage their own lives and it will free our team to be able to spend more time supporting residents. The fact that the coronavirus outbreak hasn't impacted the project timeline is amazing."

Roger Birkinshaw, housing director, Northgate Public Services, said, "It is a first for us to begin an implementation entirely remotely, and I am proud that we have the people and the technology and expertise to make this happen."



Data management tips for innovation & insights

An-Chan Phung, CIO for Master Data Management, Civica



The ability to bring together data from multiple business systems and functions to create a complete and accurate view of tenants and properties unlocks exciting opportunities for innovation and data insights. However, as housing providers accelerate their digital business efforts, poor data quality is a major contributor to a crisis in information trust and business value, negatively impacting financial performance.

Here are some ways housing providers can use data management solutions to help them take back control of their data to deliver better, more cost-effective services:

1. Delivering trusted insights

From the board, through management and down to operations, one common trusted dataset is the backbone of better insights and improved value. Areas where data management can add particular value include: asset compliance and safety; arrears and income management; fraud reduction; and increasing the efficiency of responsive repairs.

2. Enhancing customer service & satisfaction

The ability to access complete and trusted customer and property information on time, on any device and at the point of engagement, is fundamental to quality customer service. For example, master data management has enabled Wheatley Group to launch its GoMobile project, which allows housing officers to access a full set of data while they are out on their patches.

3. Synchronising digital service provision

While most organisations will already be exploiting digital channels for service delivery, the platforms themselves can

inadvertently create a separate silo of customer data disconnected from the core housing management system. Alongside fixing issues with data quality, data management tools also synchronise digital platforms and back-office systems to ensure one consistent set of customer and property records is shared.

4. Supporting mergers & consolidation

At the same time as mergers and collaborations across the housing sector continue, the application and data landscape providers have to manage is becoming further fragmented. Merging datasets often presents an expensive, lengthy and resource-intensive exercise that jeopardises the realisation of anticipated benefits. Better data management capabilities can support housing providers to ensure timely and accurate on-boarding.

5. Supporting multi-agency collaboration & safeguarding

Enabling better collaboration through a single shared record, while enforcing strict data access controls and upholding data governance policies, is becoming increasingly relevant.

6. Improving internal collaboration

Best practice data management enables organisations to break down

siloed working practices by ensuring everyone has access to one consistent and complete 'golden record' presented using standardised business terminology. This golden record is automatically synchronised across systems and departments, driving pervasive data quality.

7. Improving service redesign, diversification & better service targeting

Access to complete and trusted information will drive improved decision-making in service redesign aligned to customer demands and accurate profiles. Furthermore, it will ensure housing providers can diversify into new lines of business with confidence. Accurate customer demographic and up-to-date contact information will ensure services are targeted towards the right individuals at the right time.





8. Fulfilling GDPR obligations & customer information requests

Data management tools enable organisations to retrieve the entirety of the data they hold for a customer upon request, to manage and maintain their consents, to analyse their data and ensure what they hold is correct and compliant.

An-Chan Phung is the CIO for master data management at Civica.

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The nexus of fire safety, IoT & artificial intelligence

Ian Ballinger, Head of Projects & Certification, FireAngel



The disparities between Approved Document B (Fire Safety) volume 1 and the recent revision of Part 6 of BS 5839 presents housing providers with varying guidelines on the minimum requirement of fire safety provisions their property portfolio should currently specify.

Ian Ballinger, head of projects and certification at FireAngel, shares his advice on why housing providers should consider the benefits of going above and beyond the current regulations and recommendations by pairing an LD1 category specification with IoT and AI in order to protect tenants and simultaneously future-proof their housing portfolios.

There are now over 15 million 'smart homes' in the UK as individuals look for solutions designed to make life within their properties easier, safer and more efficient.

With regard to the social housing sector in particular, advancements in IoT technology are supporting housing providers and the UK's fire and rescue services in protecting individuals by specifying preventative, rather than reactive, fire safety measures that comply with an LD1 category specification.

While some housing providers may not initially aim to adhere to this specification because the current legal requirement is an LD3 category, the latest advancements in smoke alarm technology are offering greater flexibility regarding connected and cost-effective fire protection.

These technologies are not only compliant with an LD1 specification, which future-proofs the property against potential regulatory changes, but also offers the ability to be adapted and enhanced in future to meet the individual level of risk each tenant presents.

Taking a connected approach

This can be achieved through the installation of a new generation of connected fire safety systems that feature



both Smart RF and Predict technology, providing effective remote monitoring of each property through a wireless network of alarms. The technology allows housing providers to easily monitor and manage the status of alarms in real time across their entire housing portfolio, highlighting any potential issues as and when they occur.

Historically, a collection of smoke, heat and carbon monoxide alarms will have been installed and tested upon initial installation, then only tested (at best) once a year. In a worst-case scenario, after the initial installation test, the alarms may never have been tested by tenants.



This is where housing providers can benefit from IoT and connected fire safety technologies using AI to bridge the gap in communication between a property and its tenant, as housing providers can benefit from silent network testing automatically conducted every 18 hours for each property. This helps to provide a clear due diligence trail of compliance (if and when required) and also confirms the status and performance of each alarm.

In theory, the remote monitoring capabilities that connected technologies offer can help support a significant reduction in overheads because the costs and requirements for physical property visits and subsequent missed appointments are eliminated. This new approach to fire safety delivers the highest standards of protection in the most cost-effective way, as providers can use Smart RF and Predict technology to instantly view the performance of each alarm in real time to understand the trends and levels of risk each property presents.

The adaptable technology also enables individuals responsible for the management and maintenance of housing portfolios to use IoT technology to easily upgrade the fire protection systems installed throughout their entire housing stock in the future, subsequently reducing the challenges related to asset management and the associated costs.

This upgrade can be achieved by simply adding a Smart RF radio module into the alarm, allowing wireless interlinking of up to 50 alarms within one network. This creates a safety network with access to vital information including current status, alarm history, replacement dates and

The nexus of fire safety, IoT & artificial intelligence

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system health through the activation of a secure, cloud-based connected gateway.

By using AI through a connected fire safety system, which uses a gateway featuring a unique algorithm and patented Predict technology, it can highlight trends and high-risk patterns of behaviour.

By being able to pinpoint tenants who have become vulnerable or high risk in a completely automated way, housing providers can use their resources to target and support those people most at need, both improving safety and ensuring they are using precious resources more efficiently.

Staying ahead of the curve

The 2019 revisions to Part 6 of BS 5839 provide professionals, specifically landlords, with a best practice guide regarding the provision of fire safety for their new or materially-altered and existing properties. The update recommends upgrading from an LD3 specification (the previous minimum requirement) to an LD2 specification. The fire safety provision in sheltered housing flats has also been increased from LD2 to LD1, highlighting an area of potentially higher risk.

With regard to building regulations that cover new or materially-altered dwellings, it's clear that there is a disparity between the regulations in England and Wales, which stipulate an LD3 minimum requirement, and in Scotland and Northern Ireland, which recommend a minimum requirement of LD2.

When compared with BS 5839-6, which advises a minimum requirement of LD2 in most rented single occupancy situations, it's clear that the building regulations for England and Wales are not as closely aligned to those of its neighbours, resulting in an element of confusion over what level of protection is required.

The current minimum requirement for newly-built or materially-altered domestic dwellings in England and Wales is LD3, which requires the installation of a Grade D mains-powered smoke alarm with battery back-up in the circulation areas of each storey of a building, such as landings and hallways which form part of an escape route. Within the 2019 revisions to BS 5839-6, the recommendation of Grade D has been further defined into Grade D1 (sealed or rechargeable back-up) or Grade D2 (replaceable battery back-up).

For the private and rented sector in particular, a Grade D1 specification for maintenance purposes is seen as the most pragmatic solution, removing the obligation to replace batteries during the life span of the alarms. Protection can be taken one step further through an LD2 specification, which requires installation of a heat alarm in the kitchen in addition to a mains-powered smoke alarm (with battery back-up) in the most habitable or highest fire-risk room, such as a living room. In Scotland and Northern Ireland, along with other European countries, this level of specification is the current requirement under local building regulations.

While the UK government has recently announced that Approved Document B, Building Regulations for England and Wales, will be subject to a full review, housing providers shouldn't wait for changes to the regulations to reinforce their duty of care. Housing providers can demonstrate best practice through the installation of alarms that meet an LD1 category and successfully futureproof their housing stock from any regulatory changes that may occur at a later date, while appropriately managing the level of risk each individual tenant presents. An LD1 specification is designed to offer maximum protection through the installation of alarms in all areas of a property where a fire could potentially start. This includes alarms in all circulation

spaces that form part of escape routes, in addition to smoke alarms in all high fire risk areas, including living rooms, bedrooms and dining areas. This also includes the installation of a heat alarm in a kitchen. To offer the highest levels of protection available, Thermoptek multi-sensing or optical alarms should be installed.

By following a best practice policy that adheres to an LD1 specification through the use of IoT and Smart RF fire safety



technologies, housing providers can not only ensure compliance with current and future regulations, but successfully identify the level of risk or indeed an increased risk to their tenants and properties. Remote monitoring delivers many capabilities, allowing professionals within the housing sector to have a comprehensive understanding of which tenants are at a level of high or increased risk and require earlier intervention.

Ian Ballinger is the head of projects and certification at FireAngel.



One Housing's digital transformation

Tony Blows, CIO, One Housing

The here and now

There is now much evidence globally that the spotlight has begun to shine more brightly on local digital transformation programmes. This may be due to the search for certainty and assurance regarding what has been delivered so far, and whether a full digital programme will help organisations survive as we emerge from the lockdown.

At One Housing, we have been on our transformation journey for a few years now, and given the current circumstances, that's very fortunate timing.

Some of our original transformation drivers included improving data quality and access to information, leveraging the cloud to support a well-equipped, agile workforce and, most importantly, to offer cost-effective digital channels to enhance customer service and satisfaction as well as the employee experience. As luck would have it, all of these drivers helped form a good response to the impact of the pandemic on our business.

Listening to staff

A desired outcome of our agile working project was to reduce our reliance on data centre-based and thin-client technologies by deploying laptops, tablets and phones on a grand scale. Thus, the transition of our office-based staff to home working has been seamless, all things considered, and we have seen no negative impact in our ability to deliver excellent customer services. In particular, our customer service centre responded wonderfully to being home-based, leveraging the earlier move to a single service number and our investment in EngHouse's contact centre management platform.

It may be worth going back to the start of the programme during late 2017 to further understand the outcomes achieved so far. And while some of the focus of our 'One Future' transformation programme was on modernising our IT systems and the way we use data, it was also about changing

our organisational culture and business processes.

One of our earliest projects was to implement and embed lean thinking methods to improve processes and measure our performance more effectively. We were also keen on customers having more service options by way of additional digital channels, staff being freed up from drudgery via increased process automation, and seamless KPI production.

While PowerBI is now being deployed for all our KPI reporting needs, another key driver, namely improved collaboration, is being delivered via numerous Office365 applications, such as Teams, SharePoint, OneDrive and Exchange.

Listening to customers

The pandemic has also led to a dramatic rise in use of our latest generation of online services, including customer online accounts (launched October 2019) and our numerous websites. Subsequent phases of this project are being expanded and fast-tracked in response to this growing demand.

Our commitment to providing a compelling digital offer is best exemplified by the fact that usage and usability of digital services are now tracked as a headline KPI by our executive team.

Fortuitously, our new main website went live in April. The project started by talking to our customer groups and trying to understand their needs, as well as listening to our customer-facing colleagues. From there, we could look at all our customer journeys so that residents and stakeholders could find relevant content easily and quickly.

We also created new web content to ensure we kept our promise of providing clear and correct information. All this took time but, having done so in a collaborative manner, we think this has made a significant contribution to keeping customers informed and more at ease

during the pandemic.

Customer feedback has recently helped launch our new Microsoft Dynamics 365 CRM. It has been shaped to support the specific needs of our customer groups and, over time, customers as individuals. CRM gives us a single view of our customers because it aggregates the information scattered across our legacy back-office systems in a comprehensive, clear and considered way. Ultimately, it will drive all our customer-centric business processes in a reliable, accurate and efficient manner.

It's an investment in our customers as well as our frontline staff. With around 35,000 residents and a culture that fosters service excellence, the new CRM offers performance transparency and the ability to recover and learn from our mistakes.

We are already starting to look at the next phases of the project and how CRM can help our sales and marketing teams and other stakeholders in future.

Governance & resourcing

Since inception of the programme, we've generally managed to maintain pace, quality and to deliver to budget. A key reason for that has been the clear oversight performed by our programme board, comprising senior leaders, non-executives as well as project sponsors and managers. Each project needs to have a compelling business case and the PMO team thereafter track progress, costs and benefits from cradle to grave for each project.

We have also continued to refine the key relationships between the programme team, our internal customers and our IT operations teams to ensure effective hand-over and ongoing improvements to initial implementations.

Data and integration

To paraphrase Apple, "If you have a problem to fix, then there's an app for that." If that's true in a world of cloud services,

One Housing's digital transformation

Continued from previous page

agile working and GDPR regulation, you're going to need a lot of integration and data management.

We accepted that and have subsequently deployed 'a bigger boat', in the form of a Mulesoft integration solution as well as a suite of Microsoft data management products. Recall my earlier references to removing drudgery, increasing efficiency and enhancing quality? All those ambitions are becoming less challenging for us as we achieve further integration and data management.

Communicate, communicate, communicate

Even though we've seen early success with projects launched to support our employee experience, colleagues told us that they still wanted to hear more from our senior leaders, wanted to receive news and other information on the go and said that we weren't reaching many of our frontline staff. We therefore decided to implement Facebook's WorkPlace; this

has enabled us to have a dedicated and secure space to connect, communicate and collaborate.

Since launching in September 2019, most of the organisation has embraced WorkPlace. There are now 68 active groups and we are averaging over 1,000 active monthly users, with around 150-200 group-wide posts each month.

It's fair to say that from a well-being perspective, WorkPlace has helped keep us together because our staff have had a platform to share the heroism of the frontline teams and the dogged support of the back-office staff during a time when the pandemic has kept us at home and apart.

What's next?

The initial programme still has a year to run and has had to make some adjustments in terms of the impact of the pandemic. However, the programme will now increase its focus on replacing legacy systems to improve asset and tenancy

management, thereby staying true to our original primary drivers of customer safety and quality services.

The 'new normal' requires, perhaps even demands, that we build on what we have achieved in terms of the digital service offer and workforce agility, as well as driving value from investments already made in data and business efficiencies. To put it another way, we aim to achieve overall programme success by remaining aligned to our key corporate strategies while continuing to listen to both customers and staff.

Tony Blows is the chief information officer at One Housing.

Stonewater breaks new ground with SharePoint

Stonewater has gone live with a new SharePoint-based EDRM integrated with its MIS-AMS housing management system.

With over 32,500 homes and more than 70,000 customers, Stonewater generates huge amounts of data and documentation. A systems review determined that its existing data handling solutions were starting to feel clunky, with inefficient processes, a lack of functionality and limited remote access. The holy grail was to be able to manage documents and records in a way that would ensure compliance with all data laws while making information fully accessible to staff and customers across a range of locations and within a mobile context.

Stonewater's programme board approved the business case for an innovative plan to replace its Documotive EDM, e-post and invoice processing



Amit Patel,
IT Director,
Stonewater

system with a fully digital document and records management system, electronic post system and purchase to pay solution using Microsoft's SharePoint platform, fully integrated with the housing provider's existing MIS Active Housing Management System.

Application development partners Blacklight Software and technical and project delivery advisors 3C Consultants worked alongside Stonewater's internal team to map out and deliver the transition over an 18-month period.

Despite the impact of coronavirus and the lockdown, Stonewater's new system

went live across the organisation in early June 2020. The housing provider said that its secure, cloud-based solution with robust access management control is ground-breaking in the sector, it being one of the first to fully migrate away from its legacy EDRM provider.

Amit Patel, director of IT, Stonewater's, said, "It's an amazing achievement to have migrated all of our data, encompassing housing, assets, development, finance and corporate services, from Documotive to our SharePoint platform.

"Our extended project team should be proud of getting us over the line in the most challenging of circumstances. For the last four months of the project, we have been working remotely, adding an extra layer of difficulty, not least in ensuring our 500+ end-users were trained on our new system through our digital training platform."



When buildings report on themselves

IoT-based compliance and safety

Cian O'Flaherty, CEO, Safecility

The decade of smart buildings is upon us as digital innovation transforms the spaces we live and work in through an ever-expanding suite of technologies, and with it comes the solution to our compliance headaches. Smart buildings promise to make it all simple with IoT and cloud, make it all cheaper with low-cost hardware, and make it all more productive thanks to better software.

However, housing providers are asking questions such as, "what strategic objectives are served by this technology, can we harness it effectively, and do we need in-house capacity?"

What should smart buildings tell you?

The killer app for smart buildings and IoT is safety and compliance. There are significant push-and-pull factors that will drive adoption rates of this technology for safety and compliance.

Housing providers are already familiar with many of the push factors. The Grenfell and Hackitt reports have led to an overhaul of compliance and safety obligations and higher workloads, while budgets have been going in the opposite direction as teams are required to do more with less. All the while, a rapidly-ageing population is driving increased demand for services and accommodation.

Among the pull factors, the dramatic reduction in hardware costs over this decade will make it possible to retrofit large portions of estates with intelligent technology. Innovative models such as 'compliance as a service' will offer housing providers impressive returns on investments and attainable scale. In the background, whole organisations are applying digital transformation processes to the rest of their businesses, creating further impetus for transforming safety and compliance with IoT.

In a post-coronavirus world, one of the new realities is that conventional compliance testing visits could represent an infection control risk. Having teams travel from site to site to conduct tests, especially when visiting residential care or independent living facilities, is no longer

going to be accepted as good practice. The health and safety risk presented by this practice will drive housing providers towards IoT for safety and compliance. Adopting smarter buildings addresses the need for digitisation to quickly avoid potential liabilities.

The reality is that buildings can now be expected to report on themselves, affordably and reliably. Switching your processes to a digital system that's capable of automatic remote testing could reduce visits to your properties by 90 per cent over five years. Manual compliance is a seven-step process, whereas a digital process shrinks this to just a single step, the repair visit; everything else can be collected, organised, affirmed and alerted using IoT and cloud solutions.

Where do we start? The end, of course.

The challenge is to develop high-quality design and development processes for projects. These ensure that your organisation gets the most bang for its buck and avail yourself of technology that is future-compatible. We therefore encourage our partners to start at the end.

Compliance has become so embedded that its first principles are frequently forgotten. What are the teams trying to achieve? Beginning by outlining that end goal allows teams to work towards the best technology to automate and improve the process. Spending time with those teams to map their current processes and set those against the 'end' generates good project specifications and high-quality outcomes.

For example, an emergency lighting process aims to catch failing or defective units before an emergency and ensure

their timely repair. This is achieved by complying with regular tests across the entire stock of units, often done by manually triggering them and noting performance (data entry). A solution that provides adequate reassurance on compliance as well as fulfilling your process and legal obligations needs to map onto these actions.

Avoiding FMMs

We generally come across very similar sets of common problems among our customers – we call them FMMs, or frequently made mistakes, and there are usually four of them:

- The kid in a sweet shop – Having a little nibble from every solution on the market without a strategic goal in mind leads to poor results and indecision. It can hamstring progress for years.
- Not knowing thyself – IoT solutions are a toolkit. If you don't know your processes, you have little chance of selecting the right tools for the job.
- Square peg, round hole – it's always tempting to get a sensor to do a job it wasn't designed to do. This path rarely leads to the right outcomes.
- Lack of standards – it's tempting for housing providers to trust the experts but in many cases, they will need to pick and stick to standards. For their comms (LoRa, NBLoT, 2G and so on) or their platforms, it will be essential to set the standards for vendors and stick to them.

Getting your buildings to report on themselves will be a critical task in the coming years. You don't need to buy every sensor on the market to do this. There are a lot of sensors out there and, at best, you only need about five per cent of them. When you map your processes, overlay

When buildings report on themselves

Continued from previous page

your new IoT workflow(s) and assess it against the job to be done.

A major temptation is to reduce the investment but that risks only implementing a solution that does half the job. We frequently see that the Rol on projects isn't pro-rated; you either get the full Rol or you get very little of it. Doing half

the job probably still involves 90 per cent of the resources but you are the proud owner of the worst of both worlds!

You already have a huge compliance workload and it's only going to get bigger. A smart building can automatically test itself and inform you of non-compliance. It is possible to create your desired

automation, set up the conditions for it to succeed and then go and demand it from vendors.

Cian O'Flaherty is the CEO of Safecility.



The future of data in housing

Stephen Thorlby-Coy, Head of ICT, Yorkshire Housing

Data, when put to good use, can completely revolutionise the way a housing provider works. At Yorkshire Housing, we're capturing and using data in new ways to transform our organisation from one that is reactive to one that is proactive.

I started my career in the manufacturing sector where one of my first projects was in data. It revealed to me how powerful and useful data can be to transform a business and streamline operations. Fed up with producing shift reports manually, I implemented an automated reporting system which did away with the previous reporting method of capturing information on paper.

Automated data capture and reporting

The automated reports were a revelation to the company. Reports could be accessed by production managers at the start of their shift, providing them with all the information they needed regarding what had happened during the previous shift. While it was a fairly basic data capture and output system, it meant that decisions could be made much faster and reject rates and scrappage were reduced considerably. What had come about partly through my own laziness produced

something that the operational managers found fantastically useful.

Over the years, I found myself working with data in much more complex and beneficial ways, including managing analytics and online service development for charities, where the recognition of patterns in their call centre's call volume meant they could adapt their resources to manage the peaks and troughs of busyness. One charity I worked with used data to track grant applications which allowed colleagues to see in real time the status of applications and what this meant for their output spend.

However, my move into housing felt like a step back in time, back to my experiences in manufacturing.

At the time, the housing sector had not kept pace technologically with the rest of the world. Even the basic data capture and output of automated reporting, which had transformed the manufacturing business I'd worked for 20 years ago at the start of my career, hadn't been adopted.

My move to Yorkshire Housing presented a huge ambition; to elevate the organisation from one that is reactive (like most of the housing sector) to one that is proactive. The idea is to be able to fix problems before they occur and provide a seamless service for tenants and customers. Data is at the core of this aim.

Data governance

Starting from the ground up, the

foundations need to be laid first. For me, this means ensuring a clear organisation-wide data governance policy which is understood across every department and at every level.

This means not only ensuring that the terminology is fully understood, but also how we measure different processes, how we determine the ownership of those processes, and the end-to-end execution of them. In other words, not just doing a job but recording it, too.

A plumber, for example, needs to record their jobs, the time taken and any parts used. This information allows us to analyse spending and resource usage in much more detail and optimise our operations to cut costs and improve efficiency. Designing a data capture method that makes this process easy and efficient will help us to capture accurate data without impeding on day-to-day operations.

Expertise

We're also investing in expertise through the recruitment of a data architect, BI developers and analysts to build a team with a higher calibre of data expertise than I've ever worked with before. The team will work alongside other departments to make the data we capture accessible and allow our colleagues to be analysts as well.

Continued on next page

The future of data in housing

Continued from previous page

We're aiming to build a relationship across the organisation in which our analysts are working as business partners with our colleagues. This integration of data across the whole organisation opens up more possibilities for improving and automating processes, meaning that our agents can concentrate on adding value to the business and focus their attentions on providing services and extra support for those who need it.

Structured data and visual reporting

We're currently working with Orchard on improving our data warehousing with the aim of integrating Orchard Data with the other tools and systems we're already using as well as with our finance and accounts systems. Our aim is to bring data into a structured space so that we can consistently deliver the right reporting at the right time.

Working visually is often the best approach to ensure that data can be understood and analysed quickly, and we're introducing various software and tools which will allow us to create efficient and comprehensive reporting. We'll build the reporting to allow us to drill down to more in-depth data to allow colleagues at all levels, not only managers, to understand the context of what they're doing each day.

From reactive to predictive

The move from a reactive to predictive model requires a different sort of data. Using our current data capture techniques, we have lots of data that tells us what's already happened, but we need to get to the data that predicts a future event and prompts us to take action.

A classic example is smart home technology. Smart boilers, for instance, have the ability to transmit data back to tell us what's happening. If there's a blip or something unusual in the pattern of data we receive, it could be an indication that something is about to go wrong and we could use this to trigger a preventative maintenance appointment with the customer automatically so they're not left without heating or hot water.

Another example could be the frequency with which somebody is logging in to check their rent statements. An increased frequency could be an indication that something is happening that might be affecting them financially and that might be an early-warning signal that they're

about to go into arrears. Looking for these sorts of trends and triggers can help us to elevate our customer service to a new level. Wouldn't it be great if we could have a proactive call or conversation with that tenant to provide reassurance, prevent them from going into arrears and act before they find themselves in a real crisis?

The internet of things

Another avenue we're starting to look at is how to care for older people. As part of our work with an independent living scheme for older persons, we're trialling IoT devices that monitor movement in people's homes. These include detectors that can register if someone has walked past a monitor or a device that plugs into an electrical socket which can recognise when the kettle has been boiled.

Using these devices, it's possible to analyse patterns of behaviour and understand when people need support, telling us when we need to do targeted interventions and proactively make wellbeing calls to vulnerable people. The more we can implement these sorts of smart technology, the more we can start to understand how people live and fit our services around that to have the greatest impact.

Of course, this sort of technology has legal, privacy and ethical implications, and the more insight we gather into how people are living, the more how we handle data governance plays on my mind. Just because we can tell that every day a tenant gets up and puts the kettle on at 8am doesn't mean we should use that information.

Questions surrounding what the information is being used for and where freedoms and privacy are being infringed on is a huge grey area. With this in mind, we're establishing practices so that we're continually reviewing data capture methods and working out ways in which they can do good for our service users without crossing a line. For example, in our trials with IoT devices that track movement in independent living properties, the data produced is accessed by the tenants' relatives via an app, rather than by the housing provider, with full permission from the tenants themselves.

The future

At Yorkshire Housing, we still have a lot of work to do to lay the foundations and put

systems in place to ensure we're capturing the right data and structuring it in a way that produces useful and insightful reports.

We're working closely with Orchard to develop systems that meet the needs of the organisation and our tenants, including the development of automation within our operations, and how we manage and structure the data we gather with a data warehousing solution to consolidate our systems. The aim is to have everything closely integrated, with data flowing quickly and seamlessly between systems. Orchard's absolutely fantastic technical teams are metaphorically putting square pegs into round holes to make this happen.

With Orchard, we've also begun to take advantage of the increased processing capabilities that come from using the cloud, which puts us about 18 months away from adopting machine learning and AI technologies – something we're already talking to Microsoft about to work out how we do this. Orchard's roadmap is leading in the same direction, nicely complementing our own ambitions.

In terms of the housing sector as a whole, Yorkshire Housing is in the middle of the pack when it comes to the level of sophistication of our data capturing and usage. We're not at the back, but we're not at the front either.

Across the housing sector, we're seeing lots of little experiments and trials with smart homes and IoT devices, and we need to keep doing these to understand exactly what the data can tell us. Housing, however, is behind lots of other business sectors in the data revolution and it's time we embraced the possibilities and influenced the development of new data-based systems and innovations.

Stephen Thorlby-Coy is the head of ICT at Yorkshire Housing.

Huume launches 'housing needs' modules

Huume has unveiled a customisable suite of SaaS-based 'housing needs' modules, including choice-based lettings (CBL), housing register (HR) and homelessness (English, Scottish and Welsh versions).



Kevin Millard,
Product Manager,
Huume

Kevin Millard, product manager, Huume, said, "Many housing-specific systems no longer provide value to housing providers and local authorities so we've carried out meticulous research and assessments to ensure that our solutions exceed the housing needs of today. Huume transforms the way that 'housing needs' software is delivered in order to make

better use of housing teams' time and resources."

All Huume modules have been built using the same common framework and latest technologies which are delivered via a mobile responsive web application.

Millard said, "Having collaborated with housing officers to build the ideal

solution, our modules offer the best of both worlds; an external, purpose-built system that helps control and manage housing needs effortlessly, while providing the flexibility of an in-house system due to the modules' self-configuration functionality.

"When circumstances change, much like the pandemic we are experiencing today, we understand systems need to be easy to adapt. Huume allows the modification of form layouts and help text and the ability to create new fields and field labels. Once implemented, new data can be stored immediately."



Habinteg streamlines its finance with Orchard

Habinteg Housing has chosen Orchard's financial management system to streamline its accounts and purchasing workflows.

Habinteg was experiencing limitations with their previous Microsoft Dynamics system, in particular a P2P module to make its purchasing and invoicing processes more efficient. The Habinteg team also struggled to access training and documentation for their dated systems and found them cumbersome and difficult to use.

After comparing multiple options, including an upgrade of its existing system as well as some free and paid-for options, Habinteg selected Orchard as its new partner, selecting its financial management system based on OpenAccounts, eBIS and V1.

Andrew Crompton, director of finance and resources, Habinteg Housing, said, "Orchard appealed to us as a single solution to our finance workflow. We'd had immense problems before because we had two systems feeding into each other but the interfaces didn't work well, leading to registration errors and a huge amount of work for our finance team to tidy up. We also had trouble getting

training and documentation for the old system, plus upgrading to a newer version would have cost us more than a whole new system.

"We chose Orchard partly because of the usability and functionality, but also because of the relationship we'd built up with them. We had a few key priorities, mainly around functionality, training and documentation as well as the IT support to handle integration, and we were persuaded on all of these."

The integration process for Habinteg's new finance system coincided with the beginning of the lockdown so both Orchard and Habinteg's teams had to complete the setup and integration while working remotely.

Crompton said, "One of the main reasons for our move to Orchard was to shift to a system that was much more intuitive. I received my first invoices through eBIS yesterday and deliberately didn't use the guide, yet it was all pretty obvious what I was supposed to do and where everything was."

Like everyone else, Habinteg was forced to make significant changes to its working processes very quickly in order to enable its teams to work remotely during the lockdown.

Crompton said, "We only had one week to get our back-office staff working from home and set everybody up with the IT they needed for their roles, but everyone has taken to it really well."

While final integration of the Orchard system is still ongoing, Habinteg expects that eBIS will enable it to make flexible working more widespread even after the lockdown has been eased.

Crompton said, "For remote working, eBIS is a perfect tool. We'd had agile working on our agenda for a while and wanted to make it possible for staff to work remotely; the opportunities the current situation has presented will make it likely that we'll work far more flexibly in future."

Housing Technology's IT Finance & Procurement 2020 report – Download it today...

Housing Technology's 'IT Finance & Procurement 2020' report is now available to download from www.housing-technology.com/research.

Supported Aareon, the report is based on a comprehensive online survey of over 100 senior IT and business executives from UK housing providers responsible for IT finance and procurement. The data collection, analysis, commentary and design were carried out by Housing Technology's research, editorial and design teams.

Some of the findings from the report include:

- Facilitating and supporting housing providers' overall corporate and long-term strategies are, unsurprisingly, the two primary drivers for IT spending.
- Achieving value for money is the single most important factor in IT procurement.
- Housing providers are almost unanimous in finding it difficult to switch between systems from different IT suppliers.
- Around one-third of housing providers demand that any IT procurement project must have a direct link and/or correlation with the organisation's wider corporate plans.
- In terms of board-level representation for their IT function, only 13 per cent have direct board-level representation and 11 per cent from their CxO staff.
- The majority (74 per cent) of housing providers' IT teams hold their own budgets for spending, suggesting a large degree of autonomy.
- When it comes to capturing the requirements for procurement projects, business teams' wish-lists tend to take priority over everything else.
- Internal processes and merely getting quotes from several suppliers are the most common and frequently used choices of procurement processes.
- Housing providers' post-implementation reviews focus mainly on their projects' delivery within budget, achievement of their original objectives and ongoing SLAs.
- Annual IT spending represents 12 per cent of housing providers' overall annual expenditure.
- IT budgets (including FTEs) are expected to increase by just over 50 per cent over the next 12 months.



Finally, Housing Technology would like to thank the following people for their invaluable advice and support in the creation of the original survey structure and questions: Malcolm Perry (Accessible Properties), Chris Cliffe (CJC Procurement), Steve Dungworth (Golden Marzipan), Gary Pliskin (Islington & Shoreditch Housing), Steve Higginson (Monmouthshire Housing), Jayne Owen (North Wales Housing), Sue Smith (Nottingham City Homes), John Yates (Plymouth Community Homes), Harneek Chilemba (Sutton Living), Neil Jones (Trivallis), Doug Silverstone (Metropolitan Thames Valley Housing) and Debbie Chun (Wandle Housing).

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ClwydAlyn Housing selects Voicescape for rent collections

ClwydAlyn Housing in North Wales has chosen Voicescape to deliver its Collections software to help tenants pay their rents on time, reduce arrears and generally mitigate the effects of universal credit.

The housing provider is also using the Voicescape service, which combines tenant data with behavioural insights, to provide welfare contact in response to the pandemic.

Suzanne Mazzone, director of resident services, ClwydAlyn Housing, said, "Like many housing providers, we've made tenant wellbeing our main priority over the past few months. Voicescape has enabled us to streamline the ways in which we contact residents and has helped us to provide support as quickly as possible."





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(African Proverb)**

Earlier this year, Itica conducted its ‘Future of ICT’ survey but postponed its results until now to allow everyone to focus on dealing with the coronavirus.

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Together Housing's working from home with Mobysoft

Together Housing has just completed a successful end to its 2019/20 financial year by beating its annual arrears target and reducing evictions by 39 per cent, citing its use of Mobysoft's RentSense software as a key reason for its success.



Jackie Tagg, income manager, Together Housing, said, "We achieved and exceeded our year-end performance targets for 2019/20. This was our third year as a single organisation after amalgamating five housing providers.

During that time, we've improved our income management processes to promote better processes consistently across all of our operations, which we couldn't have done without RentSense.

"Evictions have been cut by 39 per cent this year; early interventions and the consistent approach enabled by RentSense has helped the team sustain more tenancies."

Before the coronavirus outbreak, many of Together Housing's staff worked from home up to three days each week so were able to hit the ground running at the start of the lockdown.

Tagg said, "With RentSense, it's easy for our income team to log on and work from home, plus I can manage the team remotely because I can see how they are performing. What RentSense has really helped enable since the switch to working from home full time is the

ability to divide the workload as each week progresses; particularly since the outbreak of coronavirus, we have seen a 30 per cent increase in our income officers' caseloads."

During the first week of lockdown, Together Housing's team was very reactive, answering incoming calls from customers. Together has a high percentage of self-payers and many were concerned about paying rent or asking for help regarding universal credit, even though most of the tenants calling in had never had any problems paying their rent in the past.

Tagg said, "We're well aware that workloads have grown and phone calls are taking longer but RentSense has helped us prioritise caseloads and support those tenants who need assistance, and now we can plan for business as usual."



Queens Cross Housing's zero evictions & reduced arrears with Mobysoft

Queens Cross Housing reduced its arrears by over £100,000 and carried out zero evictions in 2019/20 after using predictive analytics to stage early interventions, based on its use of Mobysoft RentSense software.

Elizabeth Hood, deputy director, Queens Cross Housing, said, "Alongside our use of RentSense, we have moved away from our standard letter-based approach to personal contact and having all of our housing officers working in a consistent manner.

"We've found that RentSense is very accurate; it monitors all of our rent accounts and alerts us at the very first stages of debt. It also highlights tenants who may be in credit but at risk of falling behind with their rent."

James Knox, income maximisation manager, Queens Cross Housing, said, "To make a difference, we felt that speaking to tenants and working with them would be more effective. It also meant that all tenants would receive the same consistent service – this approach is an important factor in getting our messages across, plus our tenants then know what to expect from us and all of our housing officers. Overall, RentSense enables early interventions and prioritises our cases for us; this enables our team to speak to the right tenants at the right time."

Since its widespread use of RentSense, Queens Cross Housing's tenants' arrears have fallen from £501,000 to £397,000 (a decrease from 2 per cent to 2.6 per cent) for 2019/20. During the same period, the housing provider had no evictions, despite ongoing welfare reforms.



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Residual land values & winning more bids

Phil Shelton, Chief Executive, Shelton Development Services



In economic terms, land is worth what someone will pay for it. As land is a limited resource, the person who can pay the most for a piece of land will win when competing against others. The process by which the land price is arrived at is a key difference between housing associations and private developers.

Private developers trade in land; housing associations are investors in property. This fundamental difference means that they have different criteria for assessing land value, which sometimes favours private developers and sometimes housing associations.

Historically, the more agile nature of the private developer has usually been to their advantage as there is more freedom placed with the land buyer, plus the assessment of the land value is typically more straightforward. Speed is not the only factor, though. Sellers want to maximise the sale value, so the housing association sometimes has an advantage here because the assessment method they use can lead to a higher land value than the private developer. Before we get into how such situations arise, let's take a look at the typical valuation process of a private developer.

First, the private developer will research their market thoroughly and choose a mix of properties that have the highest value in the most marketable configuration, while considering planning constraints. They spend a lot of time on this part of the process. The outcome is the **gross development value**, that is to say the total sales receipts from selling those properties.

The next stage is to work out how much it will cost to build the properties. These costs can be broadly categorised into works costs, technical fees, abnormals, marketing and so on. Every cost is analysed to make sure nothing is spent that doesn't need to be. In addition to the actual costs, the developer will make an allowance for an acceptable profit margin, usually around 20 per cent, varying according to the risk.

The **residual land value** is what's left over once you deduct the costs/profit margin from the gross development value. For a private developer, the maths is easy: sales income less expenditure equals residual land value. Once the properties are sold, they move on to the next development.



For a housing association, there is another key consideration; many of the properties will be rented and/or shared ownership. So, the future rental income (and possible staircasing) needs to be taken into account, as do grants from any funding bodies.

The way we value future incomes and costs is by using the concept of **net present value** (NPV). This is the process of assessing the future value of the net rent as if you had received all the income on day one. A housing association can, therefore, convert 30+ years of future net rental income into a single value in today's money. The NPV of the net rent can be combined with grant income and initial sales tranche (if shared ownership) to produce a proxy **gross development value** (GDV):

Gross Development Value = NPV of Net Rent + Grant + Initial Sales Tranche

From this point onwards, the maths is the same as for the private developer; costs are subtracted from GDV to establish the residual land value:

Residual Land Value = Gross Development Value – Build Costs – Professional Fees – Interest

So how do the differing approaches make some sites more suited to private development and some to social development?

The answer is that the sites with the greatest potential sales value will usually look better in the private model. It's the sites that would command lower house prices that will generally look better to the housing association because they can take into account the future rental stream, plus they may also receive grant for such sites. Luckily for the private developers, these future income streams are capped, so if there is sufficiently high value in outright sales, it will exceed the value of the future income.

The science on this is straightforward; the art is in determining the best possible mix of units for a site. Getting this mix right is the domain of the land buyer, not the architect, and is the key to maximising the residual land value, which will in turn give the housing association the best chance of a successful bid.

Phil Shelton is chief executive of Shelton Development Services.

Westward Housing's multi-channel payments with Capita Pay360

Capita has won a five-year contract with Westward Housing to deliver an integrated multi-channel payments solution in order to simplify its payment processes. The contract is valued at around £600,000 and follows an original evaluation process run by 3C Consultants.

The adoption of Capita Pay360 will give Westward Housing a range of PCI-compliant payment channels for its tenants, including an automated 24/7 payment line, scheduled payments and online payment links, as well as other online payment options such as Visa Checkout. The solution also

allows Westward Housing to support tenants wishing to pay by direct debit, at a Post Office or via PayPoint.

Westward Housing already uses Capita One's Open Housing software for rent accounting, repairs and asset management.



MOBILE WORKING

Thirteen cuts repairs by £500k with ROCC



The digital transformation of Thirteen Group's housing repairs service with ROCC has saved the housing provider over £500,000 and increased its 'first-time fixes' to more than 98 per cent of jobs.

Thirteen decided to implement a new repairs system after suffering from problems and outages with its existing gas servicing and repairs division, opting for a more bespoke approach to repairs and maintenance by taking repairs out of its main housing management system.

The housing provider established that it needed to automate the process of passing jobs to its operatives and scheduling appointments with tenants. This was achieved by integrating ROCC's housing repairs system with job scheduling and operative mobile working software.

Dave Ripley, executive director of customer services, Thirteen Group, said, "The transformation of our repairs process has been remarkable, with ROCC's support really enhancing our repairs system, helping us to improve even further."

Lesley Addison, senior data structure manager, Thirteen, added, "Delivering the project in an eight-month timescale was a fantastic achievement. Our digital transformation for repairs required collaborative working between our property services, customer services, finance and IT teams, significantly improving our offer to tenants. The 'go-live' was extremely smooth and operationally there was a real buzz."

ROCC completed the first phase of the project for responsive repairs, then focused on urgent day-to-day cyclical works in the second phase. The ROCC system enabled a unified approach to responsive and programmed demands, emergencies and appointments.

ROCC's housing repairs system delivers up-to-date information where it is needed to support operatives and customers, handling and checking jobs

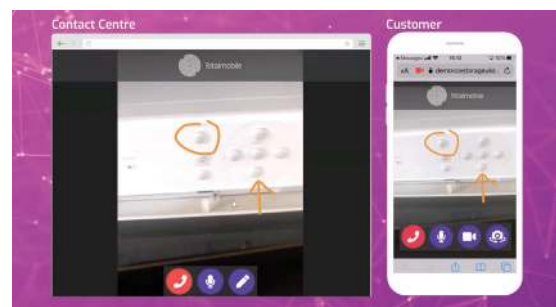
against customer requirements and enabling extra details to be added by the operatives and updated in real time.

The next area to be automated was Thirteen's out-of-hours repairs service which had previously been managed on spreadsheets. The housing provider also went live with electrical periodic testing by automating its cyclical five-year programme for more than 34,000 properties, another process which had previously been done manually on spreadsheets.

As well as unifying all of Thirteen's repairs systems, ROCC has also recently added a My Repairs tenant portal, enabling customers to self-report repairs.

Ripley said, "Expanding our systems with ROCC has really enabled us to deliver a one-stop shop for bringing in new services."

Totalmobile's remote diagnostics at Leicester City Council



Leicester City Council has deployed Remote Assistance from Totalmobile. The cloud-based video diagnostics system enables potential jobs to be remotely triaged and prioritised without the need to send an operative to residents' homes.

Configured and deployed in just four days, the Totalmobile software is being used in the council's housing repairs and maintenance department. And aside from minimising face-to-face contact during the pandemic, the council estimates that Remote Assistance will save around 9,000 pre-diagnostic visits per year and improve its 'first-time fix' rate by 10 per cent.

Kevin Wheeler, programme manager, Leicester City Council, said, "In light of the current challenges presented by coronavirus, it was essential that we invested in technology that enabled our teams to continue to operate while putting their safety and that of our tenants at the heart of any process.

"With the help of Totalmobile, we've been able to implement Remote Assistance very quickly to provide a support service via a shared video stream with the tenant. This allows us to work with them to assess

their requirements and help them safely carry out simple tasks such as boiler resets themselves. This means we can triage jobs better in order to prioritise emergency work and reduce the risk for both residents and our maintenance teams."

Totalmobile acquires Lone Worker Solutions and Software Enterprises

Totalmobile has bought Lone Worker Solutions and Software Enterprises (known as Global Rostering System) to extend the company's end-to-end suite of field service management software.

The lone worker technology provided by LWS is currently being used by over 70,000 field-based workers. LWS provides access to safety alerts, status updates and geospatial information to support staff who are operating in high-risk environments or undertaking sensitive activities.

Software Enterprises (GRS) enables organisations to build better staff rosters

so that the right staff with the appropriate skills are assigned to the correct locations and shifts. Its solutions are currently being used to roster over 100,000 emergency services field-workers in the UK.

LWS and GRS's existing systems will be rebranded and launched as Totalmobile 'Protect' for lone workers and 'Organise' for mobile rostering. Both products will be integrated into Totalmobile's suite of SaaS-based field service management products.

Mark Rogerson, chair, Totalmobile, said, "Following a transformational 2019, which saw Totalmobile deliver 70 per cent revenue and 295 per cent EBITDA growth, the acquisitions of Lone Worker Solutions and Global Rostering System creates further scale, offers entry into new markets and brings new, market-leading technology to enhance our existing suite of products."

Liverpool supports vulnerable citizens with Civica's Community Helper

Liverpool City Council has used a low-code technology platform from Civica to implement a new Community Helper tool to deliver emergency support to citizens who are self-isolating as a result of the coronavirus. The new system is free for all councils for six months.

Community Helper has automated all of the processes involved in the procurement and delivery of support such as food packages and prescriptions, making it easier to coordinate requests, remove errors and speed up the multi-agency delivery of key services to citizens.

Will Costello, head of digital services, Liverpool City Council, said, "Community Helper has had a dramatic impact in Liverpool and our delivery of crisis support to residents. It has

enabled us to streamline many of the business processes involved in delivering the service and is enabling better decision-making around predicting demand.

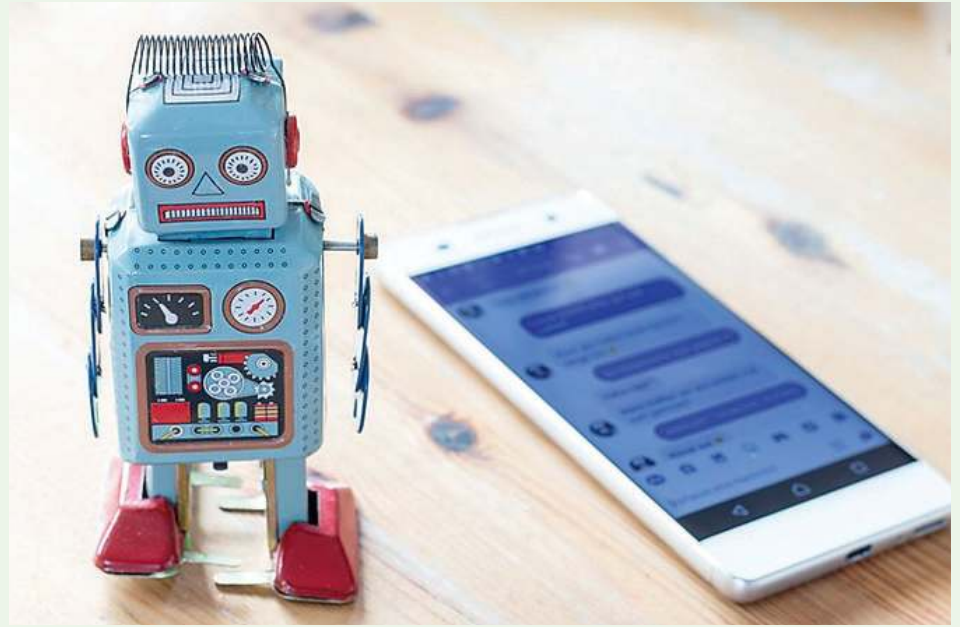
"The platform has not only provided us with a solution to the current situation but it also has the potential to continue to be relevant and help us support the voluntary sector in the future."

Based on Civica's existing iCasework cloud platform, Community Helper enables local councils and housing providers to coordinate support to their most vulnerable residents. It offers a way to manage requests securely, with smart routing to rapidly match and direct incoming demand to service providers, volunteers or other agencies. The digital platform is easy to use, quick to implement and secure, meaning it can be operational within hours.

How chatbots make customer services more human

Scott Summers, Co-Founder, Fuzzlab

I've worked in many sectors over the years, and none comprises a nicer bunch of people who take customer care as seriously as we do in social housing. Unfortunately, turning the sector's good intentions into good practice is often constrained by budgets. But it's not just about the money; technology is also an important element in providing great customer service.



Let's imagine that we could afford to have contact centres staffed by well-trained agents, 24 hours a day. That scenario would spread the volume of calls and things would be better than they are right now for both tenants and staff, but would that still be good enough?

Chatbots give humans more time

There are thousands of tenants across the UK who don't want to or can't use the telephone to get the support they need. The reasons range from being unable to get to the phone while at work to hearing difficulties to other conditions such as autism spectrum disorder. There are also people who just don't want to wait in a queue before they can speak to their landlord, especially if they're upset or would prefer to self-serve. It's equally true that not everyone will want to use new digital technologies such as portals and chatbots and prefer to use the phone.

Chatbots can make humans become better humans

It sounds paradoxical, but I propose that the use of chatbots will help customer services become more human. By training the bots to take care of the simple tasks and enable customers to

serve themselves, the contact centre team has more time to spend with the customers that want to speak and those with the more complex problems. Their training can be focused towards things such as active listening, emotional intelligence, developing trust and dealing with complaints, leaving the bots to deal with the low-hanging fruit. In short, the humans can develop the skills that make humans unique.

We still need the humans

From experience, I know that when I go to the supermarket and I have just a few items in my basket, then going through the self-service checkout will be faster than the traditional checkout. On the other hand, if I have a full trolley (and the odd bottle of wine) then I'll go to the old-school checkout because I know it will be easier and quicker. The machines are good at some things, but AI is still an emerging technology.

The ability to understand and deal with 100 per cent of the millions of ways a tenant might ask the thousands of housing-related question is still beyond even the most advanced chatbot. More importantly, there are certain things humans can do better than chatbots,

such as dealing with debt advice or homelessness.

Even more important than that is the fact that some people want and need human interaction. Good customer care demands it and so we need to provide it. Chatbots can enable this by reducing call volumes and giving their human colleagues in customer care teams the time they need to have meaningful conversations with customers.

The question isn't whether a chatbot can provide customer care as well as a human; it should be "what can a chatbot do to alleviate the pressure on the customer services team?".

Scott Summers is the co-founder of Fuzzlab.

All-change with technology for tenant relationships

Paul O'Reilly, ERP Solution Manager & Product Marketing Manager, Aareon UK



The other day I read a comment from a colleague about a medium-sized housing customer of ours who was considering at board level whether they would still need a physical office after the current pandemic. This surprised me at first; the housing sector has traditionally been absolutely office-based and also resistant to the idea that physical face-to-face contact should not be the de-facto method of dealing with customer relationships.

How quickly things seem to be changing

The retail sector is undergoing a similar shift in mindset. Worth some £395 billion in 2019, the sector has had its traditional high street bricks-and-mortar model shattered by the lockdown, even though footfall was decreasing anyway. In all sectors of business and commerce, having been plunged off a cliff by the pandemic and the lockdown, we are now breaking the surface and trying to see where we have landed.

Housing providers face a critical moment of change. Offices have been closed for over three months (at the time of writing), yet many organisations still have only the most basic of internet-based, self-service options available for their stakeholders and customers or, more worryingly, none at all. Staff who haven't been furloughed are working from home, often with unreliable connections to the office network and unsuitable tools to do their jobs. Service levels must be suffering out there.

If the sector is to survive, then housing providers need to adapt quickly to the reality of life as we emerge from this epidemic and its disruption. Customers' behaviours have changed and the more resilient retailers, for example, have already shifted their focus, resources and investment toward online services. Your tenants will expect the same from you and at a similar pace.

Most of us have experienced the ritual of queuing outside our local Tesco over the past few months. The epidemic is increasing not only their revenues, but also their store operating costs. Compare this with online-only retailer Ocado, with

over 400,000 fewer staff, which has seen its revenues increase by 40 per cent in its second quarter, and its share price increase by 87 per cent this year as it responds to the crisis using agility and technology.

This kind of change will filter through into more general customer expectations, and the housing sector needs to become more technology-enabled in order to meet them. But it's not just the need for better customer journeys, it's also the long-term resilience of the housing provider's business that's at stake here.

To state that the sector is ripe for embracing the potential of automation is something of an understatement. It has now become almost unacceptable to refuse to consider change.

The virtual office

The first point to consider is the fact that, after years of being used to working in an office environment, many workers no longer need or indeed wish to do so. There are advantages to this; having been forced to overcome the 'trust' issue, managers can now viably run certain teams remotely if technology allows it, and more field-based staff, such as visiting officers and repairs operatives, can become fully mobile, controlled by scheduling tools to maximise their productivity automatically. Other potential benefits of this include the ability to consider spreading a wider geographical net when recruiting talented staff if daily travel to the office is no longer a concern. Browser-based IT systems will also help considerably with flexibility where staff have become remote.

Open the doors 24/7

Customer interactions, on the other hand, can be automated and improved in many ways. Customers who have the necessary devices and the ability/inclination to transact online can be shifted to a self-service relationship by default. Dutch housing provider Qlinker has a fully online business model, where customers interact with the landlord via an app, with other communication channels only used in exceptional circumstances. A functional customer portal and optional smartphone app are critical tools in leveraging the savings that could be made in dealing with this group of customers.

In addition, 'smart chatbots' with voice interface can assist in this '24/7' service model. Coupled with sleek integration to back-office systems and the application of artificial intelligence, such a tool can get 'smarter' with each interaction and can 'learn' valuable lessons to become a more powerful assistant as time passes.

The group of customers who will be unable to manage an online relationship, due to either a lack of web devices or personal vulnerability, can then be focused on in a more traditional way by staff freed up from day-to-day phone answering.

Process automation – the real 'step change'

The spin-off advantages of the self-service route are that the doors are suddenly opened 24/7. But behind the scenes, the real step-change in housing providers' ability to become 'match fit' will be the quality and breadth of the integrations to their back-office ERP system and the



introduction of process automation and artificial intelligence.

Say, for example, that I report a repair request online. Value would be added for me as a customer if I could get an appointment slot there and then, using links to a scheduling tool in the back office that appear to me as information on the web portal page. It may also reduce the chances of a costly missed appointment for the contractor, thus increasing the accuracy and reliability of all scheduled appointments.

Artificial intelligence

Let's continue with our example of reporting a repair. In the background, predictive algorithms linked to the housing provider's ERP system data may highlight that other works could be carried out at the same time as my appointed repair, and automatically create a further job to be added to the appointed slot, saving significantly more costs for the housing provider and eliminating a potential future problem for the customer.

Indeed, I may not even have had to call to report the problem; my landlord may have proactively (and automatically) contacted me via email, a message in the portal or a push message in my app to tell me that a job has been raised to replace the component in question as it is judged likely to fail in the near future, and to improve cost efficiency, the job has been bundled with 100 others to form a contract that has the benefit of driving down volume costs for the landlord.

Internet of things

It used to be the case that, for housing staff, climbing a ladder to inspect a gutter fault was a risky occupation. Now, it seems, visiting any property for any purpose is a risky activity. By introducing technology that can interact with devices within properties, be they dwellings, garages to communal facilities (some of which may be several stories high),

housing providers can remotely monitor use, running hours, condition and faults of a diverse array of devices such as boilers, heat pumps, lift plant, door-entry systems, CCTV and so on. Some of these items may be in dwellings, while some may be in hard-to-access locations such as roofs. While individual faults could be captured to raise automated repair orders in the ERP system as they occur, further potential exists in the 'prediction' of maintenance by combining the internet of things with artificial intelligence to predict what needs to be fixed or replaced based on its actual use, not a surveyor's opinion or a benchmark date. So you only spend money on things that actually need money spending on them and don't have to carry out myriad manual surveys and associated data entry to achieve that goal.

The 'whole life' digital relationship

The housing sector needs to be more ambitious in its thinking. New markets continue to emerge in the property sector; as well as social and affordable rentals, there is also the growing student market and a strong private rented sector. While I appreciate that not every housing provider wants to diversify its activities, many are already doing so. And, because by doing this you are engaging with different types of consumer, once again the question of customers' expectations becomes central. A smooth, seamless digital relationship is the expectation, and if you don't provide it, somebody else will and they will take your business from you.

Onboarding should be a Rightmove- or Zoopla-style experience and must allow for choice – potential customers will not go with your offering unless they can access properties in the way they want to. The process should enable authentication using other available services as well as your own – we are all used to using Google or Facebook to authenticate ourselves as a quicker option than the pain of creating yet another profile and password.

Where they are relevant, credit checks could be performed online, and once the property is secured, a digital tenancy agreement is created and signed, and advance payment taken as part of the onboarding journey.

Digital entry systems can be automatically activated for the property once the tenancy is established. These, linked to the back-office systems via the internet of things, can then be managed and so lost keys and lock changes become a thing of the past.

We have already discussed the online tenancy, but further potential exists in targeting services to certain groups of tenants either from yourselves or selected partners.

Eventually, if the time to move on arrives, digital notice can be given by the tenant via the self-service platform and a date arranged for the digital entry system on the property to be deactivated. Any enabled devices in the property can be checked and read, avoiding the need to do detailed void inspections on every property. The customer, now in possession of a profile with your organisation, may return another day as a tenant and the process simply continues.

Conclusion

The pandemic and the lockdown have already created the 'new normal' that many people are talking about. This will only accelerate the need for change and built-in resilience for your business model and, as in all sectors of the economy, resisting the potential of technology-enabled change is no longer an acceptable strategy for the board of any registered provider – the choice is as stark as 'change or extinction'.

Paul O'Reilly is the ERP solution manager & product marketing manager at Aareon UK.

Developing truly tenant-centric apps

Gerry Kelly, CEO, Optus Homes



Change can be a scary word, and when big changes happen there are always casualties. But history also tells us that when change is driven by the government and accepted by the people, the casualties often tend to be those who refuse to accept the change or simply delay too long before adopting it. The fourth industrial revolution (i.e. mixing digital domains with offline reality) is well underway. No single item better symbolises this wave of change or is more ubiquitous than the mobile phone.

Many mid-sized companies have yet to grasp the nettle and some will find comfort in the refrain that, "our sector is different." The key elements driving the current wave of change have been here for some time, and coronavirus was simply the catalyst. Employers that had fought against remote working and BYOD schemes suddenly find themselves with no choice. And then they discovered that the efficiency benefits can be very significant.

At Optus Homes, we asked consumers and housing providers to describe what their ideal interaction tools and processes might look like. Not surprisingly, the feedback was a combination of what consumers are already familiar with and happy to use, together with what housing providers always felt would be (or should be) available.

Consumers don't want a web portal. And a responsive website masquerading as an app will always have functional limitations. Tenants want a powerful and intuitive app designed with their input,

rather than just something that makes life easier for their landlords. On the other hand, housing providers certainly want to keep their tenants happy but they also want integration to their legacy systems and need to see efficiencies and cost justification.

Optus Homes: What are the biggest frustrations in sourcing or building a mobile app for tenants?

Housing provider: "We don't want to be perceived as development guinea pigs for our IT service providers. In the past, we've been expected to pay for development or integration, only to see those features rolled-out later as standard to other clients in the following months."

Are your incumbent suppliers generally supportive of change and new third-party solutions?

"It doesn't come naturally to them; their instinctive reaction is often defensive. If we source a piece of new technology, we expect our existing service provider to be an integration enabler, not a blockage. Partnerships are the way forward."

What features would you like in a tenant app?

"The cost of phone calls and postage means that any app must have good rent and repairs features. These two features alone would justify our app costs. But we're in social housing, so it's really important that the app has a strong social or community support element, such as making it easy and safe to report ASB, request information or conduct surveys.

"Some housing providers might want a chatbot or payment solution as part of an app, but we already have some of those features so we would expect an app to integrate seamlessly and just enhance what we already have. And what about video calling? This is now something that tenants are definitely demanding."

And what about tenants – do you think

they will use an app?

"Think of some of the apps widely accepted by consumers today, such as Uber, Netflix and Deliveroo. They have set the bar for convenience and power, and our tenant solution must match that level; it's what tenants demand and will use."

The number of UK consumers using Open Banking doubled in 2019. Is this a feature you would like to see in a tenant app?

"If consumers want it, then yes. If a tenant is having rent issues, wouldn't it be great to give them the option to share details with the landlord while deciding how much to pay off in arrears each month?"

How can we make it easier for your tenants?

"Remember that some of our tenants are among the most vulnerable in society and we have an obligation to make their interactions with us as easy as possible for them. Some don't have English as a first language, so one way to help is by using technology to reduce the language barrier. I really like the idea of tenants selecting their own native language and being able to interact seamlessly with a chatbot or live chat agent."

And what about the commercial model – how much would you pay for the ideal app?

"Give us some options and be creative, starting perhaps with a free version to trial. We want visibility but we don't want to be tied into a 3-5 year contract. A simple model would ideally include maintenance and updates, and transparency on what's covered. A PaaS model might be interesting."

Housing Technology 2020

And so we spent a lot of time putting together the ideal tenants' app. A tenant- and client-centric solution rather than something built to conveniently fit an existing housing management system. Everything we've done is guided by what housing providers have asked us for, and

Developing truly tenant-centric apps

Continued from previous page

we chose the Housing Technology 2020 conference to unveil it.

This was our first time at Housing Technology's annual conference and we'd heard that it was the flagship technology event for the housing sector – we weren't disappointed. The combination of housing providers, IT suppliers and innovative start-ups at the conference allowed us to gather additional input and build a CI/CD roadmap (continuous improvement & continuous deployment). The timing of the conference in March (just before lockdown) allowed us to canvas inputs and then step back and implement them over the following months.

The Optus Homes tenant app obviously isn't the only solution available to housing providers but we think that it does represent a new class of 'change embracing' solutions from innovative suppliers. These independent suppliers often bring proven technology and commercial models from other industry

sectors and pride themselves on being customer-centric; they listen and they embrace the change.

Embrace the change

The government has made it clear that it sees the adoption of advanced technology as one of the key productivity drivers in a post-Brexit era. Cloud computing, 5G, machine learning and AI all tie back to a common theme; give consumers real convenience and industry sectors will reap the benefit from resulting efficiencies.

Were any of us really surprised by how quickly our grandparents adapted to using Zoom or WhatsApp during the lockdown? Or the spike in online shopping and app-based banking? Well, guess what? Even after lockdown has ended, grandparents will continue to use Zoom (albeit less frequently) and many of us will still want to work from home occasionally. Think of the time and cost saved, not to mention the frustration of trudging into the office five days a week or the benefits

to the environment. So, consumers gain convenience and businesses gain efficiencies.

Central to much of this change is the device in everyone's pocket – the mobile.

Mobiles are only going to get more powerful and more convenient, so why wouldn't housing providers embrace the change and offer tenants the same conveniences when managing arrears or reporting ASB? So-called 'challenger' banks offer purely app-based services for a reason – because they work. Consumers love the convenience and it's super-efficient for the banks. Similarly, there are examples of several housing providers in Europe now offering an app-only service – no web portal, no call centre, no letters, and no face-to-face meetings (other than video calls). It's time to embrace the change.

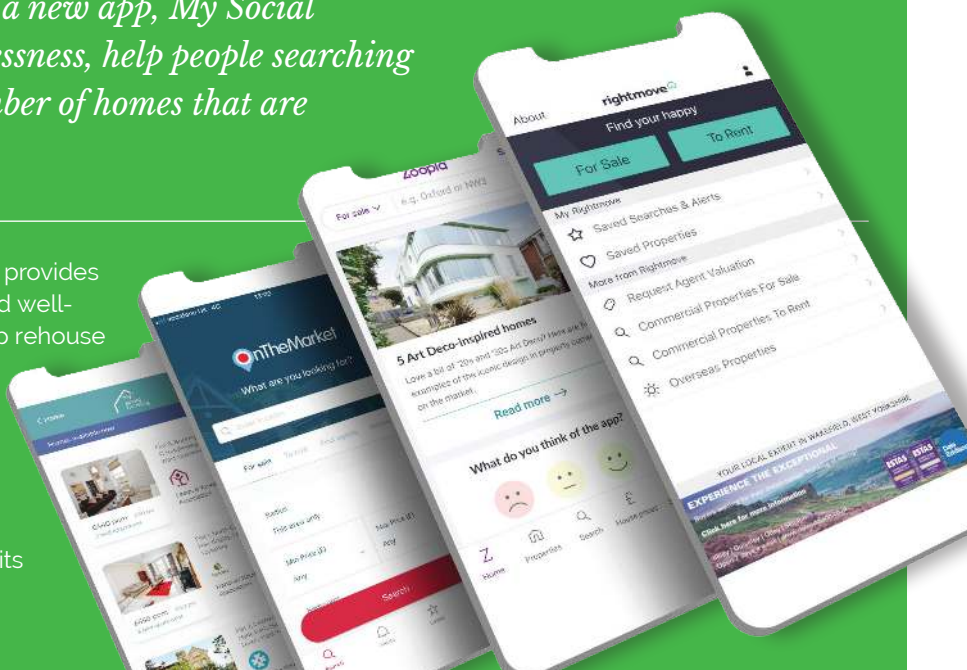
Gerry Kelly is the CEO of Optus Homes.

My Social Housing app to combat homelessness

Bridge Housing Solutions has created a new app, My Social Housing, that aims to mitigate homelessness, help people searching for social housing, and reduce the number of homes that are unnecessarily sitting empty.

My Social Housing scours over 1,500 websites and provides suitable referrals to families for affordable, safe and well-maintained accommodation. The app can also help rehouse those in housing need and assist local authorities in preventing and reducing the number of people living in temporary accommodation.

Bridge Housing has already helped over 400 families find permanent accommodation and is aiming to increase that figure significantly through its My Social Housing app.





The internet of things – Finally living up to the hype?

Roger Birkinshaw, Housing Director, Northgate Public Services

The internet of things (IoT) is on the cusp of going mainstream in the housing sector. The technology has caught up with the hype and the promise of the fourth industrial revolution bringing improvements to people's lives is becoming a reality, and it couldn't have come a moment too soon.

With increasingly ageing populations, climate change, health inequalities and anticipated rising deprivation levels in the wake of the coronavirus, it's more important than ever for the housing sector to harness the power of smart technologies to better support their tenants.

Some housing providers have already moved to the next level in exploring the benefits of IoT. One such organisation is Wolverhampton Homes, who began an IoT pilot in partnership with Northgate Public Services and Homelync in January 2020.

Seeing the bigger picture

The aim of the project was to ascertain whether the use of IoT-enabled devices could help Wolverhampton Homes deliver social and financial value for residents. The pilot would also give the housing provider a more holistic view of the condition of its properties and how they were being used along with the ability to proactively manage properties to minimise reactive repairs.

Eamonn McGirr, head of business intelligence, Wolverhampton Homes, said, "Some of the stock in our portfolio is quite old and we wanted to find out how IoT could give us a 'big picture view' of the condition of our properties."

"For example, we knew that damp and mould were a problem in some properties but we suspected that in around 50 per cent of cases, the problems could be reduced by people doing things differently in their homes. We wanted to use IoT to help us see how a change in tenants' behaviour might not only reduce their household costs but also have a positive impact on the condition of our stock."



Getting started

Six households volunteered to take part in the project and a range of devices were installed quickly and easily into the properties. These included temperature and humidity sensors, smoke and carbon-monoxide alarms and devices that monitor residents' energy consumption.

A sensor hub was also installed in each home, which began collating data immediately from the individual devices and displayed it in an easy-to-read dashboard accessible to the team involved in the project.

The information would help to determine the thermal efficiency of properties, identify heat loss and monitor dew points. Energy consumption could be measured and compared with the usage of other similar properties too, making it easier for tenants to take steps to reduce their bills.

The technology enabled the air quality of a property to be monitored so that appropriate health and safety advice could be provided to tenants. The same data was also valuable for helping Wolverhampton Homes to understand how ventilation

could affect the levels of damp and mould within individual properties.

A shared experience

Monthly meetings with the pilot residents provided an opportunity to share and discuss the findings of the data being collated from the IoT devices. For example, one participant recognised that keeping the bathroom ventilated when the shower was being used would help to prevent damp and mould within their property.

Another resident said, "It highlights where a little change can make a big difference. The data collected has come as a nice surprise, particularly because it shows I am efficiently managing my property with regard to energy consumption and humidity."

A powerful message

Wolverhampton Homes serves many residents at the sharp end of poverty. McGirr said, "It can be a challenge to encourage tenants to ventilate their homes, especially when cooking or after a shower, to avoid humidity levels rising. Heating is expensive and when residents are on a tight budget, it does not always

The internet of things – Finally living up to the hype?

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come naturally to open up a window because they're worried about wasting heat.

"Sharing the temperature data from the IoT devices with our residents helped to show that it's okay to open a window, reduce humidity and not suffer significant heat losses."

The change of behaviour due to the pilot resulted in a 20 per cent reduction in electricity usage across all participants and air quality improved by 11 per cent due to better ventilation of properties.

McGirr said, "The data helped to highlight that not properly ventilating a property increases the likelihood of damp and mould, which damages properties and is a hazard to health. One thing we have taken away from this is the power of using shared experiences to tackle problems."

Game changer for stock management

Wolverhampton Homes' IoT trial demonstrates the art of the possible in housing management and the benefits the technology could bring for the sector.

McGirr said, "When you take a holistic view of all the information across a wider range of properties, it's a game changer for stock management because you then have a broad collection of information to better plan refurbishment work."

"Knowing how a tenant is using the property and how that usage is affecting the condition, coupled with aspects such as the age and type of the property, help inform our maintenance decisions."

There are other advantages too. Without IoT, the only way a housing provider would know that a fire alarm isn't working is during a visit or when the alarm fails to work when needed. If IoT sensor data was captured then a compliance officer could pinpoint when an alarm was not working and schedule a maintenance visit to that property as well as other households in the area with similar devices.

Wolverhampton Homes is now considering a repeat of the pilot but on a larger scale to get a wider picture of the properties across its stock and plan targeted maintenance visits. Expanding the use

of IoT will help the housing provider to encourage more tenants to change their behaviour to minimise their utility bills and reduce issues such as damp and mould.

The development of IoT in recent years means the technology can now deliver on the promises of a decade ago. Housing providers can now drill down into the data being captured from sensors to identify issues and work with residents to drive positive changes in the way properties are managed. It's also possible to bring in key information such as deprivation data or live weather patterns to help predict emerging issues before they can have a negative impact on residents and their properties.

IoT has come a long way from the days of detecting when a boiler might fail. The housing sector is starting to embrace IoT technology and reap the benefits of providing better support for their tenants at the same time as helping them to run more energy-efficient, healthy homes.

Roger Birkinshaw is the housing director at Northgate Public Services.



INFRASTRUCTURE

The launch of D365ForHousing

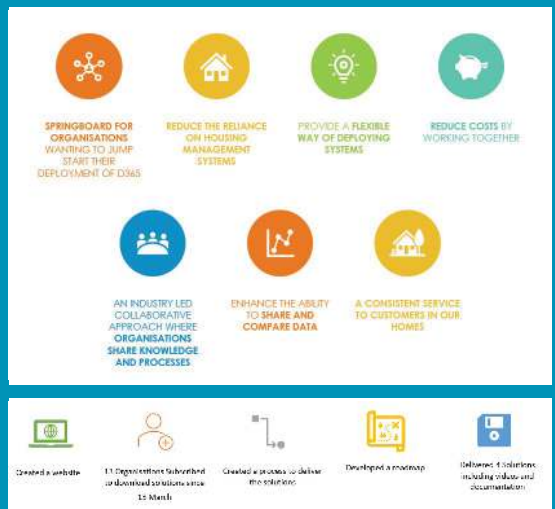
If you've implemented Microsoft Dynamics 365 or are considering doing so, then you might be interested in a new housing-specific initiative, D365ForHousing, that's been set up to offer housing providers small packages of functionality that can be placed straight into your Dynamics 365 system.

With the growing use of Dynamics 365 in our sector and with many housing providers using the platform to achieve similar objectives using similar processes, D365ForHousing hopes to use the power of collaboration to create a free library of Dynamics 365 functional 'blocks' that have been planned, created and tested by housing providers for use by the housing sector in general.

D365ForHousing has been set up by Chris Roberts after 20 years working in the housing sector; 10 years ago

he implemented CRM 4 at Optivo (previously AmicusHorizon) and caught the CRM bug.

As a loosely affiliated forum for sharing Dynamics 365 knowledge in housing, D365ForHousing has already had interest from around 20 leading housing providers, representing 360,000 properties and 750,000 tenants.





Thrive Homes' social hack to better security

John Stenton, Head of IT, Thrive Homes

As head of IT at Thrive Homes, John Stenton shares his thoughts on why he believes 'people power' is key to strengthening housing providers' security.

Let's call her Gladys. She's a lovely lady, one of the first in the office every morning. She is dedicated and hardworking, and she always has a smile and wants to help. However, Gladys does have some trepidations when it comes to technology.

Early one morning, Gladys walked over to me.

"Hi John, I think I have a dodgy email."

"Hmmm...", I thought, "I really should be working on this tender, but let's go and have a look."

We went back to her laptop where she showed me the email. I asked why she thought it was dodgy, knowing very well that Gladys had had the same security training as everyone else so she should know about phishing emails.

"Well," Gladys said, "The email address is odd and the English is terrible. They are also asking me to click on this link quickly because I've run out of email space, but you've told me before that that won't happen."

"No, you won't run out of space. So, is this a phishing email?"

"Yes, I think it is."

I thanked Gladys and asked her if she knew what she was supposed to do next. "Send an email to xxx, so that they can clean the email out of everyone's inbox," she said correctly.

This ten-minute exchange set me thinking; what had just happened? No idea – I'm in IT and we're a little thick skinned sometimes.

A couple of weeks later, Gladys does the same thing. Over she sidles, early in the morning.

"Hi Gladys, how can I help?"

"Well, I think I have another dodgy email."

"OK, let's have a look."

"You see? It's asking me for Amazon

vouchers for Elspeth (Thrive's CEO) but it isn't from her Thrive email address, so I think it's a fake!"

"You're right, Gladys, so do I. Well done, that's an easy scam to fall for. I'm proud of you for catching that one. So, what's the next step?"

A beaming Gladys then proceeded to tell me about sending the email onto our managed services provider so that they could check it and purge it from everyone else's inboxes, just in case anyone else had also received the same thing.

"That's the perfect response, Gladys. Exactly right, you're an expert – you don't need me to help you with checking dodgy emails anymore!"

I may be thick skinned, but even I could feel something odd going on. Still, back to our P2P systems and pay off some invoices...

Let's now fast forward a few more weeks. I'm walking down the office (past Gladys) and what do I hear? Gladys is explaining to someone about how a particular email is a fake and asking them, "What do you need to do next?"

I smiled at how the tables had turned, then it occurred to me – what had just happened? Gladys, a self-confessed technophobe, was giving out cyber-security advice to her team and peers – what on earth was going on?

OK folks, this is it – the social hack.

We are **all users**, and we are all the weakest link in cyber security. In February 2020, the NCSC Weekly Threat Report claimed that 90 per cent of breaches are caused by human error.

This isn't about end-user training; we all do that. This is about getting users to be more aware and pay attention 'in the moment'.

Thrive's end-users now seem to be more 'present'; they take care to look at the web links and emails – they don't click on ransomware, thank goodness!

How did this happen?

Giving them some of my personal attention, by showing them what they already know is right and wrong, is the key to reinforcing the training.

I am sure you could get similar results; your end-users know that your time is precious (because you don't have time to share it, usually) so when you do, they know it's important and they feel valued. I think of this time as an investment in order to reduce the number of times I have to stand in front of our board and explain a data breach or at least a near miss.

I can hear you already; you have too many users to do this. I know, I do too. Everyone in Thrive knows me, but I can't spend time with all of them so choose your 'targets'.

My first targets after Gladys were the 'super users'. They're already IT savvy, so get them on side, highlight the importance of their roles, share some enthusiasm with them and they will have more to share with their teams.

When the pandemic and the lockdown diminish, try to get an hour in their team meetings (it's the equivalent of a week sitting with individual end-users). Make it fun and make it so that you're interacting with them and concerned. They're used to ignoring boring emails, yet face-to-face interaction from a senior manager, that's memorable, especially if it's fun.

You don't have to do this on your own. Share the load with other leaders across the business. The super users are a start but bringing other managers on board will amplify the ripple effect.

Thrive Homes' social hack to better security

Continued from previous page

Use what influence you have with the rest of your leadership team. Show them the way and remind them; a data breach is managed by you and your peers, not the person that caused it. You have to explain it to the board and the ICO, so use that as a lever to get some time from the leaders in

your organisation to help get your users 'in the moment'.

That's my security hack – use the 'power of the people'. Cyber criminals can destroy your business and your colleagues can stop them, but only if they understand the importance

(that your time demonstrates) and are empowered by you to do the right thing.

John Stenton is the head of IT at Thrive Homes.

Delivering transformation during lockdown

Andrew Dale, Director of IT, Housing Plus Group



Housing Plus Group has been transforming its technology infrastructure to improve accessibility to services while increasing application performance and availability. The changes were necessary to overcome technology limitations that historically meant HPG's IT service couldn't effectively support the wider business in the delivery of its objectives and services.

We initiated managed service agreements from October 2019 with Incline-IT (infrastructure) and Littlefish (support services) to deliver day-to-day services and transformational change. Since then, our access to the right skills at the right time has increased significantly and has resulted in a rapid pace of change that now means IT can be an enabler of change while having high levels of accessibility to services. The ongoing changes were planned from October 2019 to June 2020 and have continued to be delivered despite the lockdown and the need for everyone involved to work from home.

How has this been possible? By having an IT setup that was designed for remote working combined with support that could effectively manage remote workers.

The right foundations

Our approach to change was to make sure the foundations were right and then build from there. The foundations included:

- A 24/7 service desk to provide support to people as and when they needed it. This has been invaluable, allowing us to cater for double our normal volume of support calls at the start of the lockdown.
- Standard device builds for laptops and mobiles using Autopilot/Intune so that devices can be issued quickly with default configurations.

- SDWAN networks based on Meraki- and Amazon Web Services hosting that allow sites and remote workers to connect in the same way, which has given flexibility to working practices and a single method of network management.
- Public cloud hosting, with servers and applications running from Amazon Web Services. Having enabled the design of the infrastructure before the lockdown, we have continued to move servers and applications to AWS in a phased way, with no service disruption to the business.
- Public cloud 'desktop as a service' by moving to Amazon Workspaces from a legacy Citrix setup; this has made highly-available desktop services accessible to remote workers who need to use our housing management system and other business applications.
- Increased use of Microsoft Office365, combined with a ramp-up in our use of Teams for collaboration and communication.

Rapid change

The rate of change has been speedy; for example, we have moved from on-premise servers and Citrix remote desktops to AWS cloud hosting and Workspaces remote desktops within six months of starting the project. This has been done despite our dispersed working patterns and the enforced difficulties that

come with working remotely from each other and from the people who actually consume the IT services. When we started, we wondered if we really could achieve a cloud-first approach in the timescales defined, but we've done it with the minimal of fuss; what this has shown is that no matter what application you are running, with proper planning and testing, it can be run from the public cloud.

We are now reaping the benefits of our major changes in IT services and are concentrating on the value-adding elements of IT while also now being in a position to start to reduce our ongoing IT costs. The key points that we have learned are that enabling change during a time of major disruption requires high levels of engagement and a conviction in seeing the changes through to live operations.

A standard toolkit for change

Overall, what has been done is now enabling us to start work on the integration of our post-merger business units, using a standard template for design and delivery. Our advice is that when implementing change, consider what is good and what is bad and then build a standard toolkit that enables repeatable actions to be carried out quickly and with confidence.

Andrew Dale is the director of IT at Housing Plus Group.

Adra's 'medium-code' business applications

(L-R) Geraint Vernon, Business Systems Support Manager, & Alun Hughes, Business Systems Developer, Adra



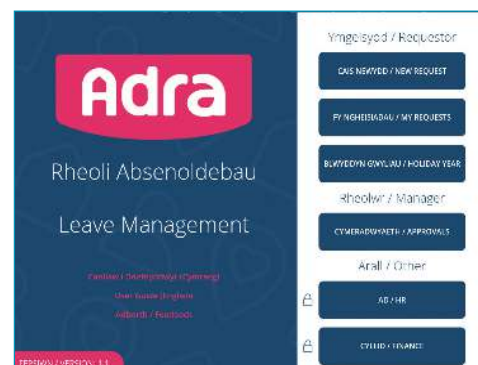
At the Housing Technology 2020 conference in March (just before the lockdown began), Adra's Alun Hughes and Geraint Vernon described their journey to a successful in-house business application development, in the belief that sharing their experience would be of benefit to other housing providers.

HR and finance processes, and we were keen to offer these to staff digitally through a self-service portal. While we wanted to be self-sufficient in developing our own solution, we didn't want to become bogged down as a software house. Low-code development was therefore very attractive to us in terms of the ratio of resource investment vs. time to develop.

To minimise costs, we decided that we would source a bolt-on business process management (BPM) solution for SharePoint Online (SPO), a technology we had little experience of at the time. By mid-2018, we had identified many potential candidates, installed demo versions and visited current users. FlowForma, Nintex and Microsoft Power Platform were the frontrunners, with FlowForma becoming our final choice due to the excellent relationship we quickly established with them, and the fact that it offered the best value for money and most closely matched our requirements at that time. It's worth noting that back then, the emerging Power Platform was not the polished and powerful product it is today.

Towards the end of 2018, we had identified our leave of absence (eight separate paper processes) and expense request processes as the top candidates for digitisation using FlowForma and the SPO development environment. We have a background in agile development methodologies and lean business transformations so we quickly agreed on new, more efficient business processes with all stakeholders. Each of the new process requirements was collected and shared for sign-off as agile user-stories.

We explained to the business that we would develop in 'sprints', with the initial goal being a minimum viable product (MVP) tested and released (i.e. an application with the minimum functionality required to fulfil the new business process). From experience, it is invaluable to engage with the stakeholders and end-users continually during the development process and to collect their thoughts



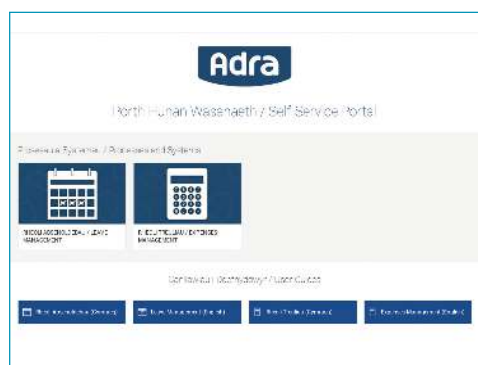
(and criticisms!) into the product backlog. The MVP would be followed by regular iterative updates, where product backlog items would be implemented (with these being a mixture of already planned improvements, new user requirements and bugfixes).

By the way, don't develop anything that doesn't improve process efficiency and push back on any scope creep; if you don't, you will find yourself developing the software equivalent of the Death Star (and we all know what happened to that).



By spring 2019, and several sprints later, we had both a leave of absence and expenses claim with approval processes live for staff at Adra. These were made available to staff via a SPO modern site experience and the entire process was presented bilingually (Welsh and English).

Developing within FlowForma was easy and efficient. The product was clean and logical for users, with the user experience being mostly pre-set within the forms. As



Adra is a social housing provider in North Wales. We were previously known as Cartrefi Cymunedol Gwynedd until a rebranding in October 2019. Our company looks after 6,300 homes and provides services to over 14,000 local customers.

In 2017, having just completed a staff 'agile working' transformation project which included a massive move away from paper to electronic forms, we embarked on several ambitious IT projects including replacing our housing and repairs management systems with a new core business system (ActiveH by MIS). We also began rolling out Office365 using a Microsoft Teams-first approach with TSG.

We were aware that many corporate paper-based processes still existed and would not be digitised within the core business system implementation. These were mainly centred around corporate

Continued from previous page

We agreed that we didn't want to just develop like-for-like functionality in these apps, but that we would release greatly improved versions with many enhancements from their corresponding product backlogs and from what was now possible within this new development environment. Autumn 2019 saw us plan and start our new development sprints

The Power App SQL Connector does all the heavy lifting for you (you don't have to write a single SQL query to interface with it). It's worth noting that in October 2019, our decision to move to the Power Platform was hit hard when Microsoft decided to make this Power Platform SQL connector a premium item (with additional licensing costs). We did re-consider our options again as it wasn't the 'no brainer' decision it had been a few weeks earlier. Microsoft agreed to an extension of the connector within our standard licensing costs and we therefore stuck to our decision. Was it Voltaire or Spiderman's Uncle Ben who once said, "With great power comes great responsibility?" A modern IT version of such a statement would conclude that, "With great power comes additional costs."

For all of you out there considering such a move, do it, just don't expect plain sailing, but when in IT do we ever get a calm sea?

Geraint Vernon is a business systems support manager and Alun Hughes is a business systems developer at Adra.



housing-technology.com/event/resilient-innovation-2020/



Pragmatic data governance and protection

Neil Topping Co-founder, ParaDPO



ParaDPO was one of the 'IT accelerators' at the Housing Technology 2020 conference earlier this year; this article is an abridged version of Neil Topping's presentation at the conference.

What we have been finding is that data protection officers (DPOs) are now leaving their posts because it has been over two years since GDPR came into effect and GDPR/DPA 2018 is now definitely business as usual. The fanfare and board attentions have shifted to areas such as the Hackitt Report.

However, what are the GDPR-related risks at the moment?

1. Housing providers are still using spreadsheets to record their GDPR/DPA 2018 compliance;
2. Data sharing agreements are expending in complexity and quantity;
3. DPOs are leaving;
4. Employees are still under-reporting breaches;
5. Let's not forget about Covid-19.

Risk one: Housing providers are still using spreadsheets

Let's take a look at what data protection information an organisation needs to record:

1. **Records of processing** – This needs to include consent management (when consent was given, the terms of the consent and when it expires), the lawful basis for processing all personal data as well as all of the repositories where the personal data is stored and processed.
2. **Personal data breaches** – There are three types of personal data breach: confidentiality; integrity; and availability. It's important that these are promptly captured.
3. **Data subject rights** – The organisation needs to show that it is compliant with the timescales of the different rights being exercised. This requires auditability and evidence that timescales have been met or extensions duly sought.
4. **Data and document retention periods** – All data should have its provenance (e.g. where it is from) and when it should be reviewed or deleted identified. Ideally, this should be either automated within a

central database or in the system itself. If you can't do this then you could create reports or store these in Excel, but that's not ideal because there are lots of extra steps involved.

Moreover, if this is all being kept in spreadsheets then it is still retaining all of the issues of spreadsheets, such as overwriting data, lack of auditability, corrupt files and siloed locations.

Risk two: Data sharing agreements are expanding in complexity and quantity

Everyone and their dog seem to want to setup a data sharing agreement. It's great that this has become a 'go-to' action for company secretaries and governance teams, but these are not always required where a suitable binding rule is in place (e.g. a contract).

The challenges here are that every organisation has tens or even hundreds of different agreements. These all have slightly different clauses and also specific forms or mechanisms for making data sharing requests. In practice, where there is an operationally-focused customer service centre where every second counts, this just isn't viable.

The key point here is to enable teams to incorporate data protection requirements into their service delivery processes with minimal disruption and customer impact.

Risk three: DPOs are leaving...

It has been over two years since GDPR/DPA 2018 and many DPOs are now moving on. This leaves a void, especially if the DPO has been left to their own devices to manage all of the evidence of compliance.

It is difficult to find good DPOs so there will be a gap before your organisation is back up to full effectiveness in terms of data protection and compliance.

Risk four: Employees are still under-reporting breaches

There is always a risk of an unknown

breach going under the radar. This risk can't be fully eliminated, but it can be mitigated by having a programme of training and awareness. Data governance should be incorporated so that data owners and data stewards understand their roles and responsibilities and that those roles and responsibilities are embedded throughout the organisation.

Risk five: Data Protection & Covid-19

ParaDPO has received many ad-hoc requests about the pandemic and inter-organisational data sharing. Health information is a 'special category data' so it requires additional consideration in terms of processing, storage and security.

However, ParaDPO has been developing Myriad, our solution to the above problems. Our first partnership with Look Ahead Care and Support is progressing well with an 'alpha' version of Myriad already deployed.

Look Ahead identified a need to improve its GDPR processing including DPIAs and SARs. We are currently loading the data into Myriad and will be tailoring the workflow engine for Look Ahead in the coming weeks. Where Look Ahead previously had spreadsheets, Myriad will replace them and put the data into a structured and auditable system.



ParaDPO has also provided 'DPO-as-a-service' for Look Ahead while it was recruiting a new DPO. This has meant that ParaDPO managed to offset risk three (above) during the search and on-boarding process; Look Ahead will continue to use DPOaaS on demand as it recognises the value of the expertise provided.

Neil Topping is the co-founder of ParaDPO.



Getting web-ready for future crises

Alex Jackson, Head of Govpress, DXW

All organisations, especially those in the housing sector, need to be nimble in times of crisis. That's never been more apparent than since the start of this year. When people want to engage with housing services, their first port of call is usually the website. It's the same for other critical services too. When users visit government or NHS websites, spending time admiring fancy graphics is usually pretty low on their list of priorities; they need a site that's easy to navigate and allows them to quickly access the information they need. Housing providers are no exception to that need, and it's more important than ever to get it right.

With this in mind, the first thing organisations need to think about is the structure and presentation of their homepage, which needs to feature the most up-to-date and popular content. The website itself needs to be robust and well-supported to withstand a crisis and users need to be able to follow a clear roadmap that helps them locate information. Nothing good ever comes from being underprepared. So let's run through four of the most important things housing providers need to consider when designing websites, and how they can cope in times of crisis when traffic is sure to surge.

Infrastructure

Most housing providers' websites act as hubs of information, allowing tenants and other interested parties to find essential advice, news and data, and to access support. The last thing you want is for the site to be slow or unresponsive, even during 'normal' times. The platform you use needs to provide a high degree of resilience, scalability and security to cope with heavy demands and unexpected peaks. This means selecting a hosting provider with a track record of enabling sites to continue to run under extreme pressure.

Website crashes and slow loading pages create a sense of insecurity among users, so it's much better to have a website that

fails rarely and gracefully than one that looks pretty.

Support

Not all hosting is created equal. If things go wrong, you want the reassurance that your hosting provider has sound plans to handle any outages. It's important that housing providers choose partners that offer monitoring and alerting services, as well as out-of-hours contacts and 24/7 emergency support. Without a holistic service, you risk leaving yourself exposed, with gaps in monitoring which could result in service users' needs being left unmet.

There's an increasing climate of collaboration and fully accessible support when it comes to hosting providers, so don't settle for one which neglects to provide you with full technical support. Aim to work with teams that have expertise in crises and building resilience.

Content design

Content design is fundamental to the effectiveness of all public-facing websites.

The key here is not to overcomplicate the homepage or website structure. The more pages you have, the more complicated your website will be. If you look at the NHS England or Gov.uk website right now, you are likely to see a simplified homepage design and large banners in bold colours, knowing that people will be seeking immediate and vital information on the coronavirus.

These kinds of changes can be made retrospectively but, in an ideal world, you should always design your website as if you are going to be using it during a disaster.

And, although it seems pretty obvious, it's important to remember that sites also need to be optimised for mobile users. People expect to be able to access high-quality information and services anytime, anywhere on any device, especially in times of crisis.

Content publishing models

When you need to get information onto your site quickly, the last thing you want to be doing is creating a new process. The current need for timely information has put the responsiveness of organisations under the microscope and highlighted how slow some have been to get off the mark. Changes in government policy and narrative are happening all the time, sometimes from hour to hour, and keeping up with that is vital.

You might be confident that your website is resilient and robust enough to deal with large traffic spikes, but if the information it contains isn't up to date, you will inevitably run into problems.

So it's also important that housing providers have well-established and efficient content approval processes; assigning team members according to their skills and expertise makes it much easier to get vital information to users.

Final thoughts

Whether you experience a small spike in traffic or a large surge, it's important to know that you can cope and that you are fully supported during times that will challenge your website's capabilities. Today, the global and public health situation is constantly changing. You never know which government announcement, or change in circumstances, could apply to your organisation or the people you support.

Beyond the pandemic, there aren't always warning signs that a surge in traffic is coming. The best defence is to run your website the right way all the time, and make sure it's updated, secure, optimised and backed up regularly, then you'll be prepared when the unexpected does happen.

Alex Jackson is the head of govpress at DXW.

Effective IT risk management in housing

David Edge, Solutions Manager, Central Network & Technologies



For many people, the first things that come to mind when thinking about IT risk are cyber security, disaster recovery and GDPR. However, there are many more areas to consider to effectively predict and mitigate issues relating to technology and data security. David Edge, solutions manager at Central Networks and Technologies, shares his thoughts on how to effectively manage IT risk in the housing sector.

ISO27001 is the most well-known international standard for managing information. Many people wrongly believe that it is a rather bureaucratic IT security standard; in fact, it's a risk-based approach to managing your information assets, most of which happen to be technology-based.

Housing providers hold and share vast amounts of personal data. This can include anything from birth information to health conditions. Tenants' data is sometimes shared with other organisations and they must protect their privacy in all cases. Policies and procedures must be in place for data storing and sharing, but in a sector that has limited funds and is often under-resourced, some organisations may feel that adhering to standards such as ISO27001 is too difficult or too expensive. However, many of its principles can be adapted to allow for effective IT risk management.

As the standard is risk-based and requires the development of a risk treatment plan, housing providers can take a broad, commercially-focused view on what they need to do to mitigate IT risk.

ISO27001 encourages organisations to think beyond typical IT threats such as viruses, account hacking and fraudulent payment requests or the loss of personal data. Instead, it focuses on the risk of compromising the confidentiality, integrity and availability of an organisation's information assets.

It also prompts the consideration of a range of assets, and this is the key to IT risk management. IT outages, disruptions and data loss may not come from obvious places so organisations need to be sure

that they have covered every aspect of their organisation and possible risks. Let's look at the core information assets to consider.

People

One of the most significant risks relating to people is IT key person risk. For smaller housing providers with relatively few staff and perhaps older legacy business applications, there are often critical individuals who are the only ones who know how a system works and can be supported, and even larger housing providers can inadvertently fall into this trap. Considering people is also about how they behave, what processes they follow and how you educate them to help reduce IT risk.

Premises

No matter how much you spend on cyber security, a weak point in any IT system is the physical access to buildings, office space and data centres. These assets also need protecting from fire, flood, power outages and other disasters.

Third parties

Most organisations rely on specialists for contributing to their IT capabilities. Some may only supply support, some might host systems or others may process personal data. An organisation must understand who their IT suppliers are, what they do and what contractual protection you have with them.

Hardware

Housing providers need to consider all types of hardware, from mobiles and laptops to servers and storage. Identify what threats there are to any hardware and whether you are effectively mitigating

those threats. This will vary from theft (a high risk for mobile devices) to catastrophic failure (a high risk for server equipment).

Data

Possibly the most important part of IT risk is data; where it is stored, how it is structured, processed and transmitted. An assessment of the threats and vulnerabilities associated with your data should form a significant part of your IT risk register.

Intellectual property

Although this is an area that is often overlooked, organisations must protect their identity, processes and their software appropriately.

How do I know if I have considered all IT risks?

This is almost impossible to guarantee but there are ways to help with assessing your IT risks. When you construct your initial risk register, make sure you have brainstormed all of your asset types with your team. You should then consider any threats they face and your vulnerability to those threats. Try to find a list of standard threats and vulnerabilities online – organisations such as Advisera offer ideas to help assure you that you have considered everything.

Housing providers and their environments change, and so do their risk profiles. It's essential to continuously review your risks and refine them in light of changes to your organisation. Reflect on recent incidents that might have highlighted new risks that you may not have previously considered.

Reducing IT risk

The main approaches needed by organisations when looking at mitigating IT

Effective IT risk management in housing

Continued from previous page

risks are prioritisation, risk acceptance and thinking outside the box. You can't reduce all risks at once, so developing a prioritised roadmap allows you to reduce the biggest ones immediately and helps make risk reduction commercially feasible.

It's also important to accept that you simply can't completely mitigate all your risks. There will always be some risk to accept. Many organisations choose to insure their IT. For example, cyber cover offers you insurance against the cost of recovering from a cyber incident. Once you have identified and graded your risks, your team needs to agree on acceptable risk levels; you can then aim to reduce them to that level or even just monitor risks that already fall below that level.

ISO recommends several options for reducing risk. They include:

- Technology controls such as end-user device protection, encryption, firewalls, patching and identity management.
- Physical controls such as ID card and building passes, CCTV, fire suppression and server room controls.
- Employee education curriculums and delivery tools.
- IT policies that are clearly communicated and audited, together with a range of procedures which ensure that the policies are adhered to.
- Supplier management and due diligence controls which ensure that your partners work to your standards.
- Privacy by design and project risk. Make sure that any of your projects, organisational changes or IT initiatives consider information security and risks.

With such high stakes, housing providers must manage risk effectively. It is

important that they continuously review their IT risks and refine them in light of any changes.

Even though some organisations might feel that adhering to ISO27001 is too difficult or expensive, many of its principles can be adapted for effective IT risk management. Housing providers can do this by being agile in their approach, prioritising risks, accepting some risks and developing a risk treatment plan to tackle any potential issues.

David Edge is a solutions manager at Central Network & Technologies.

Lockdown's legacy

How the pandemic could change the face of senior executive teams and what it means for IT professionals in housing.

Dave Mason, Technical Director, Incline IT



Following the announcement of the lockdown, the sound of sighs emanating from IT offices was almost audible as IT teams looked ahead with trepidation to the onslaught of questions, endless to-do lists and long working hours in the weeks to come.

I can imagine it vividly because I've been in similar(ish) situations in the past, albeit on a smaller scale when dealing with, for example, IT outages. It's during times like these that IT teams go from working relatively undisturbed by their executive teams, to being put under the spotlight and feeling the immense pressure that goes with it.

As IT professionals, we know how important our function is. That it goes beyond functional disaster recovery and the failover of servers. Thanks to the laws of risk and reward, as IT becomes all-pervasive within business operations and brings greater rewards, the risk it carries naturally increases. It is therefore

fundamental to risk management, business continuity and organisational performance.

Underappreciated IT

Within businesses operating across many sectors, the value of IT is largely underappreciated, despite technology and digital strategies being vital to their success. Or to be more specific, it is undervalued until something goes wrong. And having worked in this field for some years, I know that this is a bugbear for people working in IT.

This paradoxical situation exists largely because over decades of technological advance, the model of executive teams

has remained largely unchanged. Very few have incorporated CTOs and therefore IT teams usually find themselves under the directorship of the finance director or COO. Also, for the most part, IT departments are yet to master the art of talking the language of the senior executive team, which differs hugely from our own vernacular. As such, we are often caught in a vicious cycle and find ourselves with limited opportunities to steer or influence strategy in the ways we would like.

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Lockdown's legacy

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Pre-lockdown business continuity plans

I have no doubt that pretty much all organisations already had some form of business continuity plan before lockdown. And as business continuity plans are essentially the ultimate risk management tool, it makes sense to me that they are put together in genuine collaboration with the IT department.

However with the lack of IT representation at executive level, this seldom seems to happen. I would hazard that many continuity plans were created with limited business consultation with the IT department and little testing of the IT systems under complete disaster-style scenarios.

Following the baptism of fire that was lockdown and the scurry to implement full-scale remote working, I'm pretty certain that most continuity plans are currently being revisited and updated, with organisations looking at what worked and more to the point, where the plan was lacking.

Reconsider and review

But as well as updating the plans, I wonder how many have reviewed their approach to formulating those plans in the first place?

Lockdown did two significant things within most organisations. First, it forced the senior executive team and IT department

to find some unity and collaborate better in order to keep the business going. And second, it dragged IT from its usual position of sitting in the shadow of core business functions and thrust it to the forefront during (dare I say it?) an unprecedented and very frightening time.

For those on a digital transformation journey, the value of the IT function was undoubtedly highlighted. And those using legacy systems are likely to have been forced to take a more reactive approach, but where they have been successful in their efforts, they are certain to have been the protagonists of the first chapter of the lockdown saga.

Either way, lockdown presented a unique opportunity for IT teams to demonstrate the value they deliver in facilitating front-line services.

Yin and yang...

The initial stages of lockdown may have caused immense headaches for IT departments, but for every 'yin', there is a 'yang'. I have seen countless online posts and articles celebrating and praising the hard work of IT teams whose efforts kept the wheels spinning. IT has clearly caught the eye of executive teams who now have a greater appreciation of IT's importance when it comes to risk management and business continuity.

But now is the time to further exploit that opportunity and catch their ear, too. To capitalise on this new-found spotlight and sense of unity and collaboration and change how IT is perceived within organisations; from an ancillary or support function to a core function; and to begin educating the wider business on how IT can not only bolster resilience but also enhance performance and optimise productivity.

Catalyst for change

Seizing this opportunity will take assertive action in the form of a marked shift in mindset and approach. By using this situation as the catalyst to change the way they operate, the most progressive IT teams can use their current momentum and take on a consultative approach, position themselves to work more harmoniously with the wider business and earn a more influential voice within the senior executive team.

This will be the first and most important step-change needed to pave the way for demonstrating the value of IT across the organisation. And who knows? Perhaps it'll accelerate the rate of change towards the inclusion of more CTOs in strategic-level teams.

Dave Mason is the technical director of Incline IT.



Unpacking the Microsoft stack in housing

Tony Hughes, Microsoft Solution Strategist, and Kirsty Marsden, Senior Service Design Lead, Technology Services Group (TSG)

The Housing Technology 2020 conference in March seems a long time ago now and for many of us, it was the last time we networked and shared a drink or two; it's safe to say life has changed considerably since then! In our conference presentation, we cast our minds back to 2019, a year of many developments in the world

of Microsoft and the technologies which played a big part in the housing sector.

We saw increased adoption of SharePoint as an electronic document and records management system (EDRM) as well as more housing management software providers becoming Office 365 aware; the start of removing barriers and understanding that the Office 365 platform

is a crucial component of the housing applications landscape.

On top of these developments, we also encountered some of the other Microsoft products moving into the spotlight, with significant interest around the likes of the Dynamics 365 platform. There also seems to be an increasing trend towards a Microsoft-first approach, (a drum we have been banging for a while) which advises looking towards the Microsoft product stack to facilitate various business needs.

Unpacking the Microsoft stack in housing

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A new world is upon us

Coronavirus has impacted us all and we've been astonished by the way housing providers have embraced technology and adapted.

Many housing providers have deployed Teams at an incredible pace to enable mobile working and many modern SharePoint intranet projects have been accelerated to facilitate communication across disparate workforces. However, it's important that organisations now take a step back to re-visit governance and compliance and evaluate the next steps most suited to their digital transformation journeys.

SharePoint for EDRM

A couple of major turning points have taken place over the past year which have seen the traditional housing management providers becoming more 'SharePoint aware', meaning more integrations between these applications and the SharePoint environment. This is particularly useful when using the platform for its EDRM capabilities, allowing you to get more value from your Office 365 investment and, furthermore, use other applications in the Office suite to form additional elements of your processes. For instance, using Forms' artificial intelligence (AI) capabilities to read documents and file them in the right place.

Power Platform

In the past, organisations had a bad habit of implementing out-of-the-box technologies for every business need, consequently finding themselves with sprawling IT environments and only using a small percentage of each application while still paying for 100 per cent of the product.

With PowerApps, multiple solutions can be developed on a single platform and, quite often, in an agile and more

cost-effective manner. What's more, the resulting applications often integrate seamlessly with the rest of the business IT environment, especially when taking a Microsoft-first approach.

Microsoft aren't stopping with developments in this area any time soon; its Common Data Service (CDS) is being considered by many people as a low-cost entry into model-driven apps.

Project Cortex

"What on earth is that?" we hear you ask. Well, Project Cortex is the first new service to be released in Office 365 for quite some time. The service centres around knowledge management and using AI to sweep over content – recognising content types and extracting key information to automatically align that content with various skills, people and tag words within an organisation as part of a 'knowledge network'.

New topic pages and knowledge centres, created and updated by AI, enable subject-matter experts to curate and share knowledge with wiki-style simplicity, using intuitive topic cards to deliver relevant knowledge at just the right time and place in the apps you use every day.

This innovative technology is set to shift the boundaries and change the way we work day-to-day by allowing users to access these incredibly sophisticated knowledge centres in an instant. This could lend itself particularly well to a contact-centre environment, where staff are often required to have the right information readily available at their fingertips to accurately advise the customer on the other end of the phone.

Power Virtual Agents & UI Flows (RPA)

Another recent release from Microsoft is Power Virtual Agents which does exactly what it says on the tin; giving you the power to build chat bots with no code.

But what do you need a virtual agent for?

Well, it can be as simple as sending an email to somebody, or more sophisticated, where UI Flow can be used to record keyboard and mouse inputs to feed data into legacy systems. The possibilities are endless, and the bots can be embedded almost anywhere, including within channels in Microsoft Teams, on your social media pages, tenant portal, public website or intranet.

Microsoft Forms Recogniser

Last but not least, Forms Recogniser is a cognitive service which lets you pinpoint important information in forms and extract that information as metadata that can then be used for the likes of document management and triggering workflows based on dates.

Take a gas certificate, for example. Forms Recogniser can be trained to pick up key information such as customer name, contact details, date of inspection and UPRN. Such metadata can then be applied to automatically file the document in the correct location and, if required, generate a notification or initiate an appointment booking process when the assessment is up for renewal.

This innovative service can be used for much more than just gas certificates; tenancy agreements, Land Registry documents, EPC certificates, invoices and other manual processes could also be addressed.

For those of you that were at Housing Technology 2020, remember, "It's Office 365, Jim... but not as we know it!"

Tony Hughes is a Microsoft solution strategist and Kirsty Marsden is a senior service design lead at Technology Services Group (TSG).



Watford Community Housing's digital journey during lockdown

Paul Richmond, Director of Resources, & Barry Wilson, Chief Technology Officer, Watford Community Housing

Three years ago, Watford Community Housing started a significant digital transformation programme to bring our service offerings and infrastructure up to modern standards, and also to lay the foundations for future development and innovation. This required a fundamental re-evaluation of the way our IT function operated, changing its relationship with both the business and external partners, and it required buy-in to this new vision from key stakeholders and the group's board.

Going back three years, we had both recently joined WCH and saw that there were a number of core deficiencies in our IT function. Both of us came from outside the housing sector and issues such as downtime, out-of-service products and non-integrated systems were far from acceptable. We started to become accustomed to the dreaded 'system is down again' emails, normally on Monday mornings! Confidence in the service from both customers and staff was being steadily and regularly eroded, and this inspired our radical approach to change.

To start this work, we carried out a service audit of our IT function across four technology pillars; infrastructure, resilience, platforms and peripherals. Unsurprisingly, we identified that two of the four (infrastructure and resilience) were out of tolerance, with the other two also needing some level of remediation. The main issues focused on areas such as dilapidated systems, non-integrated systems, regular downtime and a dysfunctional managed service relationship.

The digital transformation plan was formed and we felt it had to be bold and cover several years of improvement and change. We went to our group board with four major decisions that were needed to take the organisation forward; these were building a resilient IT capability, creating a modern IT function, focusing on strategic development partners, and becoming a digital-first provider.

Building a resilient IT capability

We decided to insource our IT capability to address and adapt to the changing business demands of the organisation. This involved reviewing the entire IT landscape across what was the standard business-as-usual (lights on) service. The infrastructure had to be brought up to a standard that would accommodate the group's ambition for implementing technology solutions. It also needed to progress at a pace we could control, rather than at a pace dictated by a managed service provider.

Throughout the first year, the refresh of core IT infrastructure and internet capacity was tackled to allow resilience within the network but also to deploy an effective DR and backup solution because the existing set-up was leaving the organisation exposed. This focused on what we needed to do to future-proof the investment. Further deployment of end-user computing facilities enhanced the staff experience, extended mobile working and regained confidence with our stakeholders throughout the business.

Creating a modern IT function

In parallel with this, we recruited a completely new team to deliver a modern IT function. The department was split into three teams, comprising IT support, development and business intelligence reporting, which gave us a central hub for service delivery. We have focused on new and young talent, creating roles for apprentices and those seeking professional development. We have also looked for coverage in areas such as business intelligence, where new skills were required.

Our IT development team has shifted our focus away from buying in solutions towards developing our own solutions; in the past year, we have deployed several new internally-developed apps for our staff to support them, particularly in mobile working and estate inspections.

Strategic development partners

The challenging culture shift within the

organisation was to change the 'wrap-around, shiny toy' approach used to bridge gaps in business processes which inevitably continued to fragment our services. With a lack of true integration between different vendors, we decided to engage in strategic development partnerships with our core software suppliers. By working closely with suppliers such as Orchard, we could have open discussions on the expectations that we needed their products to deliver and be transparent in what their products could deliver. We have also had a clear focus on removing applications which were 'orphaned' or non-integrated and instead pushing our core partners to expand their offers.

Digital first

The strategic partnerships have helped us drive the 'digital first' experience for our customers; we won't enforce 'digital by default' but instead provide platforms and solutions that are easy to use for our customers, thereby making digital channels more attractive.

The journey for 'digital first' started with the implementation of Orchard's Digital Tenancy platform, which has delivered a dynamic portal for our customers to check their rent balances, request repairs, report ASB, and log compliments and complaints. This was further enhanced with the implementation of self-appointing repairs, enabling customers to book a time convenient to them for their repairs. Before lockdown, over 20 per cent of our tenants had signed up to the service and over 900 repairs had been raised via this route.

Lockdown response

Before the start of the lockdown at the end of March, we had already arranged for all WCH staff to be prepared for remote working, initially on a rotation basis.

When the government's lockdown announcement was finally made, we were able to respond very quickly, changing our call centre to use 'softphones'

Watford Community Housing's digital journey during lockdown

Continued from previous page

within three days and for non-laptop users to be allocated a device from our reserve training pool or use the remote VDI gateway on their own devices. Internet services already had expansion capabilities for future requirements, so we could accommodate the increased bandwidth demands from 200Mb to 1Gb within a week.

This couldn't have been done without a clear IT strategy and having foundations that are robust enough to support the journey and flexible enough to adapt to changing circumstances. While it has not always been plain sailing over the past three years, we can look back and cite a material improvement in system

performance, the roll-out of a much-improved digital tenancy portal and a higher level of integration between our systems. We have also established a modern IT team, which is providing both applications and insights to the organisation that were not present as part of our managed contract.

The other big benefit has been financial. While the above technology change programme might sound expensive, we have managed to keep our overall costs roughly the same as before. The cost of our in-house IT function is about the same as the managed service costs and our in-house development team matches the rate-card development costs of our

managed service provider. One area of significant savings has been the reduction in capital expenditure (capex) because we now have much greater control over our IT spending and have moved our focus away from 'add-on' solutions towards cyclical refreshes of infrastructure and kit.

While trying to refresh and rebuild a function can be daunting, we have no doubt that our position is much stronger now and our response to lockdown has demonstrated our readiness for new ways of working, even at a just few days' notice!

Paul Richmond is the director of resources and Barry Wilson is the chief technology officer at Watford Community Housing.



**HOUSING
TECHNOLOGY**



**RESILIENT
INNOVATION
2020**

**Inspiration
Confidence
Security**

Instead of Housing Technology's annual visit to the BT Tower in London, we are going 100 per cent digital for the first time which means that more of you can join us from the comfort of your own desk and tune into a fantastic range of presentations.

Taking place online on Tuesday 22 September, Resilient Innovation 2020 will focus on how housing providers can use technology as the underlying basis for delivering inspiration, confidence and security in everything from their current day-to-day operations through to their longer-term strategic goals.

To find out more and reserve your online place at Resilient Innovation 2020, please visit: housing-technology.com/event/resilient-innovation-2020.

As a preview, the outline presentations (full presentation details to be confirmed) include:

- **BT** – What does the future hold? Find out from BT's global innovation team.
- **Coastline Housing & Smartline** – Understanding our customers better: increasing resilience in the coronavirus aftermath, IoT deployments and greater digital engagement.
- **Johnnie Johnson Housing** – Accelerating a digital culture & an innovative post-coronavirus IT strategy.
- **Kingdom Housing** – Chrome killed my desktop: how the housing provider has moved its entire hardware and software infrastructure to Chrome OS.
- **RHP** – Putting people into technology: how putting users and user-centric design at the heart of operations leads to greater resilience and more innovation.

We all know that managing large IT projects, leading teams and making real progress can be extremely challenging. We believe that sharing knowledge and learning is the best way to navigate these challenges. That's why we're inviting you to join us at Resilient Innovation 2020. Here are some of the reasons why we think you should take a day to tune in and take part:

- Watch sessions on housing innovation and key trends from housing experts and your peers.
- Learn about new strategies and solutions that you can implement at your own organisation.
- Gather business intelligence and broaden your sector knowledge.
- Break out of your routine and find fresh perspectives.
- Gain access to all the presentation slides after the event.
- Join us from the comfort of your office or home; no travelling required!

To find out more and reserve your online place at Resilient Innovation 2020, please visit: housing-technology.com/event/resilient-innovation-2020.

In-house development vs. off-the-shelf software

Housing Technology interviewed senior executives from Aareon UK, Accent Group, MIS-AMS, Northgate Public Services and Weaver Vale Housing Trust on how, when, where and why to consider in-house software development instead of buying off-the-shelf software from external IT suppliers.

Why opt for DIY/in-house software development or external software?

Accent Group's digital development manager, Simon Green, said, "We start with our high-level requirements and balance value, innovation, resilience, ease of use, time to 'in-service', integration and strategic fit. We then decide early on whether it's possible, in terms of capability, for us to develop the product. If it is, then in-house development is judged equally against commercial off the shelf (COTS) products or partnering for development with our systems providers.

"Both in-house and external approaches work well under certain circumstances, but even when we buy an external software package or work with a partner, our in-house team brings additional value through systems integration and information management."

Aareon UK's managing director, Geraint Griffiths, said, "The most common reasons for going down the DIY/in-house software development route relate to the availability of COTS software to meet housing providers' particular business requirements, the time and expense of adapting COTS software, and the desire to have complete control over the development process so there are no external dependencies.

"When opting for COTS software, then its additional benefits need to be evaluated. Typically, these will include a range of best practice functionalities which will have been tried and tested and can be evidenced across other housing customers. Furthermore, external software suppliers will have the infrastructure to support the ongoing delivery of product

updates in the key areas of functionality, security and new technologies. These products normally have a range of customers of varying sizes so the software should be able to scale up and out as needed."



Housing providers already have a huge task in delivering housing without also trying to develop the software needed to achieve their goals.

Trevor Hampton, Director of Housing, Northgate Public Services

Northgate Public Services' director of housing, Trevor Hampton, said, "One of the most common reasons for opting to develop software in-house is a perception of expediency. In-house IT departments can sometimes find themselves under pressure from their boards to find an immediate fix to a problem and so in-house development seems the obvious option. The results are fast but sometimes a more holistic look at why the change needed to happen is needed.

"For example, take the race to go digital. A simple revamp of an organisation's website by their in-house team is unlikely to be enough to deliver full access to the digital channels that tenants will expect later on. It might have been a tactical solution, but it won't have met the strategic goals of the organisation.

"The lack of IT representation at board level is also a factor contributing to decisions to keep IT in-house. More

often than not, a series of short-term, in-house fixes will fail to address a housing provider's longer-term operational needs."

Weaver Vale Housing Trust's executive director of technology and business improvement, Andrew Rafferty, said, "We live and breathe our operations every day and an in-house development team has a much better understanding of our opportunities than relying on third parties. External suppliers are rarely 'partners'; they are still suppliers who may have contradictory goals to ours.

"The advantages of in-house development include: more control because by developing a substantial in-house team, you decide your priorities and functionalities as opposed to being mandated by a third party; greater agility from more frequent, iterative developments to mirror changing tenant requirements; closer engagement because our agile approach involves colleagues at the start by creating 'user stories' that determine the minimum viable products (MVP); and speed of delivery, with short 'sprints' meaning changes can be achieved in just weeks, not months, and far faster than an external procurement process would have been completed, much less actually implemented.

"Furthermore, we can reduce our risk because non-proprietary software using a common technology stack gives us a larger pool of developers and testers to draw from, plus there's no tie-in to the housing sector's usual IT suppliers and their closed, proprietary systems. Finally, there's the question of ownership and updates – in-house systems are entirely yours so you aren't locked into third



parties' release/update cycles that you have to adhere to, even if they add little or no functional benefit, just to maintain support."

Housing providers aren't software developers – shouldn't they stick to their core goals?

MIS-AMS's software development director, Jeanette Allerston, said, "Not necessarily – all businesses are technology businesses these days, regardless of their core aims. If a housing provider can create a business case for hiring staff and prove a return on investment, then an in-house project can be made viable.



While housing providers are obviously vital stakeholders in the development process, only a few have the resources to convert their principles and goals into viable systems.

Geraint Griffiths, Managing Director, Aareon UK

"However, significant financial investments are needed to develop a large system. The necessary resources comprise not only developers, but designers, analysts, QA professionals and project managers."

Aareon's Griffiths said, "While housing providers are obviously vital stakeholders in the development process, only a few have the resources to convert their principles and goals into viable systems. Careful consideration should therefore be given to long-term strategies and cost/benefit analysis before building an in-house system. Delivering functionality

via an in-house team can initially seem to be rapid and bring quick benefits but the practicalities of long-term product maintenance need to be considered."

Northgate Public Services' Hampton said, "Housing providers already have a huge task in delivering housing without also trying to develop the software needed to achieve their goals. Technology is moving so fast these days and it's that pace which makes it so hard for housing providers to build the knowledge, skills and insights to keep up.

"It's also a mistake to underestimate the support needed. It might seem cheaper to develop software in-house at first, but this is a false economy when you consider the need for ongoing maintenance and development."

Weaver Vale Housing's Rafferty said, "Providing great products and services for internal and external customers is a core principle for any housing provider. This will be achieved more rapidly, flexibly and efficiently with a substantial in-house team than relying on (often) out-dated technology and hoping your IT supplier gives you what you want.

"To that end, we are really interested in co-developing (i.e. a true partnership of shared efforts and rewards) with other housing providers who are developing solutions to see where the synergies are. Why not collaborate at a practical, code-sharing level?"

What are the functional advantages and disadvantages?

Accent's Green said, "When reviewing the market for a new housing management system, it was clear that the customer

safety, repairs and financial asset management modules weren't available with the functionalities we wanted without buying several different systems. So our choice was either multiple procurements or systems development and integration on top of the solid platform we already had. We opted for the latter because, in our circumstances, it was the most effective way to meet our specific requirements. And regarding any functional disadvantages to our approach, there haven't been any so far."

MIS-AMS's Allerston said, "With the in-house route, you can say goodbye to a cluttered screen of functionality that you don't want because you can tailor your software to your exact requirements.

"However, the strength of external software is that the functions are in use by thousands of other users, so they are far more stable and wider in variety. Good providers will also invest in maintenance and upgrades, and collate user feedback to inform this work. The result is that you get a good level of functionality which has been designed to help you achieve your objectives."

Aareon's Griffiths said, "The disadvantages of the in-house approach can be that there is no incentive to examine the process being delivered and benefiting from the sector-wide experience that is incorporated into COTS software. The in-house approach also must consider the long-term evolution of the product so that any short-term delivery decisions don't compromise the overall ability of the product to meet long-term goals.

Continued on next page

In-house development vs. off-the-shelf software

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And among other things, the disadvantages of an external approach are that the software might contain features that aren't needed and those that are needed might not map exactly to an individual housing provider's particular processes."



Buying external software can be much cheaper than in-house development because the package is already available off the shelf and the development costs are shared across the provider's customer base.

Jeanette Allerston, Software Development Director, MIS-AMS Development Manager, Accent Group

Northgate Public Services' Hampton said, "There are some functional advantages to developing software in-house because it will have been built to satisfy a particular organisational need, but that also makes it incredibly bespoke and often very specific to a housing provider's requirements at a particular point in time.

"For example, in the case of service charges, every housing provider has their own formulae for recovering these charges and it can sometimes be easier to code in-house. However, in-house software is never as rich or as complete as COTS software because the latter will have been developed based on best practices within the overall housing sector. If there is then a change in policy, would an in-house solution need to be developed to meet the new requirements rather than simply reconfigured?"

What are the technical advantages and disadvantages?

Accent's Green said, "The advantages of in-house development are clarity in terms of how the systems work, ease of integration and rapid problem resolution; if it's not performing, it is within our gift to do something about it. But don't neglect technical debt – spend time maintaining and documenting your own software because you'll be the ones making any future changes."

Aareon's Griffiths said, "The technical advantages of in-house software are that there is a complete in-house understanding of the product and changes are only applied when necessary and don't have to conform to suppliers' releases and supported versions.

"The disadvantages of in-house development centre around the cost of maintenance and product management. For example, the user experience (UI/UX) needs to be maintained to match industry standards because end-users expect products to evolve in line with their other digital experiences. And while it's not strictly a technical disadvantage, the burden of maintaining the skills and knowledge within an IT development team are significant."

MIS-AMS's Allerston said, "Finding the right resources to develop software in-house can be difficult because demand is outstripping supply, and if you can recruit the right team, retaining them then becomes the next challenge. With limited or inconsistent resource levels, you have a limited ability to evolve the software. And with many other competing IT priorities, it can be easy to neglect maintenance and end up with a bespoke system 'stuck' in an old technology for a long time.

"By contrast, external software providers are under constant pressure to remain competitive, and this incentivises them to continuously evolve their systems and use the latest technologies, so with very little in-house effort, your software always remains up-to-date."

Weaver Vale Housing's Rafferty said, "Having in-house capability means you have greater knowledge to take into discussions with IT suppliers about the integration capabilities of their products (where you do need to use them), rather than relying on a vague bucket of time/

cost allocated for 'integration' in the implementation of their solution. The disadvantages are that when you start, you spend a lot of time creating the basics (such as creating APIs) and building skills.

"You will need to understand more about the business logic and processes, which is sometimes held tightly by legacy IT providers. You will also need different skillsets within your teams, but we've been successful in retraining colleagues who previously had MI/report-writing roles in to low-code developers via Power Apps."



Product management is a universal challenge so you just have to get on with it, whether that's in-house or via a third party.

Simon Green, Digital Development Manager, Accent Group

What are the financial advantages and disadvantages?

Northgate Public Services' Hampton said, "The main financial benefit of COTS software is the transfer of risk. If an in-house project goes over budget or takes twice as long as it was meant to, then the organisation just has to swallow the impact, whereas if you have gone to a supplier, the price and specification should have been agreed and fixed from the outset."

MIS-AMS's Allerston said, "Buying external software can be much cheaper than in-house development because the package is already available off the shelf and the development costs are shared across the provider's customer base.

"Granted, you can lose some of the control you would have if developing in-house, but a good compromise which achieves the best of both worlds is to buy a core business system and then augment it in-house to get exactly what you want at a lower cost and with less risk."

Weaver Vale Housing's Rafferty said, "In-house development is definitely cheaper. With daily rates of around £1,000 per person per day, lead times (and therefore 'time to solution') measured in months and annual support costs of 20 per cent, not to mention lengthy procurement processes

and (often) eye-watering licence costs, it's very easy to make the numbers add up for in-house development.

"Choosing widely available development platforms means you have a huge pool of relatively inexpensive contract resource available to supplement the team if you need to, unlike the restricted pool of vendor (or their select partner) resources that are available for proprietary solutions.

"There are very few disadvantages. Yes, you'll need to keep your in-house team's skills up to date, but there is a lot of free material for common technical tools and techniques and you'll want to retain good staff, but that's the same for any function."

Can housing providers really manage typical software lifecycles?

Aareon's Griffiths said, "Housing providers' IT departments are usually set up to manage hardware infrastructure, deliver backup policies, support end-users and provide first-line support. They may also provide services such as report writing and management of the implementation of new software packages.

"However, in order to manage a product that supports the business then the software development cycle needs to be managed in its entirety from requirements identification, development and testing through to rollout, training and ongoing maintenance releases. This is an iterative process that continues for the life of the product and is important to ensure the product incorporates feedback, adds new features and continues to deliver value. This is an obvious financial disadvantage of the in-house delivery model, particularly if the cost exceeds the typical 'software licence plus maintenance' model."

Accent's Green said, "Product management is a universal challenge so you just have to get on with it, whether that's in-house or via a third party. Whatever you develop or buy will rely on something else to function or will need some maintenance. So lifecycle management applies to both approaches. It does require more discipline and planning internally, whereas using third-party hosted systems you have less choice and perhaps need less discipline because at some point the system will be upgraded for you, whether you're ready or not."

Northgate Public Services' Hampton

said, "It is too much to expect a housing provider to deliver and maintain the number of systems they typically need, making it hard for them to respond and build software fast enough to solve and support immediate or strategic needs.

"Another reason is the cloud. The move to the cloud has been driven by the demand for anytime, anywhere access for staff and tenants. But it's not easy for housing providers to build solutions that can be openly integrated onto other cloud infrastructures, making them vulnerable to potential loss of service. Rather than attempt to do so and risk being unable to connect all their systems, housing providers should look for external suppliers who should provide an open system at no extra cost."

Weaver Vale Housing's Rafferty said, "Housing providers shouldn't be following typical software lifecycles; iterative development using agile methods does away with that thinking. Once the MVP is live, engaged users become part of the solution and have to build a (brief) business case for change. Change isn't delivered to them; they co-create it.



Housing providers shouldn't be following typical software lifecycles; iterative development using agile methods does away with that thinking.

Andrew Rafferty, Executive Director of Technology & Business Improvement, Weaver Vale Housing Trust

"Our digital solution development unit is a business function like any other. It's just a way of delivering solutions so you have to have the right people on board and allow them to put in the practices and processes that will allow them to deliver the solutions that the organisation needs. It is a collaborative process so expect to be more involved than you would otherwise be, but also expect to end up with what you need and not to have to make your needs fit around what a vendor has on offer."

Any heuristics to determine whether to opt for in-house or external software?

Weaver Vale Housing's Rafferty said, "If there is an existing product which is open, interoperable, fairly-priced and fulfils a

niche requirement, then we would still be likely to buy it. However, we are looking more at toolkits than fixed solutions because we don't necessarily know what we will be concentrating on in the next 6-18 months.

"It is important that there is commitment, trust and openness for agile ways of working. The change is cultural, moving IT from a support role to becoming a key business enabler. The organisation has to be behind that move if you're going to succeed. If you try and fit this into the traditional control-based practices which are prevalent in a highly regulated sector, you'll end up with a fraction of the potential value."

Accent's Green said, "You must bring together a multi-disciplinary team and be realistic about development timescales and exact-fit functionality vs. buy and configure. Make the decision, pause, and reflect before committing to the decision, but once committed, give it 100 per cent."

Housing Technology would like to thank Geraint Griffiths (Aareon UK), Simon Green (Accent Group), Jeanette Allerston (MIS-AMS), Trevor Hampton (Northgate Public Services) and Andrew Rafferty (Weaver Vale Housing Trust) for their editorial contributions to this article.





Your work, your way at RHP

David Done, Chief Executive, RHP

Over the past couple of years, we've been working hard to enable greater flexibility across RHP – a big part of which has been creating better opportunities for remote working. This has been achieved through our 'Your work, your way' flexible working programme, which was designed to empower people to get the most out of their lives and do the best for our customers.

This meant that when the pandemic crisis progressed, we were in a strong position to make a smooth transition to remote working with minimal disruption for our customers and employees. Here are the top things we've learned before, during and as we emerge from the crisis.

Start with the right mindset...

The biggest challenge in moving to a more agile way of working wasn't our technology but our collective mindset. Over the past 18 months, we've done a lot of work to shift attitudes around flexible working and to break down any perceived barriers. We did this by working closely with our departmental managers and subsequently their teams to understand what was stopping them from working flexibly and how we could help unblock this for them.

We recognised one size wouldn't fit all and that the flexibility a caretaker or a member of our contact team might have would be different to someone in, say, a support team. Therefore, the key idea behind 'Your work, your way' was to have freedom within a framework where each team and individual could see how it worked for them. We then made sure we captured a range of examples of where it was working and turned them into case studies so people could see how it could work for someone like them.

Use technology as an enabler

Alongside our work on our corporate mindset, it was important that we had the right technology to create an effortless experience when working flexibly so that neither external nor internal customer services were affected. This included providing all office-based employees with

a laptop, introducing Microsoft Teams as a project collaboration and video conferencing tool and implementing a mobile telephony system so that no one was tied to their desk.

Just as we aim to provide our customers with choice, convenience and control in how they access our services, we want to provide our staff with the same standards. Therefore, all of our employee systems (such as our HR portal, benefits platform and learning hub) all work well on mobile and can be accessed from anywhere.

We're also lucky that Yammer has been embedded as a key internal communication channel for a number of years now because it's been absolutely invaluable as a way to keep us all connected during the pandemic.

Experiment

Having strong foundations in place has meant that during the pandemic we've been able to experiment with our existing technology to provide a better service and increased levels of engagement.

This has included exploring a lot more of the functionality within Teams; as well as being a lifeline to keep us all connected with video calls and project collaboration, we've found the 'live event' feature (which we hadn't used before) to be particularly useful.

For example, I host a live briefing on there every week to keep everyone up to date with how things are progressing and to answer any questions people have submitted (they can also post questions live). We regularly get over 75 per cent of the workforce tuning in live to this (including our caretakers on their phones)

and people can easily watch it afterwards too. We've also used the function for more informal activities such as our recognition awards ceremony where, as a leadership group, we surprised everyone with black-tie to hand out the awards virtually. We've also used it to support wellbeing initiatives such as live yoga sessions and talks on resilience. The live event function is probably something we'd have never thought about using before, but we'll definitely be continuing with it.

Yammer has also been an incredibly important tool in keeping our people connected and engaged. We've transitioned events that were previously face to face onto the channel such as our 'A great place to think' speaker programme which we hosted as a 'Yam Jam' instead. We've also been pulling everyone together weekly through Yammer with 'Friday Connect' which involves a fun activity for 30 minutes on a Friday afternoon.

A strong sense of camaraderie and fun, underpinned by the fact we take our jobs seriously but never ourselves, is a key part of our culture. Therefore frequent get togethers to socialise and celebrate with one another are really important to us, so anything we can do to replicate that during this time is very welcome.

Put people at the heart of technology

Overall, the pandemic has encouraged us to refine our digital strategy and we've only been able to do that due to the strong foundations we already had in place. At the core of it, we'll ensure that whatever technology we introduce, it'll start with a clear understanding of what

Your work, your way at RHP

Continued from previous page

the people (customers and employees) who will use it actually need. This includes:

- Implementing a new mobile telephony system during lockdown which has made it completely cloud-based, enabling us to deliver full contact centre capability from people's homes, helping us deliver a more seamless service.
- We're also looking at ways in which we can keep our customers better informed of their repairs, inspections and payments.
- Our employee-led 'Leading lights' innovation group is running customer focus groups on how we can improve our payments journey.

- We're also holding focus groups with our employees to harness the learnings from this time in terms of remote working, including what benefits they've discovered, what they've found difficult and if they have everything they need to do their job well (starting with the right technology and systems, for example). This will help us turbocharge our flexible working programme.
- Recently launching our ground-breaking 'Stellar' customer service programme. The programme will support our employees to deliver a consistently excellent customer experience across all channels,

including how we translate our brand personality in the virtual world.

We're pleased to say that all of this work has had an impact, with demonstrable increases in both our employee and customer satisfaction over the past three months and a significant shift in our TrustPilot score to 4.5 stars. We'll continue to look for ways to get more out of technology during this period to enable greater flexibility in how we work and deliver services, with the view to 'go back to better', not 'back to normal'.

David Done is the chief executive of RHP.

Lack of VfM from IT – Itica survey

Earlier this year, Itica conducted its 'Future of ICT' survey but postponed its results until now to allow everyone to focus on dealing with the coronavirus.

The main findings from Itica's survey of around 100 respondents, from both housing providers and IT suppliers/consultants, are around the value for money that housing providers apparently gain from their IT investments.

Of those respondents working for housing providers, 63 per cent thought that they didn't get value for money from their technology suppliers.

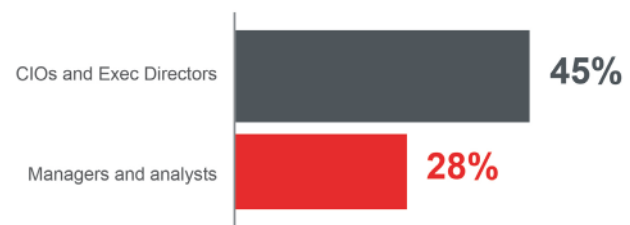
In contrast, 94 per cent of respondents from IT suppliers and 75 per cent of IT/business consultancies thought that housing providers did get value for money from their IT.

Itica said that its survey exposes a 'perception disconnect' between housing providers and their IT suppliers.

The chart, right, shows the variance within housing providers, with those respondents in supplier-facing roles giving the lowest ratings regarding IT suppliers' value for money. At the same time, only 45 per cent of key stakeholders and decision-makers have positive perceptions about value for money.

Itica found that value for money is merely one example of perception disconnects; others include housing providers'

% saying "we get good value for money from our technology/solutions providers"



own competencies, technology roadmaps and supplier performance.

Neville Brown, director, Itica, said, "Our view is that the issues [around value for money] exposed here are representative of the sector as a whole. Dealing with these head-on is imperative if the sector is to be successful in delivering the predicted level of business and technological change over the next three to five years."

The results of Itica's survey are available in its full report, downloadable from www.ityca.com/housing2020survey. Finally, Itica would like to thank everyone who took part in its survey; the respondents' involvement raised £2,000 for The Big Issue, with those funds being used to support Big Issue vendors during the lockdown.

IT and sympathy...

Ian Mihajlovic, CEO; Occubly



In our experience and from anecdotal reports, up to 80 per cent of non-IT staff are unaware of the remit of an IT department. IT departments do a superb job of engineering, but expectations of IT often include software development or process refactoring. These are increasingly arenas for specialist outsourcing.

A rock and a hard place

Historically, housing providers have found themselves navigating between the Scylla of multiple systems that can sprawl out of control or the Charybdis of one 'super system' that claims to do everything – both of these are extremes which need to be avoided.

Spreadsheet sprawl

Where a housing provider has multiple systems (who doesn't?), spreadsheets are often a primary source of information, yet they may be only part-documented or not coded in the 'house style' because the spreadsheets' creators come from all departments, not just IT. Due to the variety of contributors, spreadsheets may become corrupted, out of date or password-protected, with the creator having left the organisation without passing on clear instructions.

The long-awaited 'super system'...

Over the decades, we've been promised a single system that does everything. However, there are few examples of that actually happening without a layering process which results in such complexity that those people tasked with maintaining it become culturally resistant to change:

"Can we delete that table? After all, it has no relations."

"I don't know – maybe there is something that relies on it."

"We can't change this – something might break."

"I'm not sure why they set it up this way, but there must have been a good reason."

This results in tension between IT staff and business users, as IT departments are tempted to develop 'pushback' as

their primary interaction skill, rather than engagement and listening, when considering new feature requests from business and operational departments.

Solve for structure, not just systems

A different approach, taken by technology providers such as Occubly, involves data structures closely reflecting real-world data. This approach is known as reducing the 'impedance mismatch' between real-world assets and their data representations.

Impedance can be described as the bottleneck caused by different ways of expressing the same thing, between two systems that need to communicate. Impedance causes delays and uncertainties about data integrity, leading to incorrect compliance and asset management data causing financial losses.

Once impedance creeps in, it grows like Japanese knotweed because the thread connecting the real world to data processing is broken. The effects can include the creation of enormous Excel spreadsheets which attempt to behave as databases, but struggle to escape their natural two-dimensional, non-relational aspect.

This effect is sometimes called 'systemic delay propagation'; each interface becomes a compromise between the individual capabilities of the interacting systems, rather than the business purpose. This is how IT departments find themselves at the end of this chain, dealing with issues which are nothing to do with their core engineering remit.

The people dimension

Another issue to be aware of with any digital transformation is resistance to change.

IT staff may worry about maintaining their involvement at the same level within the new ways of working, while operational staff may fear that efficiency improvements will make their roles redundant.

Both of these concerns can be addressed through upskilling and adjusting the balance of expertise between internal staff and contractors hired specific to the purpose. The real win is that staff will be released from many boring, inefficient and repetitive tasks to focus instead on more rewarding and added-value activities.

The solution provider challenge

Operational managers are familiar with being told by software providers that something they want is not possible with their current system, or that some difficult new way of processing information is actually industry best practice.

This is important to understand when interacting with your IT department, who will tend to focus on security, networking, load-balancing, uptime and disaster recovery, rather than software development.

The challenge here is for external solution providers to listen and learn.

Solutions providers can decide to accept this challenge by basing their data analysis and data management on new 'data structure' audits designed to capture the greatest pain points where lost time, inefficient processes and business-critical

IT and sympathy*Continued from previous page*

outcomes overlap. The difference with a typical data audit is that the goal is not to 'score' the organisation nor make abstract recommendations to be implemented by someone else later, but to directly use this information to eliminate those pain points ourselves.

Conclusion

Post-Grenfell and coronavirus, housing providers are on an Odyssey of increasing compliance complexity and responsibility. Perhaps the best way to steer between Scylla and Charybdis is to make sure your vessel is well-documented, with

staff upskilled and motivated, and as little impedance from navigation to rudder and sails as possible, an approach to make even Odysseus proud.

Ian Mihajlovic is the CEO of Occubly.

Platform Housing's digital communities during lockdown with Crimson

Platform Housing has spent the months of lockdown working with Microsoft specialist Crimson on digital transformation, mainly around its implementation of Microsoft Dynamics CRM throughout its core business areas.

In addition to creating automation and consistency across Platform Housing's business processes, the project will also enable it to harmonise complex services across the group's operations, covering service response for home ownership and lettings, finance and asset management, and customer experience and communication, all from a single solution.

Jonathan Cocker, chief information officer, Platform Housing, said, "We wanted a way to consolidate several legacy systems so that we could quickly and easily access customer and property information from a single environment.



Jonathan Cocker,
Chief Information
Officer, Platform
Housing

"Just as consumers are becoming accustomed to shopping online and having delivery in an instant, they are expecting the same type of digital response in all aspects of life. What we like about Dynamics CRM is that it is a customer-focused solution that will help us to improve our operational efficiencies specifically around the changing needs of all our customers, whether they're tenants or homeowners.

"One of the challenges we had before was managing a high volume of daily customer calls, yet these were often transactions the customers could do themselves if we had a self-service platform. Now instead of phoning our customer service team for a simple enquiry, such as a rent balance, tenants can now log into the self-service system and view this information online.

"This was difficult before because we had disparate systems that would often hold different information. With Microsoft Dynamics, we have a single version of the truth, ensuring tenants and customers can always access accurate data."

The first phase of the digital transformation project involved Crimson developing the system architecture, a process that was threatened to be curtailed by the start of the lockdown in March.

Ciara McMillan, account director, Crimson, "We needed to understand Platform Housing's operational processes in order to identify areas where the workflow, automation and process-flow capabilities of Dynamics CRM could add efficiencies. This process continued during lockdown, with both teams continuing the digital transformation project using video conferencing and technical development taking place from the homes of Crimson's technical team."



Ciara McMillan,
Account
Director,
Crimson

Cocker said, "The lockdown demonstrated exactly why it's important for housing providers to have an effective digital strategy and customer service solution so that they can continue to communicate with and serve customers even during the most extreme circumstances. Empowering customers with information about their housing situation and having the ability to deliver accurate data at the exact point of need is the key to developing digital communities built on trust and transparency.

"The beauty of Dynamics CRM is that it's built with customer service at its heart, rather than operations. For us, it means that we can operate in tandem with our communities and be more proactive. Even the smaller things, such as the in-built AI within Dynamics CRM, mean that we can be more proactive on behalf of our customers.



How do you solve a problem like data?

Why digital assets aren't like physical or financial assets and why the housing sector struggles to get the most from its data..

Andrew Morris, Managing Director, Data Associates

Can you imagine that your properties needing to be repaired could be copied in an instant without cost and made available anywhere? No, neither can I.

Everyone in housing talks about assets – we all think we understand what they are and how they should be managed. Strangely, we are often talking about completely different things. Physical assets, property assets and fixed assets are like three blueprints of the same thing, but each captures an equally important but different viewpoint. Are we managing maintenance, housing or depreciation? Given the confusion around the existing assets, is it any surprise that the sector struggles with managing data as an asset?

The duck test

What is an asset? We all think we know what they are but it's tricky to define. Ask three managers and you'll get at least four answers. We could do worse than try the duck test: "If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck."

Let's think about the things that housing providers consider as assets and the features that set them apart. Here's my list of candidates to be considered as assets:

- Cash;
- Data;
- Intellectual property;
- Materials and other physical assets;
- People;
- Property.

What are the important characteristics that distinguish them?

- **Duplicated** – it can be copied without significant cost or loss of quality;
- **Maintained** – regular maintenance is required;
- **Owned** – the ownership is clearly defined;
- **Real** – it must exist in physical space;
- **Valued** – it has a well-defined monetary value in the financial accounts.

How do other assets compare to data?

We've produced a table and highlighted

Asset Type	Duplicated (can be at zero cost)	Maintained (degrades if not)	Owned (accountability is clear)	Real (physically exists)	Valued (financially accounted for)
Cash	No	No	Yes	No	Yes
Data	Yes	No	No	No	No
Intellectual Property	No	No	Yes	No	Yes
Materials / Physical Assets	No	Yes	Yes	Yes	Yes
People	No	No	No	Yes	No
Property	No	Yes	Yes	Yes	Yes

the assets with the same characteristics as data.

The ability of data to be copied and shared without limit at no cost is unlike any other asset. That's its greatest strength but it's also a weakness if it's not controlled, resulting in data breaches, inconsistent data and unmanageable storage needs.

Data never wears out or needs to be repaired. This is like other intangible assets such as cash and intellectual property. It's also like people (well, we do retire, take holidays and need to visit the doctor, for example, but people generally tend to look after themselves). A corollary is that quality is exceptionally important; if it is created once and can be reused infinitely, then we may never replace it with a new, higher quality product like we do with physical things such as a boiler. Data's value is intrinsic to its ability to be reused, so if the quality is right then it's much more likely to be reused and reuse is more efficient as no work is needed to fix errors.

All assets except people and data have well defined ownership. For people, in a way, we own ourselves and are self-governing. But in the housing sector (and commonly elsewhere), data typically doesn't have clear ownership, and that's a big problem. Who has the authority to make decisions and decide the rules about property, financial and customer data in your organisation? Frequently nobody does, and when a decision is forced, such as when a new IT system is commissioned, somebody does their best to decide on the rules. This goes often

awry because they haven't considered all of the stakeholders who depend on that data or the rules are inconsistent across the different IT systems. This lack of governance can cause untold chaos, manual rework and expense.

Data doesn't physically exist; like other intangibles, you can't put your hands on it. And no, cash typically isn't a wad of notes in a vault, more often it's zeros and ones in a bank's computer systems. Being virtual leads to enormous confusion if your data isn't managed properly. You need to have a clearly defined master record for each kind of data you store. If not, how do you make sure you've updated the golden record and how can you demonstrate that your regulatory returns are based on the right data?

Cash, IP, materials and property are financially accounted for with clear rules and procedures, whereas people and data aren't. Again, people are a special case, but data can be valued and is increasingly being monetised. Housing providers have very detailed and rich information and often they are giving it away freely to commercial organisations such as credit agencies. There are significant opportunities for housing providers to use data to target services to customers and optimise asset management, with substantial financial benefits.

What does good look like?

We've seen that data isn't like the bricks and mortar world of housing. This helps explain why the sector has found managing data so difficult. The

How do you solve a problem like data?

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Regulator of Social Housing is increasingly interested in Registered Providers' data – it's a recurring theme of its publications, judgements and notices. Can you sleep easily, with the confidence that all of the data in your regulatory returns can be traced back to trustworthy facts in your systems of record?

What's needed is a simple description of the data that's critical to the organisation, who has authority to make decisions about it and what the rules are for handling that data – this is 'data governance'. Although it's standard practice in most other sectors, it's relatively new to housing but it will become an increasingly important tool

to manage data as an asset and for the assurance of good regulatory behaviour.

Andrew Morris is the managing director of Data Associates.



Chris McLaughlin (L), Managing Director, MIS-AMS and Andrew McLaughlin, Managing Director, MIS Group

MIS Group pledges £20,000 to UK foodbanks

Over a ten-week period, MIS Group has pledged to donate £20,000 in total to twenty UK foodbanks nominated by the public. The campaign, which it has called Food for All will see the company donate £2,000 each week (two charities per week) across the ten weeks to foodbanks up and down the UK in a bid to stamp out food poverty.

Chris McLaughlin, managing director, MIS Active Management Systems, said, "We're fortunate to have been able to carry on working throughout the lockdown, and we felt that it was important to give something back, so we're donating to 20 foodbanks nominated by the public in the fight against food poverty in the UK."

Anyone can put forward a nomination; the only criteria are the foodbank must operate in the UK, have a registered charity number and its own bank account. To find out when nominations will open in your region and how to nominate a foodbank, you can visit the MIS-AMS website or find the company on LinkedIn, Twitter or Facebook.

Andy McLaughlin, managing director, MIS Group, said, "We want to make the decision on how to allocate the donations as democratic as possible. MIS staff will vote from a randomly selected set of ten nominations for each region. The foodbanks with the greatest number of nominations for each region will receive the money."

Just keep typing...

Having just been sent top-of-the-range mechanical keyboards from Cherry, the Housing Technology editorial team are now surprise converts to what might be termed 'proper' keyboards.

While the humble keyboard is unlikely to ever feature on any housing provider's list of productivity tools or be part of any digital transformation project, the productivity gains arising from using a decent keyboard instead of the cheap and flimsy keyboards supplied with off-the-shelf PCs and laptops are remarkable.

If your work or that of your team involves a large amount of typing, word-processing or data entry then getting a decent mechanical keyboard (Cherry is the leader in this sector) is a quick and inexpensive (in the overall scheme of IT budgets) way of boosting productivity, data accuracy and reducing repetitive strain.

As an additional benefit, particularly for staff performing repetitive tasks on a regular basis, free 'Cherry Keys' software allows IT managers and end-users to assign customisable tasks, such as standard email texts or macros, to individual keys to save time.





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