HOUSING TECHNOLOGY™
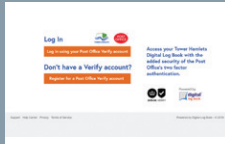
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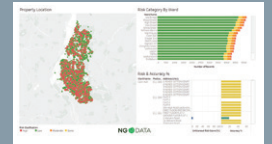Housing Technology's Connected Communities 2019

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CONNECTED COMMUNITIES 2019

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FEATURE

Housing mergers and acquisitions
– where does IT fit in?

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Building from strong foundations

As the saying goes, "good houses are built on strong foundations." The same rationale applies to housing providers' myriad plans for digital transformation.

Digital transformation means different things to different people, ranging from the wholesale replacement of entire IT infrastructures and applications through to merely 'reskinning' existing websites.

However, what most digital transformation projects have in common, regardless of their size, scope, cost or complexity, is a strong emphasis on the creation of a digital 'presentation layer' for access to services, whether for housing providers' staff or their tenants.

The centre cannot hold…

In the same way that hastily or shoddily-built houses will be fine for a short length of time, so too will new bright and shiny digital housing services. But without solid, dependable foundations, both those houses and those services are very likely to fail to deliver in the longer term.

For digital transformation projects, those oh-so-necessary, solid foundations need to be data and associated data-driven processes.

Only connect…

While it is undoubtedly tempting to opt for some 'easy wins' through the creation of digital versions of existing analogue services or processes, these need to be underpinned by a commitment to review your data, its internal and external sources and final destinations, then de-duplicating, rationalising and cleaning it then, ultimately, automating as many of your data-driven processes as possible.

Only then can you create the right foundations for the long-term success of your digital transformation plans. Yes, it will take longer and will cost a little more in the short term but the alternative will certainly be, at best, a false economy.

As the expression goes, "If you don't have time to do it right, when will you have time to do it over?"

FORCHCOMING EVENTS

HOUSING TECHNOLOGY – CONNECTED COMMUNITIES 2019

10 September 2019 | BT Tower | London
www.housing-technology.com/events/bt19

HOUSING TECHNOLOGY 2020

4-5 March 2020
The Doubletree by Hilton Oxford Belfry
www.housing-technology.com/events/htc20

COMPANIES IN THIS ISSUE

ExtraCare selects Orchard to support OpenAccounts

The ExtraCare Charitable Trust has chosen Orchard Information Systems to support its OpenAccounts finance software.

Paul Todman, financial planning accountant, Extra Care Charitable Trust, said, "Orchard proved its credibility by helping us with a sales ledger problem which took less than a week for us to solve with Orchard support; this had been outstanding for over three months with our previous supplier.

"We realise that having a system on its own doesn't always offer a complete solution. The customer service and support element is the reason why Orchard became our choice to provide support for our OpenAccounts system and so far we haven't been disappointed."

Correction

In the March issue of Housing Technology, the "Unlocking value through data insights" article contributed by Orchard Information Systems and Red Olive was published with an incorrectly attributed 'dashboard' screenshot. The intellectual property rights to the dashboard screenshot belong to Musgrave Analytics, an analytics and visualisation company specialising in social housing. Red Olive apologises for any confusion caused.

River Clyde Homes saves £55k with MIS-AMS

River Clyde Homes has completed an extensive upgrade programme of its rent arrears and data-capture functions using MIS AMS's ActiveH software, resulting in savings of £55,000.

Lorna Williams, business performance and systems manager, River Clyde Homes, said, "After reviewing our current system, we realised that there was quite a bit of work to do to make our internal operations more streamlined and efficient. With help from the team at MIS AMS, we have created our own unique system, with modules, groups and rules to really give the business exactly what it needs in terms of reducing arrears.

"Since the introduction of the new system, we've saved over £55,000. We now have one system instead of two that's easy for our staff to use and gives us a 360-degree view of our tenants."

River Clyde Homes has also recently gone live with ActiveH's mobile surveys module.

Lorna said: "We were about to start on our annual tenancy audit and knew this time we wanted to embrace a more digital way of working, so we bought the ActiveH mobile surveys module to help us to complete the whole auditing process better and faster.

"We had 5,400 properties to audit so being able to use a digital system to capture the relevant information minimised the scope for human error and made the whole process for our team and our tenants much more efficient. The initial audit was such a success that we are now deploying the MIS AMS mobile surveys module across the business for all of our other surveys."

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Building DIY systems in low-code – A pragmatic alternative?

Paul Turner, Systems & Performance Manager, Adur & Worthing Councils

Adur and Worthing Councils are two district councils near Brighton which have had a shared officer structure since 2008. Over the past few years, we have begun to use our own low-code platform to develop our own systems. This approach has been recognised as being innovative; we won a SOCITM award for innovation in 2015 and a Digital Tech Leaders award in 2017.

Like most providers of social housing, we want to be more efficient, agile and joined-up across our operations. We want financially-sustainable IT systems that genuinely enable our tenants and officers to get on with the things they need to with the minimum of fuss.

Our approach is to do this using a low-code platform comprising MatsSoft and SalesForce, with tight data integration between the two and links to other systems through open APIs. But what is a low-code platform, and why have we chosen it?

Low-code and the alternatives

To be able to appeal to housing providers across the sector, large and small, with widely varying ways of working, off-the-shelf products sometimes need to be all things to all people. Furthermore, many off-the-shelf products were developed several years ago and have evolved into complex products which, compared to newer software, can be relatively rigid and inefficient. And if bespoke development is needed, this can be costly and time-consuming. In this scenario, organisations are reliant on the software provider to be innovative and this can hamper progress.

Off-the-shelf software is often standalone and without open APIs, it can result in data silos. For example, we estimate that Adur & Worthing councils have around 400 such data silos, which clearly doesn't fit in with our aim to have joined-up systems and approaches.

We looked at developing with open-source software. One attraction of open source is the ability to share it between organisations and to be able to both provide and receive shared applications. However when we looked in more detail, we found that this was too expensive to be sustainable, regardless of whether we developed in-house or bought in external development expertise.

So what is low-code? Well, it's a platform for application development that allows people (not necessarily with an IT development background) to use visual drag-and-drop tools to develop applications; the use of actual written code is kept to a minimum. And capabilities are designed to be re-used, so we are not coding everything from scratch but reusing existing blocks of functionality.

With re-usable capabilities already built into the platform, it is quicker for developers to learn and it is faster to develop applications. We estimate that an enterprise-quality solution can be built in four to six months, although the larger scale repairs system we built took our developer around a year to build. Building our own applications with our low-code platform gives us the ability to follow through on the ideas that our staff and customers generate.

Low-code case study: repairs

Back in January 2017, we were challenged to discover what a good value-for-money repairs service looked like. We carried out customer research, journey mapping, data mapping, technology discovery and horizon scanning and then we looked at

how this would all fit within our leadership vision.

We wanted tenants to shape the future service so we interviewed around 30 people involved with our repairs service, including tenants, customer-service agents, operatives, external contractors and administrators. Their feedback told us that we were doing some things well but the customer and user experience fell short in some areas, such as from setting initial expectations of the repair right the way through to completion, where a significant number of tenants felt that they were not being listened to and thought that providing feedback was a pointless exercise.

From these insights, we developed some service-design principles (which we think are actually global principles for us around service design): listening to customers; getting things right first-time; enabling smooth and transparent customer journeys; being proactive in communications; enabling tenants and staff; and having well-defined service standards.

People and workstreams

Of course, getting to the desired new service doesn't just involve the provision of shiny new IT systems; first and foremost, this process involves people. For us, technology was just one workstream – we also had a workstream for our service-level agreements with our tenants and staff, and having more integrated ways of working. We also had a workstream for engagement, which included setting up a new user group and providing better external communications.

Our technology workstream consisted of building an end-to-end repairs system. This included a new repairs portal, a new scheduling app (including allowing repairs to be rescheduled when necessary) and a new mobile workforce app for our

Building DIY systems in low-code – A pragmatic alternative?
Continued from previous page

operatives. Good design has been crucial to providing software that meets users' needs. In key areas, we used professional UX designers alongside a prototype-and-test approach to ensure that the quality was up to the right standard. Our tenants tested our wireframe prototypes before we developed our applications and this feedback went into improving the screen designs.

In conclusion
We hope our use of low-code will lead to clear and consistent standards, a better service experience, and the ability to act

on insights with better decision-making and more efficient operations.
Our new projects in the pipeline include building our own asset management system (starting with compliance), improving estates inspections, void repairs and improving the design for our back-office users (who didn't get the benefit of professional UX design during our first iteration).

While it is tempting to try to achieve everything at once, this is an iterative process. We don't need to achieve everything at once; instead we can do

things in bite-sized chunks. With our low-code platform, we can be genuinely flexible, experiment and learn. In short, we think this gives us the ability to innovate into the long-term.

Paul Turner is the systems and performance manager at Adur & Worthing Councils.

Cathcart & District Housing signs with Designer Software

Cathcart and District Housing is now live with Designer Software's web-based HomeMaster software.

Christine Leitch CEO, Cathcart and District Housing, said, "The process of changing from our old Windows-based, on-premise system has been very smooth and the commitment from the project team at Designer Software has been exemplary. Our staff find the system very intuitive and the ability to have access to HomeMaster on any device, irrespective of location,

will certainly improve productivity. A significant benefit is that HomeMaster will produce reports that align exactly with the format needed for our ARC submissions.

"The other benefits to us have been the efficiencies gained by our main contractor's adoption of HomeMaster and the implementation of functionality from Designer Software which drives the recharging of costs to owner-occupiers as well as the real-time recording of information relating to repairs and maintenance projects."

Thorngate Living selects HomeMaster as its new HMS
Design Software has also signed up Thorngate Living, a Gosport-based provider of assisted living and independent care, for its HomeMaster software.

Anne Taylor, CEO, Thorngate Living, said, "What we like is HomeMaster's flexibility and ease of use, and for us, one system provides everything we need for both our sheltered housing and care homes. With HomeMaster, we can record everything from financial information through to comprehensive property records for all of our residents in one system."

Craig Brock, COO, Designer Software, said, "With our web-based, hosted solution available on a subscription basis, Thorngate's implementation of HomeMaster opens up new opportunities for us in the care and support sector."

Bringing IT together – An interview with Castleton Technology

Dean Dickinson, CEO, Castleton Technology

Castleton Technology is one of the fastest-growing technology providers in the social housing sector and is arguably one of the largest. Yet, its rapid growth has not been without problems, and despite an impressive track record for innovation, the company remains widely misunderstood. Housing Technology puts Castleton CEO's Dean Dickinson under the spotlight and discovers why.

> *"We're specialists in social housing; unlike some of the big players, social housing is our sole, 100 per cent focus."*

Castleton Technology's growth through multiple acquisitions has left some confusion around what the company stands for, so why the huge acquisition programme?

You're right – at the point when I came on board two and a half years ago, Castleton had already made six software acquisitions and two managed services acquisitions in just two years. The rationale was to bring together best-in-class software to provide the first fully-integrated ERP system for social housing, delivered in the cloud.

Currently, much of the market is using a collection of siloed legacy solutions; we wanted to change that by providing a cohesive, cloud-delivered approach to facilitate mobile working, self-service tenant platforms and more.

Has Castleton just re-skinned old architecture through acquiring lots of companies?

No, we have redeveloped what were already best-in-class solutions to create the APIs that facilitate integration, then added new functionality incrementally based on market response and emerging technologies.

What have been the challenges for Castleton along the way?

We inherited eight small businesses with individual cultures, all operating separately, with their own management and support teams, systems and processes, and with no real cohesion between any of them.

My challenge was to create a holistic view, integrating these diverse businesses into a single entity with common values, a consolidated back office, standard processes, consistent procedures and a single support system. Unsurprisingly, this has proved to be a challenging process, leading to high staff churn and, regrettably, a poor support experience for some of our customers.

None of this helped Castleton's reputation in the market in the short term, but ultimately it was necessary and, more importantly, it helped us to get absolutely the right people in place at Castleton.

Describe some of the strategies you've implemented since joining Castleton and the results of them.

Our twin strategies have been to focus on improving customer support services while continuing to innovate with new products designed to deliver an integrated solution.

From a support point of view, customer feedback confirmed that once they were actually reached, our technicians were knowledgeable and provided high-quality advice. The frustration lay in our poor response performance. Accordingly, our strategy has been to expand the size of our support team substantially, invest in training (including cross-team training), foster morale and improve team spirit. By the beginning of this year the impact was clear; our response rates were up to 96.3 per cent against our SLAs, with ticket backlogs reduced by 80 per cent and internally our employee 'net promoter score' has improved by 60 per cent in the last year.

On the software front, our strategy has been to integrate our entire solutions and services suite. We have innovated to help housing providers drive efficiency and provide better services to tenants. In particular, introducing 24/7 self-service technology such as our configurable Castleton.Digital web portal reduces the pressure on call centres by driving engagement digitally and more cost-effectively.

A number of customers have now gone live with our fully-integrated solution suite which demonstrates a positive impact and we've also seen customers signing long-term contracts of up to 10 years, which I believe underlines customer confidence in our integrated digital solutions. They know we'll adopt emerging technologies, continue to innovate and keep them ahead of the curve.

How does Castleton compare with its competitors' offerings?

Well, we're the only company that can provide fully-integrated systems using all our own software, and we're certainly leading the field on self-service, facilitated in the cloud.

Castleton is the first software provider to have harnessed emerging technology to develop and deliver an AI app, with help from our customer Housing Solutions. AI Manager enables tenants to communicate with their housing provider at any time via an Alexa or Google Home device, whether to check their balance, raise an enquiry or request a repair.

We're specialists in social housing too. Unlike some of the big players, who also provide software for healthcare, police

Bringing IT together – An interview with Castleton Technology
Continued from previous page

and other sectors, social housing is our sole, 100 per cent focus. We have over 600 customers in the housing sector, which I believe is more than any of our competitors.

The other thing that sets Castleton apart is the range of services we offer. As well as being software developers, we also provide managed services. So, we can truly offer a full service, including private, public or hybrid cloud hosting – and as agnostics, we can advise on the best and most secure options. In fact, some customers use us for all of their IT, from Microsoft Office and firewalls to voice IP and Skype.

> *"Castleton is the only company that can provide fully-integrated systems using all our own software, and we're certainly leading the field on self-service, facilitated in the cloud."*

We don't fear bold investments. We opened Castleton India last year, bringing 16 new developers to the Castleton team. This strategic scalability provides our customers with enhanced services, enabling us to bring solutions to market faster and more cost-effectively. We also invested over £750,000 in the latest hardware for our datacentre.

What about integration and APIs?
Yes, this is an important point. We know that legacy systems and supplier lock-in are perceived as barriers to the introduction of new products and systems' integration. However, Castleton has open APIs that can plug into any other systems, and vice versa. This means we can provide an integrated solution, whether that solution includes just Castleton software or a mix of our software with customers' existing systems, which gives them much more flexibility.

How do housing providers realistically move to a new supplier when they are already using multiple applications?
We recently completed a move for a leading housing provider; they wanted to add mobile technology to an incumbent system, so we used API technology to integrate the solution. Open APIs enable us to take a phased approach rather than a 'flick of a switch' type changeover. In this case, the housing officers used our 'Agile' technology for a year, so when we replaced the entire housing system, it was a seamless and pain-free process because users were already familiar with the Castleton front-end.

What are Castleton's biggest achievements and what of the future?
Our biggest achievement is to have created an organisation that can consistently and repeatedly deliver to customers' requirements. We have established ourselves as innovators and are sector leaders in AI, facilitating tenant self-service. We've turned around our poor support performance and we are beginning to achieve positive brand recognition.

Finally, we have attained double-digit growth year-on-year, with a 15 per cent revenue increase in the past 12 months despite the flat market. This has enabled us to continue our journey, investing in ever better services, the latest equipment and new products for our customers.

For the future, there's still a long way for us to go, but we recognise there's great potential for Castleton. We need to improve our service and support delivery further still, and better explain to customers and potential customers the breadth and depth of our offering.

Our next move is to improve our account management structure in order to provide a single point of contact for customers, regardless of whether the need is for software or managed services. This is what we refer to internally as truly becoming 'one Castleton'.

Housing Technology would like to thank Castleton Technology's CEO, Dean Dickinson, for taking part in this interview.

South Yorkshire goes live with Civica Cx

South Yorkshire Housing has completed the implementation of Civica's Cx housing and asset management solutions.

The fully-integrated solution from Civica will cover a number of areas including: contacts and assets; communications; rent arrears and voids management; repairs, planned maintenance, servicing and inspections; complaints and feedback; a contractor portal and the use of Civica's APIs for a customer portal.

Claire Sockett, head of IT, South Yorkshire Housing, said, "We're delighted to be up and running with this new digital platform from Civica. Cx will make a big difference to how we interact with and respond to customers, raising the quality of our services, helping our people to work in a more agile way and transforming our systems for a more digital future in social housing."

Spatial analytics in housing

Robert Nichols, Housing Lead, Esri UK

In the housing sector, one technology has emerged as a vital keystone. Sitting at the apex of successful organisations, it is supporting the transformation of every pillar of their business operations, from customer services and maintenance planning to housing development. That technology is GIS.

Geographic information systems (GIS) are not new to the housing sector. Indeed, over a hundred housing providers already have GIS solutions from Esri, and the vast majority of them have been using GIS to record and manage spatial data for many years. Many housing providers are now extending their use of GIS across the organisation, developing suites of GIS solutions and making them available to more employees, in offices and in the field. Through this broader use of GIS, they are making significant improvements to their asset management, customer services and operational efficiencies and successfully addressing some of the housing sector's biggest challenges.
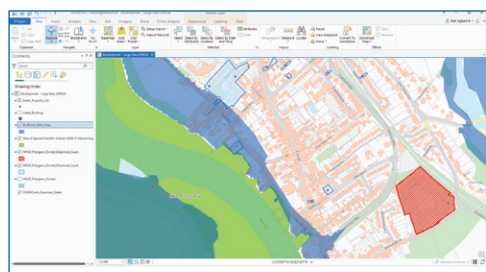
Organising vast amounts of data

Housing providers hold large volumes of data on everything from the number of tenants in their properties to the locations of lamp posts on their land. GIS provides the geographic context for all this data and allows housing providers to store all
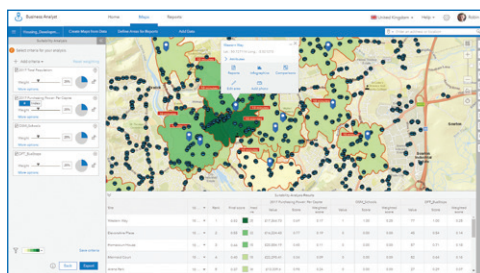
their maps, apps and data securely in one central place, either on-premise or in the cloud.

Once all data has been digitised and organised by location, it is much easier for employees to find the information they need, and this can have huge implications for business efficiency and customer service. When Red Kite Community Housing digitised its paper records and consolidated its business data using Esri's ArcGIS Online solution, the time required to respond to boundary queries reduced from several hours to just a few minutes.

Reducing operating costs

The process of organising and managing data with GIS can also provide a catalyst for significant reductions in operating costs. For example, housing staff can more easily see which land the housing provider owns or manages and then avoid paying for grass cutting and other maintenance on land that is outside its responsibility. After using ArcGIS to centralise its geographic data, Saxon Weald was able to more precisely calculate its grounds maintenance requirements, negotiate more competitive service contracts and reduce its direct costs by £60,000.

Gaining insight into tenants' needs

One of the more complex challenges that housing providers face is the need to anticipate tenants' future needs and be ready to respond. GIS enables organisations to analyse a vast amount of data, visualise the results and gain a clear insight into what can be very sensitive issues.

For instance, Sovereign Housing successfully undertook location analysis

using ArcGIS to ascertain the impact of the government's 'benefits cap' on tenants over a period of 5 to ten years. The findings were displayed on a digital map with a time-lapse slider, enabling the organisation to predict not only where, but also when, households might start to experience difficulties.

Accelerating the development of new homes

In light of the ongoing, critical shortage of housing in the UK, housing providers have an important role to play in helping to build new homes. GreenSquare Group has used GIS to help it identify suitable development land faster by analysing property types, access routes, land ownership, housing demand and many other factors using ArcGIS. The organisation has also reduced the time needed to carry out feasibility studies for new development sites from 10 days to two by removing the need for multiple site visits, physical meetings and manual processes.
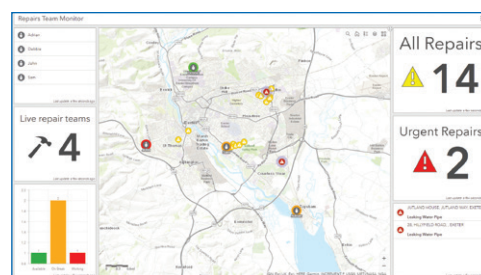
Sharing information with partners

The inability to share information easily with partners can be not only a frustration for housing providers but also a hindrance to strategic planning and decision making. GIS makes it very easy to share information between teams and work collaboratively with other organisations. Sovereign Housing has found ArcGIS Online particularly effective for sharing information about potential new development sites with nearby councils in a visual format. The information displayed using ArcGIS can be easily understood by everyone and helps to initiate negotiations

Spatial analytics in housing
Continued from previous page

about new, mutually-beneficial housing projects.

Working effectively in the community

Much of the work that housing providers do is in their communities, so improving mobile working is often a key goal. There are a wide range of mobile GIS solutions that improve the efficiency of processes in the field by streamlining data collection, automating manual tasks and giving employees the information they need, when and where they need it. Bracknell Forest Homes uses ArcGIS mobile solutions to deliver its 'smart working on the go' strategy and has saved thousands of pounds by freeing up its staff for other activities. The organisat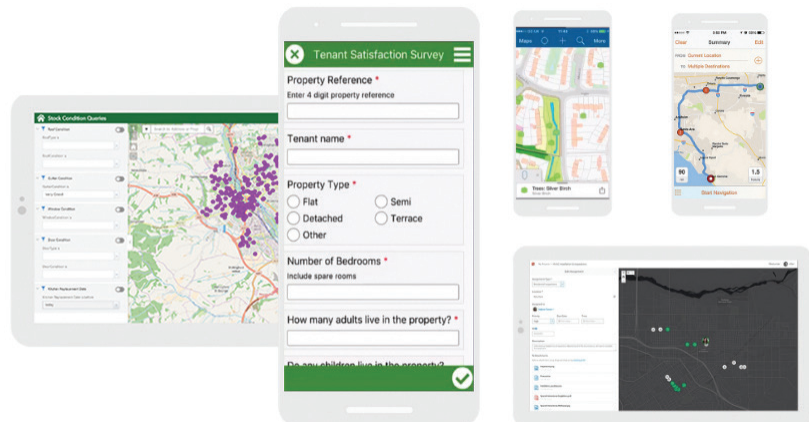ion's 'tree team' can now manage 10,000 trees with just two members of staff, and share accurate information about the condition of trees with both internal and external stakeholders.

Improving customer satisfaction

Achieving customer satisfaction is the ultimate goal and yet also a common challenge. When a suite of GIS solutions is implemented successfully to transform end-to-end processes, it can have a very positive impact on the customer experience. Indeed, when Flagship Housing created a brand new, GIS-enabled process for grounds maintenance, it began to receive 50 per cent fewer calls into its contact centre relating to failures in the grounds maintenance service, while at the same time it received dozens of unprompted calls from happy customers, praising the improvements to the service.

All these examples show that GIS is no longer just one brick among many in a housing provider's IT department, used to fulfil a single purpose. Rather, GIS is a now an important keystone that supports business transformation across all business functions, for all employees, in offices and in the field.

So, when housing providers need to improve their customer service, develop new housing faster, reduce their maintenance costs and plan for the future, they can do all of this and more using one technology: GIS.

Robert Nichols is the housing lead for Esri UK.

IT as catalyst or enabler?

Does IT drive your business plans or vice versa?

Harneck Chilemba, Managing Director, HAC Housing Consultancy

The ubiquity and pervasiveness of IT in business today presents a dichotomy when it comes to an organisation's strategic planning; like the chicken and the egg, should IT dictate your business plan or should it be vice versa?

Having been a finance director at five housing providers, three of which involved me acting as the senior management lead for both finance and IT, it is a dichotomy that I've had to wrestle with many times. Fortunately for me, I virtually had total control over the business planning in all three organisations and was able to happily fudge the issue!

The challenge for most organisations is that while IT is universally accepted to be the lifeblood of every organisation, to the extent of it posing an existential threat to the organisation if it's not got right, IT is also very technical and very complex. As a result, planning for IT initiatives is necessarily the preserve of IT experts. Even finance directors can't claim to be conversant enough with what is going on half the time. However at the same time, strategic planning is the preserve of the board through the senior management team and ultimately the finance director.

The business planning process

In most organisations, business planning starts with the board and senior management conducting a review of the

IT as catalyst or enabler?
Continued from previous page

organisation's direction for the next five to 10 years. From this, the finance director formulates a business plan, usually with financial forecasts for the next 30 years. The 30-year planning period is based on a standard requirement for lenders (especially lenders of transfer housing providers) over which to judge the organisation's long-term viability.

The big spenders
Depending on the organisation's lifecycle, most of the ramping up of expenditure in a housing provider's business plan falls within two areas, new development and major works.

Indeed, in terms of financial modelling, peak debt (which determines the maximum amount of borrowings you need to have in order to survive) was always determined by the level of new development and major works included in the business plan.

However, over the last ten years, spending on IT and IT projects has tended to be the third largest area of spending. The main reasons for this are:

• The speed of change that housing providers have had to endure, mainly due to ever-increasing regulatory pressure to deliver value for money, year on year;
• The growing demands for improved customer experience;
• The speed at which IT has had to evolve in order to deliver more for less has meant most legacy systems have had to be replaced.

It is a combination of these three pressures that has raised IT's importance to a level unforeseen even as recently as 10 years ago.

When I started off in housing, there was one thing that my then-boss and finance director used to say (and I've heard repeatedly over the years): "if there is one area of our operations where a single mistake could sink us, it is [property/building] development".

Indeed, over time, a number of providers have failed due to mistakes made in either the controls associated with one or more large development schemes or quite simply getting their financial assumptions wrong.

The prominence of IT
Today, the threat of getting your IT wrong has risen to a similar existential level of risk for both housing providers and

commercial organisations. IT failures are now, or should be, high up in the rankings of any organisation's risk map.

From a regulatory point of view, the HCA continues its pressure on housing providers to deliver VfM and also publish their VfM metrics, and the government's recent Green Paper suggested that housing providers should publish a consistent set of KPIs, and both of these metrics require accurate data. Furthermore, these metrics are likely to form the basis of future league tables, on which access to grants for development may be predicated.

The HCA has also put housing providers' boards on notice that they are accountable for ensuring that the evidence they see in VfM reporting is accurate, timely and supports both compliance with the regulator's current VfM standard and the probable new reporting requirements to customers on service-delivery performance.

The prominence of data
As a result, swift access to accurate data is becoming fundamental to any housing provider's ability to perform efficiently. Why? Because it empowers them to make sound, data-led decisions which in turn underpin good governance, compliance, assurance and the ability to manage risk.

Access to accurate data is also essential to delivering services effectively online so that customers can self-serve without the need for housing staff to intervene. This is what improves the service provided and liberates staff from many routine tasks.

Is IT a business-plan enabler or catalyst?
It's a tough dichotomy. As stated above, IT can pose an existential threat similar to development risks because of the large amounts of money now involved and the organisational paralysis that can result when the wrong system has been deployed or a perfectly good system has been implemented wrongly.

At the same time, IT is crucial in delivering the operational efficiencies required for any business to survive. It therefore follows that IT plans must necessarily inform the financial plan, or at least for the next ten years of the business plan.

It was fortuitous for me that at three of the housing providers I've worked at in the last 20 years, I was the finance director with responsibility for both finance and IT; it was

therefore unnecessary for the IT manager to come 'cup in hand' to request funding for the IT programme. I was able to obtain board approval for the IT programme by simply explaining to the board that we either funded and implemented the IT programme or we would die!

It was on the back of this combined finance/IT role that, at one of the organisations I worked, we were one of the first housing providers of our size to implement server virtualisation well before some of my colleagues could even spell virtualisation, data management systems (including workflow) using the latest technology, and replacing our IT department with a fully-managed service provided by one of this sector's most successful outsourcing companies.

Each of these initiatives not only involved large sums of money over the life of the business plan, but each was also a 'game-changer' in its own right and required a step-change in the way everybody in the organisation thought and worked.

The current status
Here is a quote from a recent study from The Economist entitled 'Data is the New Oil': "The world's most valuable resource is no longer oil, but data. A century ago, a 'new' commodity spawned a highly-lucrative, fast-growing industry that probably impacted the world's economy more than any other. This commodity was oil".

Now, similar statements are being made about data, which is the oil of the digital era. This is evident from the fact that today's most valuable businesses in the world are Apple, Amazon, Google, Microsoft and Facebook.

A recent survey from Altair of 50 housing providers' use of technology to effect change found that the top three drivers of transformation are improving customer experience, increasing efficiency and the implementation of a new corporate strategy. The survey reported that:

• 98 per cent of housing providers are planning or are currently implementing some form of transformation programme;
• 90 per cent of respondents described themselves as either 'early adopters' or 'early majority' in terms of their approach to innovation and transformation;
• 61 per cent described themselves as either 'digital fashionistas' or 'digirati' in terms of their approach to digitalisation;
• But 89 per cent of housing providers

IT as catalyst or enabler?

Continued from previous page

currently have less than 40 per cent of their customer transactions completed online.

When the respondents were asked to look forward to 2025, the results were as follows:

- Over 75 per cent of housing providers expect to be using technologies such as smart devices, chatbots, offsite manufacturing, big data and apps as part of their core approach to service delivery;
- Over 50 per cent of them see an opportunity for greater use of artificial intelligence in the delivery of services.

Folks, this is just six years away!

And that's far too slow in comparison with leading commercial organisations. Indeed, let's turn to the commercial world is to see what the brave new world might look like.

Big data

It's well-known that the volume of data we need to handle today has exponentially grown to a degree beyond human capabilities to process.

Most of the factors that we need for digital are in artificial intelligence and in the cloud. These technologies require massive computing power, the likes of which our in-house data centres will no longer be able to cope with.

Data analytics

More and more commercial organisations are deploying data analytics to solve the most complex problems; big data underpins these powerful analytics, with data science enabling AI-based solutions.

And while the need to drive efficiencies has been a key driver for innovation, technologies are already moving onto the next phase which is being referred to as 'living services'. A 'living' business is one which is wired for flexibility and has the ability to shift and reshape as the external environment and expectations change.

Beyond VfM

In this brave new world, being efficient is no longer the main goal; being adaptable is. This involves rewiring the organisation around achievement of the best possible customer experience. Customers will want to engage with you via all of their channels, not just on yours. And in this new brave world, your customers are the innovators, and millennials (as your future employees) are not too far behind.

In housing, we need to start thinking, planning and catering our services to millennials as our future tenants, most of whom are teenagers at present.

Conclusion

In my view, a lot depends on the level of IT representation within the organisation; for example, IT representation is often missing at board level. The finance director tends to exert more influence at board level because he or she produces and presents the business plan and can override all other directorate priorities, including IT.

Thankfully, this is changing in large corporate entities where IT professionals are learning to be less geeky and more commanding in their presence on the board.

So, in conclusion, whether IT in this context can be viewed as either an enabler or a driver of the business plan can perhaps best be answered by this question: would any organisation survive by burying its head in the sand and hoping that the torrent of IT developments and new ways of working are nothing but a fad that will pass sooner or later?

I think we all know the answer to that question!

Harneck Chilemba is the managing director of the HAC Housing Consultancy.

Housing Technology's Connected Communities 2019

Housing Technology and BT Business are making our annual visit to the BT Tower in central London to host our new 'Connected Communities 2019' one-day event on Tuesday 10 September 2019, kindly sponsored by Aareon, Castleton Technology and Itica (more to be confirmed in June).

With its core themes of 'analyse, predict & inform', Connected Communities 2019 will cover how housing providers can streamline their internal operations and tenant engagement through innovations in self-service, CRM, data management, 'mobile first' delivery, process automation, AI, analytics and business intelligence.

The event will open at 9am on Tuesday 10 September 2019, followed by a carefully-chosen series of business and IT presentations in the BT auditorium, interspersed with lunch at the top of the BT Tower. The event will close at around 5pm.

Please note that the speakers and presentations for Connected Communities 2019 will be announced in June 2019. Please contact alastair@housing-technology.com if you or your organisation is interested in speaking at or sponsoring this event.

Please see www.housing-technology.com/events/bt19 for further information.

Delivering the 'wow' factor – From traditional HMS to Microsoft Dynamics

Debbie Chun, IT Programme Manager, Wandle Housing

Wandle aspires to deliver a 21st-century customer experience and has taken the decision to transform its business so that it's flexible enough to support this vision and deliver the 'wow' factor to its customers.

Our new system is designed to enable service delivery that is no longer on the back foot; it promotes the principles of apologise, learn, don't repeat, follow through and follow up, and perhaps most importantly, pre-empt problems.

Pre-empting problems

Our project started in October 2017, when faced with an outdated and soon-to-be unsupported system, high costs and low customer satisfaction, we needed to act fast and think differently. When we bought our 1980s-style system, everyone else was buying Apple, and thinking back you wonder what were we thinking and why didn't we notice that the world was changing? Determined not to make the same mistake we engaged 3C Consultants to help us explore our options and to build a business case for change.

Deploying Dynamics

Our solution was to deploy Microsoft Dynamics around our existing housing management system, enabling an incremental shift and giving us time to plan how we will eventually move our rent accounting out of the legacy system. We had an immediate need to capture our asset data in one system so we decided to buy an asset management system that we could integrate with Dynamics for customer-focused processes. In addition we bought Microsoft Power BI and Azure so that we can fulfil our vision of becoming a data-driven organisation.

Dynamics was an obvious choice for us because it gave us the flexibility we were looking for and enabled us to build a customer-centric system which supports simple processes and provides a single view of the customer.

Our business case was approved in May 2018, the procurement ran from then to June 2018 via Crown Commercial Services, and we awarded contracts to Blacklight Software for Dynamics, Power BI and Azure and to Civica for Keystone in September 2018.

Embedding our guiding principles

As a business, we had established our guiding principles and sought to embed these from the outset; we wanted to ensure that all customer journeys were co-designed; transactions were designed for first-time resolution; data was captured once and used many times; and new technology was embraced to maximise value for money.

We opted to use Workplace for Business to engage customers in co-design, setting up an innovation lab for them in 2018. We are steadily building membership, with 70 customers signed up for a live Q&A session on repairs in January 2019. The suggestions and feedback from this session have since been fed in to our internal workshops and will help to shape our new processes and services.

Our complaints tool went live in Dynamics in February 2019 after Blacklight had worked with our business ambassadors to ensure that the new process enables first-time resolution, empowering front-line staff while improving reporting and accountability. In doing so, we took a leap of faith and moved away from the 'budget-holder block' that so often frustrates a smooth customer experience.

The anti-social behaviour and fraud tools also went live in February. We designed these processes to ensure that the data we already hold is used to populate automated emails and letters; our staff can now simply send the communication out or add in additional details specific to the case.

Favourable licensing

In terms of new technology, we secured a very good licensing deal from Microsoft and we can use Workplace free of charge, maximising the value we are getting from our new software while benefitting from its amazing features and functionality.

Civica's Keystone asset management software went live in March this year and while this was a quieter go-live in terms of the number of users, we were keen to ensure that our staff could maximise Keystone's functionality. The mobile devices previously given to our surveyors were no longer suitable so we invested in new kit to ensure ease of access while out on site.

Communication and engagement have been key to the success of our project so far. Daily stand-ups helped to not only manage project actions but also to engage and raise the project's profile across the whole of the business, with team meetings and all staff briefings allowing us to communicate the "what's in it for us?" messages. Our latest initiative on Workplace is to build a chatbot which can answer FAQs on the project and new processes as they go live.

Resistance to change

Things haven't been completely plain sailing and there were a number of problems which we have had to overcome, resistance to change being the biggest and trickiest to address. In this end, Wandle has invested in a change management programme to help its people to manage change and understand where they fit in with our future vision; this programme saw every member of staff attend change workshops and a consistent set of messages delivered about our rationale for change.

Delivering amazing customer service is our top priority and in only a few months we have taken a huge leap towards achieving our vision.

Debbie Chun is the IT programme manager at Wandle Housing.

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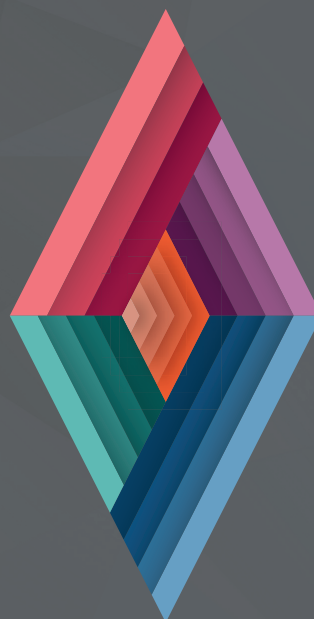
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CASTLETON

Moving to 'compliance plus' with IT

Stewart Davison, Business Development Director, Gas Tag

It's probably one of the toughest times to be a social housing provider so that's why the housing sector must evolve and embrace technologies that can help meet increased demands, alleviate day-to-day pressures and ensure our tenants are safe.

When it comes to gas safety, we need to avoid the trap of finding other responsibilities that may be deemed to be more pressing or urgent to deal with because "gas looks after itself".

And rather than say the obvious thing and explain that gas safety should be an equally major consideration for all housing providers, perhaps the time is now right to re-assess how things are done when it comes to gas management? Remember, the social housing regulator asks the sector to "think beyond statutory compliance".

That's why I would encourage every reader to seek out technologies that improve efficiency, support best practice and take away some food for thought regarding your current gas safety management process.

Maintaining workforce standards

Whether outsourced or in-house, there needs to be a process to ensure that visiting engineers have the correct competencies and are qualified to complete work at the property. Research by the Gas Safe Register finds that tenants in the UK don't tend to ask the engineer for ID and as a consequence an estimated 1.1 million illegal jobs are carried out every year.

Technology exists to help remove the administrative burden of manually checking those credentials and, more importantly, verifies that the engineer has the relevant Gas Safe qualifications to do the work safely.

Managing access and evidencing attempts

No access to a property is a frustratingly common issue and is estimated to cost the sector over £500 million over the next ten years; each attempt costs around £50 and first-time access rates can be as low as 30 per cent. But how do we know if the engineer has actually attempted access? How do we know the best time to gain access?

Again, technology can provide the answer. Providers can use technology that will prove the engineers attempted access by time- and date-stamping, recording their location and demonstrating real-time photographic evidence of the attempt. We can also use predictive analytics from data collected to make informed assumptions around the best times to reach tenants and avoid wasting time and effort on missed appointments.

Driving positive engineer behaviour

Each time an engineer visits a property and completes work, without technology we can't know for certain if the work consistently met the required standards. Even if an engineer has the correct qualifications, there are still on-going industry-wide issues regarding poor workmanship. A 'Which?' consumer report found that eight out of 10 qualified engineers who conducted a regular annual inspection failed to meet legal requirements.

To help tackle this issue, providers can implement systems which guide engineers and standardise the process of servicing, with prompts to remember each action via smartphones. All work can be stored in the cloud, available for analysis at any time, helping providers to identify the areas for improvement.

Unlocking true compliance

We need technology to understand where we're truly at when it comes to safety and compliance. It could be said that we have more technology available to us when ordering a pizza or taxi and often we're committed to old methods which lack the transparency required to make sound judgments.

It's not that we don't ask the right questions, but it's whether we ask them in the right environment to the right person. In academia, when any meaningful research is conducted, there are measures taken to ensure that the respondent(s) selected have no biases and are placed in a neutral environment that won't influence the response.

In any pressured work environment, where our reputation is questioned, it's almost a knee-jerk reaction for us to protect ourselves and say that we know the answers, when the reality is that we sometimes don't. Through applying technology that can give us the assurance needed to give confident answers, we can prove that properties are safely maintained because we have the real-time evidence to back it up.

As the sector evolves and the management challenges intensify, we need to be brave and seek technologies that can simplify our everyday working lives.

I believe the phrase 'transformation' insinuates that there is a lot of effort and a major overhaul involved, thus we create mental barriers to procuring new technologies which are in actual fact a fairly simple decision, often with minimal effort for maximum output.

We can't say that technology will eliminate all of the problems that we face as a sector, but the right technology can be used as a tool to help us do the absolute best we can. After all, compliance is a journey, not a destination.

Stewart Davison is the business development director at Gas Tag.

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Financial dashboards – Using graphics to monitor and understand finance

Simon Musgrave, Director, Musgrave Analytics

Many organisations face the challenge of communicating complex financial information to their board and other stakeholders. This is particularly important given the need to understand risk in mergers and acquisitions as well as planning major developments and on-going operations. This article explores the use of interactive graphics and dashboards to monitor performance and understand complex risk scenarios.

Management reporting focuses, quite properly, on the accuracy of the information. However, the requirements of non-financial decision-makers to fully grasp financial performance are growing. They need to be able to:

- Monitor the current status of VFM (value for money) ratios and loan covenants, comparing them to historical levels, external benchmarks and budgets.
- Challenge corporate plans by running high-level stress testing via 'what-if' scenarios.

In addition, they may also want to:

- Drill into the detail of expenditure codes, displaying values over time, creating alerts of budget variances and viewing standard reports such as monthly income and expenditure.
- Ask detailed questions such as: is performance good enough; is it as good as it can be; is it actually changing, either arbitrarily or in response to management changes; and are there any particular issues in the detail, for example in specific housing areas or teams, that might be missed in the high-level views?

Key questions addressed by analytics

	PAST	PRESENT	FUTURE
INFORMATION	What happened? REPORTING	What is happening now? ALERTS	What should happen? PLANS
INSIGHT	Why did it happen? STATISTICAL MODELLING	What is the best action? SCENARIO MODELLING	What will happen? FORECASTING

Working closely with key clients, especially Together Housing Group, Musgrave Analytics has built up a suite of executive, operational and analytical dashboards focused on providing everything from high-level overviews to operational alerts and financial forecasts. This article explores the key elements of these tools. Dashboards and reports generally can be directed at the past, present or future with a focus on information or insight, as illustrated in the table above (adapted from 'Analytics at Work', Davenport et al, 2010, p7).

While we work with all types of content, this article is focused on financial data. A common client refrain is the desire to see just 'one version of the truth' and in housing (as in most sectors) there can often be a divergence between the data from finance and operational systems on key issues such as rent collection, arrears, and repairs and maintenance. Divergence may be the consequence of different timings and definitions as well as errors in the data. It is important to ensure that data from all systems is as accessible and understandable as possible so that users know what they are looking at, can understand their relevance and grasp the key messages promptly.

To this end, we have been working on developing financial dashboards which seek to present complex data as simply and clearly as possible, using graphics wherever they are helpful. It is essential to address the concerns of those key stakeholders who may not be financially trained, but who are deeply concerned about the strategy and challenges facing their organisations.

VFM monitoring

The Social Housing Regulator requires each housing association to report their value for money ratios; to quote from the specific expectation (2.1d): "Registered providers must demonstrate: [d] that they have appropriate targets in place for measuring performance in achieving value for money in delivering their strategic objectives, and that they regularly monitor and report their performance against these targets."

Monitoring VFM ratios
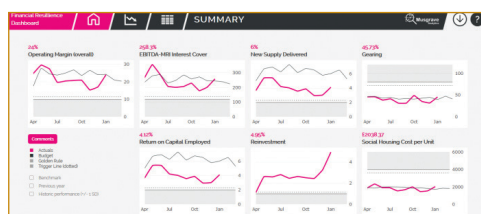
While there is a clear process to submit the VFM scores annually, the on-going monitoring doesn't have any formal methods. With Together Housing, we developed a dashboard that makes it possible to demonstrate that this expectation is addressed. The figure above shows a display of the seven ratios.

The pink line is the actual value over the current financial year, the grey line is the budget. The grey shaded area is 'golden rule'; in other words, the values that should not be reached and the dotted line near that shows the trigger line, which indicates when planned contingencies are activated as the operational risks have become acute.

To help monitor performance, there are also options to show benchmark values, such as those from Housemark, a band

**Financial dashboards – Using graphics to monitor and understand finance**
Continued from previous page

showing historic performance or simply the previous year's values.

In depth assessments - scenario modelling and forecasting

Going beyond simply monitoring, a board also needs to know what might happen in various circumstances. The regulator's guidance is: "We have reinforced our expectation that boards take ownership of their organisation's stress testing and ensure they understand the impact of economic cycles as well as one-off shocks on their businesses."

Real time scenario modelling
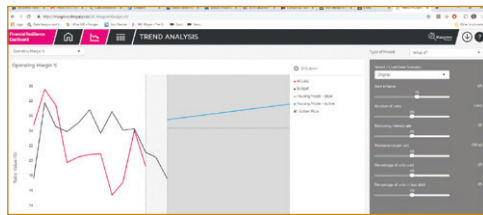
The objective of stress testing is to be able to understand the key risks and how they interact. The figure above shows an interactive dashboard that can be used in board meetings to explore the impact of any of the key risk factors on the VFM ratios.

The more data-literate board members expect to be able to interact with data in this way and these tools facilitate this. Live scenario modelling requires a full financial model in the background. In the example above, this is done using R (the statistical computing language) which re-computes the financial model as soon as a slider is adjusted.

A further advantage of using an environment like R is that sophisticated forecasts can be generated that project time-series data into the future. Where there are clear trends and seasonal patterns, the value of a series can be projected with a good level of confidence.

Monthly reporting

While the board or senior executives wish to monitor the main ratios or explore the risks, the financial manager wants to ensure that they understand the current data, and although accountants are obviously skilled at reading tables, using graphics makes it easier to spot trends and anomalies. The screen in the figure to the

Graphical financial reporting
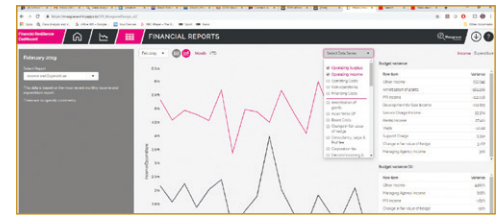
right allows the user to see any number of series on a graph with a completely flexible time-horizon, as well as presenting data in a tabular form.

Conclusion

Good analytics requires the merging of multiple skills in IT, design, statistics, data management and of course, the business domain itself. This article argues that the design of good dashboards can make a significant difference to the understanding of risk and the delivery of sound performance.

Simon Musgrave is a director of Musgrave Analytics.

Mobile surveying – More than just data capture

Graeme Reid, Director, Hub Asset Management

In my other life as the owner of a surveying company, we have completed a lot of stock condition surveys over the past 15 years; probably around 150,000 surveys spread across every conceivable property type, and from remote island communities to dense, city-centre developments.

During that time, our methods and processes have developed to keep pace with changing requirements, housing standards, data demands and the available technology. We started our survey work using paper forms that were manually input into spreadsheets and evolved into using some software designed for mobile data-capture running on a variety of hardware from Psion Workabouts (remember them?) to 10" tablets. The problem with all of these data capture solutions was that they were designed by very clever developers who have clearly never spent a whole day on site using their own products.

Good condition surveyors are in high demand and, in many cases, work on a freelance basis, being paid per survey. They are therefore very motivated by productivity and the efficient use of their time in each property. There is clearly a balance between ensuring that correct, accurate and robust data is being collected, inconvenience to the tenant is minimised and the surveyor is getting through the survey and out to the next property. Good survey design is therefore crucial.
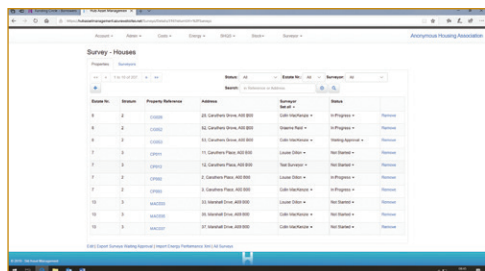
After trying various products, we decided that the only way to get what we needed was to develop it ourselves and so Hub Surveyor, the companion product to Hub Manager, was born and in doing so we

Mobile surveying – More than just data capture
Continued from previous page

have identified a number of key factors that differentiate the good from the bad.

Size
Several providers in the sector have developed data-capture tools to run on tablets or laptops. While these may look great in the office, anyone who has tried carrying one around with them for a day (let alone three weeks) while climbing ladders, knocking on doors, measuring room dimensions or just keying in data with one finger will tell you that they are a pain – quite literally!

They are too heavy and cumbersome, you can't put them in your pocket when you need both hands (or when you'd rather not been seen walking about carrying an expensive piece of hardware in your hand), and if you put them down, you need to remember to pick them up again. Your data-capture software should run on a standard-sized smartphone; they are light, easy to use, you can put them in your pocket and most apps can be downloaded to a surveyor's own phone so you can reduce costs. And if you think the screen is too small to see all the information you want the surveyor to see, you're showing them too much (more on that later). So trust me, size does matter!

Don't keep tapping!
A typical condition survey might include around 120 questions relating to component specification, age, quantity, compliance and so on. Every time a surveyor selects a response or responds to a request on the survey template, they have to tap the screen.

Depending on the system being used and the performance of the hardware device, it may take around three seconds for the device to react to the screen tap. Each time a surveyor is asked a question by the device, they may have to chose from either a drop-down menu, key in a numerical response or scroll through a range of answers to choose a suitable response. If each of the 120 questions requires two taps of the device, that's 720 seconds or 12 minutes, waiting for the survey software to

process the surveyor's requests.

We have seen several systems where surveyors have to make multiple taps to simply allow them to progress from one question to the next. In the above example, if each of the 120 questions required two further taps that's an extra 12 minutes for every survey. Our surveyors complete an average of 10 surveys per day, so that's an extra two hours of a surveyor's time that could be better spent completing a further two or three surveys each day instead of waiting for their software to keep up. So our advice is to design the structure of your survey template to minimise the number of responses needed to navigate through the questionnaire and stop tapping!

Rules
It's important to keep in mind the purpose of the survey and that while we recognise the surveyor's desire to progress efficiently and quickly, we need to be able to have rules, restrictions and protocols that ensure
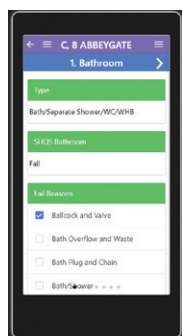
the survey is completed fully and minimises the potential for rogue or invalid data.

Rules should guide the surveyor through the questionnaire, removing invalid response options based on previous answers, alerting them to keyed responses outside expected ranges, ensuring they can't leave sections or surveys incomplete, and making it clear as to where they are in the survey in case they get distracted and have to come back to the survey.

Big bold colour schemes work well (Hub highlights green for complete and red for incomplete – it's not complicated!). The end result should be complete, clean and accurate surveys requiring minimal post-survey validation and cleansing, meaning you can confidently use the data immediately.

Need to know basis
Keep the information you are sharing with the surveyor to only that which they need to know. The more information you present to the surveyor, the more cluttered the screen becomes and the greater the scope for errors or confusion.

Structure your survey questionnaire to present the information you want the surveyor to see in a simple and clear way and avoid the temptation to add in fields and data, just because you can. This also

means that you don't need a large screen (see my earlier point) and can keep the surveyor focused on what they're doing.

Survey management
How do you manage your surveyors in the field and make sure they have access to sufficient addresses to keep them productive while retaining control over who has done what?

The data collection software needs to have a survey management function to allow you to assign survey types to particular addresses and allocate these to individual surveyors. You need to be able to reassign addresses if a surveyor leaves or a new surveyor joins the team, and this needs to be done remotely. Surveyors need to be able to upload completed surveys and download new addresses without having to return to base and the survey manager needs to be able to monitor progress and data quality on a daily basis.

Once data has been returned and is sitting in the system, the survey manager needs to be able to choose to sign off the data as being ready and to publish it ready for the end-user to access or to return it to the surveyor to amend or correct as appropriate. This survey management tool is a vital part of the survey system and it needs to be as clear, simple and efficient as the data capture process itself.

Put yourself in their shoes
The next time you are considering sending out a team of surveyors to complete a condition survey, put yourself in their shoes; no, really, put yourself in their shoes and go out for a day or two and spend some time with your device and software of choice and see if it works as well as you think it does. It's not always about shiny kit and clever graphics but more about how it does the job that you and the condition surveyors want.

At Hub, we have developed a system in collaboration with our surveyors, so we know Hub Surveyor works well, our surveyors like it and our clients get the data they want. Many of our surveyors have worked extensively across the UK using other devices and systems and so we know what is out there and we know the difference between the good, the bad and the downright ugly.

Graeme Reid is a director of Hub Asset Management.

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Low code & digital technology – Transforming tenants' lives

Kathryn Downs, Director of Technology & Transformation, Midland Heart

In March 2019, Midland Heart had the brilliant opportunity to share our digital journey so far with peers from across the sector at the Housing Technology 2019 conference.

Rewind to October 2017 and new to the sector from the world of retail, I was tasked with launching a portal for tenants to manage their rents. As is the norm for our sector, we had identified a third-party solution that would provide a range of fixed functionality for our tenants, requiring a significant investment in the software, plus the associated professional services for implementation, configuration and management of the project.

However, several things were clear at this early stage; specifically, that existing suppliers lacked the flexibility and responsiveness required to meet Midland Heart's evolving technology needs, and tenants weren't routinely involved in technology decisions.

Learning & inspiration

With this in mind, we decided to take some time to learn lessons from other organisations, visiting social housing organisations ahead of us in their digital transformation, along with looking at other markets for inspiration. From this we drew up a series of criteria essential to making a success of our customer app.

We needed to:

- Put our tenants first, not technology;
- Find flexible solutions to meet tenants' changing needs;
- Have responsive processes to make change happen quickly;
- Have the right behaviours to successfully transform our service;
- Offer tenants choice in how they interact with us;
- Involve our tenants to inform our decision making.

Trialling low code

Based on these principles, we set about assessing our options, including in-house development. A few days later, a prospective email dropped into my inbox, introducing a low-code, rapid application development package, the headlines of which broadly matched our success criteria. Intrigued to learn more, we took up the opportunity to trial the technology for free. Over the next few weeks, we assessed a few technologies and different low code platforms, formulating an approach and making the case for introducing an internal team of software developers and the procurement of low-code development software.

Our research also highlighted that just introducing a portal didn't guarantee success; we needed to digitally transform our organisation at every level, bringing our colleagues on the journey with us, and transforming our technology services to deliver the change.

Our digital transformation programme was born.

Recruitment began to build our technology team to find the software engineers, business intelligence developers and project managers needed to help design and deliver our new customer offer and introduce agile, iterative development practices. At the same time, we set about ensuring our existing team was fully on board and we had strong development plans in place.

Thinking about the customer journey and communication touch-points, we identified a programme of changes required to deliver our digital transformation, not just new apps for our tenants and colleagues to use, but also investment in our core enabling technologies such as WAN, LAN, WLAN, mobile and unified communications.

Tenant engagement

Next, with the people, technologies and roadmap in place, we started to engage with our tenants, establishing two panels to gather their thoughts; one panel met on a regular basis at our main office, the second was a virtual panel. We worked with the group to understand what was important to them, what features they would like to see and how we could best launch the app. The group met regularly, reviewed storyboards and early prototypes and later provided testing and feedback. Our tenant group has gone on to be digital champions, promoting the system to their fellow residents.

Software development started in August 2018 and by November we had a viable product and we were into the testing phase. After a series of tests including security and accessibility, we went live in late January 2019. Since then, we've marketed the app via email to 1,000 tenants to learn lessons and understand trends. Early results show a 36 per cent take-up and 90 per cent repeat use, which we expect will grow as marketing activities increase and we begin to actively convert tenants. The next stages of rollout will include promotion on our social media and website as well as on rent statements to be mailed out to customers later this year.

Meanwhile, the software engineering team has moved on and launched a contact management system for our customer hub and will launch a colleague app in April 2019 – bringing with it the ability for those in the field to report issues they see with our properties, allowing Midland Heart to provide a much more proactive service for our tenants.

Seamless data flows

All of our solutions are interconnected via a suite of micro-service APIs, allowing data to flow seamlessly between them and making change easy to effect. We have

Low code & digital technology – Transforming tenants' lives
Continued from previous page

also linked the solution to our housing management system via the same micro-services, ensuring we maintain a single 360-degree view of our tenants in order to provide a connected service.

With low-code, we have quadrupled the speed of our software development and are now well placed to deliver low-cost, responsive solutions to our business in the coming years.

Next up is an online letting system that will allow our tenants to view and apply for homes, while automating many of the manual processes associated with that, in turn freeing up time for staff to better serve our tenants.

Kathryn Downs is the director of technology and transformation at Midland Heart.

Digital agents and robotic process automation

Josh Ayres, Head of Emerging Technology, IP Integration

Although tenants can't necessarily choose their housing provider when looking for somewhere to live, they do expect their landlord to be able to deliver on all fronts, especially customer service. But how can housing providers' contact centres keep up with tenants' ever-increasing expectations and demands? And how can they resolve more complex queries while also making tenants feel that they are being heard and supported?

A new way of meeting tenants' demands
While some housing providers have already begun to explore the use of automation in customer service, with technologies such as 'autodialers' being used to help with repetitive tasks, there is still more to be done.

Helping call-centre agents by introducing the likes of digital agents, robotic process automation (RPA) and chatbots will enable housing providers to offer integrated, multi-channel customer services.

Automating routine tasks for human agents and introducing the digital agent comes with many benefits.

The introduction of the digital agent
Introducing a digital agent is far more cost-effective than integrating systems.

For example, when swapping out a system or needing to access a new one, the digital worker only needs to be shown where to go. Consequently, big IT overhaul projects aren't needed.

Introducing chatbots – applications that seek to replicate human agents – onto websites who can answer routine FAQs, such as repair requests, will be beneficial to both the tenant and contact centre. Chatbots can be assigned to complete simple tasks, such as retrieving tenant data and answering support queries, by drawing on a list of pre-constructed answers or they can use AI and natural language processing (NLP) to 'understand' comments and questions from tenants.

Robotic process automation
Chatbots can also be integrated with an RPA bot to handle more complex queries at a higher rate. Chatbots together with RPA – a type of application programmed to complete certain menial software tasks such as populating forms – create a complementary technology pairing that will help both the tenant and human agent, with the chatbot forming an easy-to-use front-end for the tenant that will trigger the RPA bot to complete more complex tasks in the background. When the tenant gets through to the agent, the repetitive tasks will already have been completed and the agent can focus on the more complex parts of the query.

Working behind the scenes
This chatbot-RPA combination could even solve the tenant's query without them ever having to pick up the phone. For example,

if a tenant wants to change their address and two systems need to be updated and a confirmation letter sent out, the chatbot and the RPA system can work together, with the chatbot gathering the tenant's new information, which will then activate an RPA process to manage all of the internal workflows. The tenant won't be aware of this and will simply receive a friendly confirmation message from the chatbot. As a result, the human agent wasn't bothered with this simple query and can spend time on a more complex call, and the tenant didn't have to wait on the line.

Better services
Adding automation also improves the level of service that is available. If human agents don't have to waste time on mundane tasks, they can offer a more personal, in-depth interaction with the tenant. Not only will the tenant feel valued, and more likely to forgive the odd mistake, but the agent will also feel more valued and more inclined to provide a better customer experience if they feel their efforts are being appreciated. Adding in KPIs and other reward incentives will ensure that agents feel they are being rewarded for providing the very best customer service.

Making tenants happy not only saves money, but by introducing digital agents to contact centres, staff and tenants alike will reap the benefits of a more efficient and personalised experience where they feel valued and heard.

Josh Ayres is the head of emerging technology at IP Integration.

Creating trust & transparency in repairs

Paul Swannell, Housing Sector Specialist, Localz

The online revolution has introduced consumers to a plethora of new instant, connected services. Companies such as Amazon, Deliveroo and Uber have created on-demand, transparent and connected experiences, putting customers at the centre of their services, and giving them control, reassurance, convenience and, overall, building trust. They are setting the benchmark for all sectors and consumers are beginning to expect the same level of service from every organisation they deal with, including field service organisations.

Impersonalised and inflexible services that don't fit into customers' routines are having a profound impact on today's consumers. Research by Localz and YouGov revealed a surprising 71 per cent of respondents felt 'physical and emotional disturbance' around scheduled appointments. A last-minute change to the time of an appointment or even an on-the-day cancellation will cause a ripple effect to the customer's daily life. And even when a repair is successfully carried out within the scheduled appointment window, the fact that most appointment slots span four or five hours still leaves the customer guessing about when to expect the operative's arrival. This lack of interaction and reassurance around

service appointments drastically limits the levels of trust consumers feel towards their landlord.

Building trust

Trust is a critical ingredient in any successful relationship, whether this is personal or with an organisation. Steve Jobs once said, "A brand is simply trust". Trust is built on a just a couple of important ingredients; transparency and the fulfilment of promises.

In other words, tell the customer what you are planning to do and when, and then make sure you do what you said you were going to do. In the first few interactions, and before absolute trust is earned and established, it's helpful to let the customer know what progress is being made towards delivering on the promise; where things are up to, what's going to happen next, and when. And when things go wrong, keep the customer updated and let them know what to expect. If things are running late, the customer won't mind so much if they are kept informed, so trust will be maintained.

In environments where interactions are frequent and where 'promises' can be fulfilled reliably and repeatedly, it could be argued that the need for transparency diminishes over time. The consumer gets used to the outcome always happening as expected; trust has already been established. Good examples include making a bank transfer, arranging a direct debit or receiving an Amazon Prime next-day delivery – they all 'just happen'. But in environments where outcomes are more difficult to predict, where precise timings are tricky or variable, and where interactions are less frequent (such as in housing repairs), then transparency remains important throughout in order to build trust over time.

So how do these principles apply to housing repairs?

Once a customer has booked a repair and has chosen a time that fits their schedule,

they want real-time, relevant information that relates to their appointment, direct to their smartphone.

This includes several communication touchpoints. Customers want to be reminded and reassured that the appointment will take place as and when they requested it, they want to know when the operative is due to arrive, to be able to track this in real-time and they want a heads-up when the operative is approaching their property. Finally, they want a quick and convenient means of passing important information to the operative without having to join a contact centre queue.

Rate your service

One of the key ingredients to successful communication, and one that is often forgotten, is the power of listening. Asking consumers to rate the service they've received and provide feedback on it will lead to them feeling important, cared for and, if you respond in the right way, listened to. This is something that Uber has done very well; by allowing consumers to rate their driver, it not only leads to customers feeling heard but also it enables Uber to improve the safety and quality of its service.

So what is best practice in housing repairs and how can transparency and trust be supported?

- Provide customers with regular updates throughout the appointment lifecycle, triggered automatically by changes in job status: repair request logged, appointment scheduled, reminders before and on the day of service. Many housing providers already offer these notifications, but this is usually where things end.
- Create the ultimate transparency by giving customers access to real-time location tracking when the operative is on their way.
- Deliver accurate ETAs that take live traffic conditions into account and update ETAs if traffic conditions change.

Creating trust & transparency in repairs
Continued from previous page

- Automatically ask for feedback after every completed job and act on those that are sub-optimal. Analyse feedback by job and use the results to monitor and incentivise operatives' performance.
- Make sure two-way communications are established, thereby making it easy for customers to tell you and your operatives important information (without having to join a call centre queue).
- Automate delay notifications so customers know if things are running late.
- Provide contact centre staff with the same transparency and real-time tracking so they can give a consistent and reliable message if a customer still decides to call.

When trust is established and maintained in a business-to-consumer relationship, the consumer is far more likely to be an advocate and ally. If they consistently receive the service levels they expect, then they are more likely to be forgiving when things occasionally don't go as expected and are less likely to vent their anger publicly or on social media. That customer will be more on your side and will ultimately become less expensive to serve because they are less likely to raise complaints, less likely to call you for updates, more likely to keep their 'side of the bargain' and will generally act responsibly and courteously.

Customer advocates
A good example of the importance of trust in social housing is the recent 'Dispatches' television programme, 'The new landlords from hell'. It was heartening to read that Sanctuary Housing had been contacted in advance by some of its tenants, saying they had been approached by Dispatches but would not be taking part.

Building trust and transparency in the delivery of repairs will help to swell the ranks of such advocates, who are more likely to take the side of their landlord instead of denouncing them. There's an even more clear-cut positive outcome from building trust and transparency and that's the reduction in the cost to serve; customers are less likely to make calls to check the progress/ETA and they are more likely to be at home when the operative arrives.

Paul Swannell is a housing sector specialist at Localz.

Manifest enables Greenfields' digital tenancy sign-ups

In 2017, the business solutions team at Greenfields Community Housing began a project to enable more agile working practices, particularly those relating to tenancy management; for example, a review had identified that over 20 paper documents were created, duplicated and manually filed for each tenancy.

The main objective of Greenfield's project was therefore to fully digitise its end-to-end lettings process, ensuring legal compliance and 100 per cent data accuracy across all of the relevant systems. Greenfields worked with the software integration consultancy Manifest Software Solutions to create effective and accurate flows of data between Greenfield's housing management system and its EDRM and mobile applications.

Emma Palmer, chief executive, Greenfields Community Housing, said, "At Greenfields, we're always on the lookout for innovative ways to improve services while finding efficiencies. The excellent work carried out by our business solutions team, support and front-line staff together with Manifest Software Solutions has made a significant and positive difference to both tenants and our own staff."

Digitisation of the tenancy management process has improved tenants' experience at many of the key touchpoints during the process. With easier access to information online and the ability to sign up from their own homes, initiating and completing a tenancy agreement is far smoother. A single point of contact and robust data accuracy provides faster and simpler communications throughout the duration of the tenancy.

At the same time, Greenfields' internal teams have benefited hugely from the project, largely through time savings, with the lettings team alone saving the equivalent of a full day of one team member each week. 100 per cent data accuracy across all systems, including pre-populated forms where possible, reduces data-input errors and duplication of effort, while information gathering in real time and greater visibility across all departments contribute to smoother operational workflows.

Through close collaboration with Greenfields' business solutions team, Manifest Software Solutions were able to map out the key requirements for both internal and external stakeholders as well as explore any limitations to the integration. Using MSS's Universal Adapter toolkit, Greenfields also tasked the consultancy with taking the lead across the various vendors involved.

Dave Carr, director, Manifest Software solutions, said, "Our Universal Adapter provides seamless integration of data streams irrespective of source, via a single hub. We remain fiercely independent so that we can work with all or any software vendors to create bespoke solutions with rich functionality that help housing providers to achieve their objectives, regardless of scale or reach.

"Client requirements often include complex integration of legacy applications as well as newer web-based services. Trying to bring together technology of different ages, and from a variety of suppliers isn't easy, but it is possible. Now we know that it can be done, what's important is to ensure that it's also accessible to organisations of all sizes in terms of project length and price point, and our independence from specific vendors is an important part of achieving that."

Richard Harvey, Head of IT, Housing Solutions

Housing Solutions takes to AI

Housing Solutions has embarked on a first-of-its-kind project, introducing AI technology via Amazon Alexa into tenants' homes. This is a revolutionary customer self-service platform, developed alongside Castleton Technology.

Our new 'digital IT' strategy, approved earlier this year, was driven by Housing Solutions' organisational objective to support our tenants. Following feedback from them and an independent survey, we recognised the ongoing need to focus on ways to increase efficiency, particularly through investment in new IT systems, to underpin the strides we've made in improving customer satisfaction.

Desktop-as-a-service

Our in-house IT team needed to ensure that the infrastructure supported growth, so they investigated the options that would support channel shift. Their findings meant migrating our core systems into a single solution on a private cloud platform hosted by Castleton Technology. This has helped us to transform our traditional IT set-up, with its on-site solution managed by an internal IT team, into a future-proof desktop-as-a-service (DaaS) infrastructure. This will remain fit-for-purpose for years to come and makes possible a more mobile workforce and digitally-engaged customer base.

The connected data environment has improved collaboration and access to the right data at all times so that our staff can work seamlessly from anywhere. We've transferred all of our paper forms so that they can be signed digitally, eliminating double-handling and duplication of work and automating repetitive tasks. We have provided all mobile staff with lightweight, portable Microsoft Surface devices that are connected to our back-office systems so that any notes made while out of the office are automatically uploaded.

Adding Alexa skills

The IT team has really raised the bar by thinking of how they could perform better and what new services they could introduce. For example, tenants like the flexibility of omni-channel communications, so we entered into an innovative and exciting collaboration with Castleton. We have adopted the 'AI manager with Amazon Alexa skill' which enables tenants to access our portal using voice commands on their Alexa device.

The self-service AI platform allows tenants to ask routine requests, such as balance details, and log repairs and update their personal information. In preparation for this service and to make sure that AI is available for our tenants, we made extensive wi-fi provision across 500 of our homes, with a target of doubling our wi-fi offering to our tenants this year. There is a video of our solution here: castletonplc.com/news/housing-solutions-ai-video.

As part of our digital strategy, we have updated our website by researching users' behaviours via Google Analytics and Hot Jar as well as gathering tenant feedback from our service improvement team meetings. As a result, we have brought our housing transfer system online in recent months and we've now added a live-chat option to our website so that tenants have the option of accessing help via their Alexa device rather than having to call to our contact centre.

More self-service

We have vastly improved our self-service portal with the help of Prodo Digital to make it more accessible as the 'go to' option for day-to-day interactions, such as booking appointments or checking a rent balance; this has resulted in our online transactions increasing three-fold.

In an age when customers can access vast amounts of information instantly, it's fundamental to a housing provider's success that they become truly digital which is why we've made online the first choice for our customers, enabling them to access our services at a time and place convenient to them.

Richard Harvey is head of IT at Housing Solutions.

Kirona bought by Advanced

Advanced has bought Kirona, the field-based workforce and resource scheduling software provider. The acquisition is intended to strengthen Advanced's ERP capabilities.

Although 80 per cent of its revenue comes from social housing, Kirona also has expertise in central and local government, infrastructure, retail, utilities and healthcare, with customers including Balfour Beatty, Carpetright and North Lanarkshire Council. Kirona's partner network includes Aareon, Civica, Northgate, BT and Vodafone alongside Capita and Orchard as housing partners shared with Advanced.

Gordon Wilson, CEO, Advanced, said, "We've been very clear about our plans to become a leader in vertically-aligned ERP software, both organically and through acquisitions. Kirona is a highly respected, strong performing brand in workforce management and represents a good opportunity to bolster our existing ERP capabilities."

A new community engagement app for housing organisations
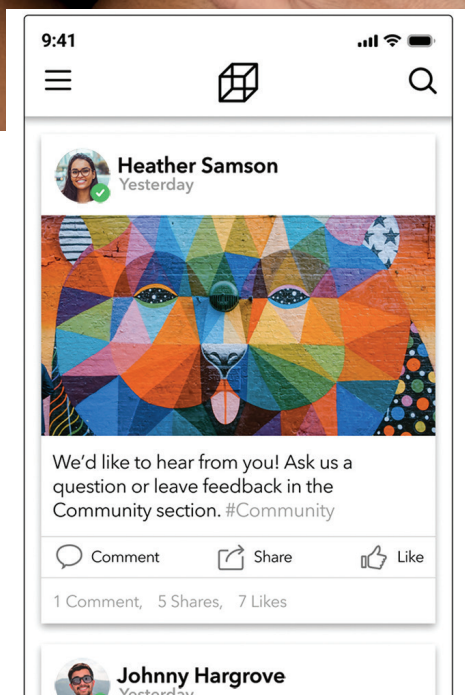
Engage first, empower second

The importance of building sustainable communities and driving high levels of community engagement was a key theme at the recent Housing Technology event and features heavily in the government's recent paper titled "A new deal for social housing".

A number of recent studies have shown that effective community engagement benefits all parties concerned, but getting communities to engage is difficult.

Traditional social media platforms are often used as the "goto" vehicle for engaging with communities and are still very popular for advertising. However, a growing number of people feel uncomfortable sharing their thoughts on these public platforms, and organisations that use them to connect with communities barely reach 10% of the intended audience with their communications.

Our solution

We've teamed up with the experts at Disciple Media, to bring their community media platform to the housing sector and help organisations meet the challenges of community engagement.

You get your own-branded app with many of the good features you would expect to find in leading social media platforms, but it's private for you and your community members and all content is completely under your control. It's easy to use and extremely quick to deploy, providing a great way to promote meaningful community engagement and collaboration.

All this is rounded off with a wealth of analytics on membership, content, poll results and device usage etc. so that you can measure the effectiveness of your engagement initiatives.

The platform can be used to support any type of community and is in live use supporting pop group fan bases (including the Rolling Stones), sports organisations, politicians, clubs and village communities. Commercial organisations are also using it for their staff as an alternative to other intranet technologies.

itica community insight powered by

Want to have a look?
Please get in touch for a demonstration.

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Digital transformation starts with identity

Stuart Young, Managing Director, Etive Technologies

What is digital identity?

Customers want a way to repeatedly access online services in a fast, simple and secure way. Housing providers, local authorities and government want to give customers quick access to online services to support digital transformation and engagement, improve social and economic inclusion, reduce customer friction and reduce service delivery costs. Yet how do you support the 'thin-file' customer and/or the digitally excluded?

The solution is to create a single legal identity that enables a one-off customer verification. This requires a single, trusted, reusable and secure identity that is owned and controlled by the customer.

### And digital transformation?

All organisations are digitally transforming the way they deal with customers. Early digital strategies focused on reducing the amount of paper used and moving towards digital transactions. These activities are based on one-to-one transactions and authentications.

Now, however, customers expect to be digitally recognised and expect to be able to use multiple devices. Combined with this is the exponential growth in technologies built around the principles of the internet of things (IoT) and ubiquitous connectivity.

This creates huge amounts of data around customers' needs which give organisations an immense picture of their customers. This requires knowing who your customer actually is, building the single customer view and one entry point to services. Consequently, digital identity is emerging as the lynchpin of digital transformation.

The 'thin-file' customer

A thin-file customer is a person who lacks the basic fundamentals to confirm their identity – a passport, driving licence and credit file. These customers are the most vulnerable in society, in greatest need of support and often the highest and most frequent users of public services. They
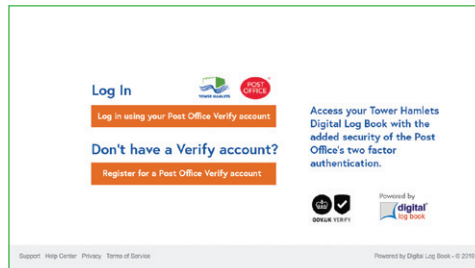
are also the most disadvantaged by this technological shift to online services.

Tower Hamlets Council is working on a project to use assured identity aligned to Gov.uk's Verify service as a single trusted verification to access its services.

The first services are tackling housing and homelessness, employment and education through an initiative called Workpath, and benefits and UC, helping to tackle poverty. Standards implemented by Gov.uk's Verify are the only legal standard of digital identity; creating one assured identity helps reduce the friction people experience when accessing multiple services using multiple access points and authentication details. A reliable solution for online identity will make the delivery of these services more efficient for the council and more streamlined for their customers, supporting greater digital inclusion.

This project is being led by Etive Technologies working with the Government Digital Service (GDS), the Department of Work & Pensions (DWP), the Post Office and Mvine to create a generic and trusted standard of identity for the public sector.

The Verify legal standard of identity

Gov.uk's Verify is a secure way to prove who you are online, and using other sources of data, we can create a trusted Verify identity, enabling customers to access services. A Verify identity can be used to access many government services, such as DWP benefits.

The DWP said, "We are intent on ensuring that we provide modern, secure and easy-to-access digital services for citizens. As

part of this, we will always look to take advantage of new and current solutions and technologies as they evolve. The world of digital identity is a key part of any digital service meaning that DWP, in line with our general approach, will look to explore a range of solutions across the spectrum of identity and trust, known as the 'pantry' approach."

We need to implement solutions that reduce the friction people experience when trying to access multiple online services. However, different suppliers to the public sector have their own ways of authenticating customers and we have our own internet access management (IAM) solutions. These have varying levels of authenticaion and security which create frustration and conflict for customers. How many different authentication details and processes do we expect our customers to use when accessing online services? It creates complexity for customers and higher costs for housing providers.

Towards a single assured identity

An important part of the solution is a customer-centric approach, where the customer has a single assured identity. A customer can use their assured identity with one set of credentials to access housing, local authority and government services. As a result, this means that housing providers, local authorities and government agencies must work together because they are all serving the same customers.

Previous work by Etive, GDS and Tower Hamlets on the implementation and adoption of a single assured identity, identified a wide range of benefits.

Giving customers the ability to control and manage their own information helps to improve digital inclusion, empowerment and customers' online journeys. Putting consent at the centre ensures that customers can manage who they share their information with, when it is shared and ensure GDPR compliance. The organisational benefits of this include reducing the ICT, security and integration costs associated with running

Digital transformation starts with identity
Continued from previous page

multiple systems which lack interoperability.

Our previous work demonstrated that a metropolitan council with a population of 275,000 people will help to make savings of over £16 million over five years, comprising £4.4 million on identity assurance, £2.5 million on eligibility checking and £9.8 million on service delivery (note: these savings don't include the costs incurred by housing providers who duplicate the same work).

Tackling fraud is another issue. It's estimated that fraud costs the public sector £7.3 billion per year, of which 52 per cent is related to identity fraud. According to figures from Network Homes, "tenancy fraud is thought to cost UK housing providers and local authorities around one billion pounds per year."

Evidence confirms that there are many cost savings to be realised across the adoption of a single, trusted and federated approach to identity.

Social and economic structures of our society

Digital identity also has implications for improving economic and financial inclusion.

Current work in the financial sector, using open banking, is assessing ways in which a single identity will enable financially-excluded people to use their verified identity to fully engage with financial services. This would enable financially-excluded people to open a basic bank account.

You can now sign a mortgage document using a Verify identity, apply for a passport or driving licence or get a DBS check.

An assured government digital identity increases convenience for the customer, reduces friction for accessing online services, enhances the control of identity and data, and will improve the process of digital transformation.

Quite simply, a digital identity is now a pre-requisite to taking part in the social and economic structures of our society.

Stuart Young is the managing director of Etive Technologies.

Sovereign's digital transformation with PowerObjects

Sovereign Housing has recently started a digital transformation strategy based on PowerObjects' deployment of Microsoft 365.

Sovereign's business case for digital transformation was built on three pillars. The first was around the strategic direction and aspirations Sovereign had for a modern technology platform to better serve its tenants, the second was a better understanding of what its tenants actually needed from a omni-channel perspective and the third was around gaining a 360-degree view of its tenants by capturing and presenting all tenant interactions in one place.

After recent mergers, Sovereign had 'inherited' different ways of working within numerous legacy systems and therefore wanted to reach one consistent way of working, and consequently a single technology platform, across all of its regions. Dynamics 365 was chosen primarily because Sovereign is a

Microsoft-first organisation, and Dynamics 365 promotes 'configuration over code'. Sam Dart, head of digital technology services, Sovereign Housing, said, "We've been impressed with PowerObjects' extensive experience and capability when configuring and deplying Dynamics 365. Throughout our procurement process, we've always felt that PowerObjects really understood what we're trying to do and articulated how they would help us reach our goals."

Sovereign started its implementation with its sales and marketing, contact centre and tenancy management teams, including the use of Dynamics 365's AI capabilities to manage tenancy requests and deliver personalised services, introduce online self-service and triage cases coming into its contact centres.

In particular, to change the way it delivers tenancy management services, Sovereign needed to schedule its housing officers centrally. Through Dynamics 365 and specifically its Field Service module, Sovereign can link its

service resources to each customer case, enabling it to get the right operative at the right time to its tenants while ensuring that Sovereign has a clear view of when, where, how and why it is scheduling its resources.

Christian Dignance, CRM product owner for tenancy management, Sovereign Housing, said, "PowerObjects are an extremely capable partner. They've given me confidence that they can deliver the vision that we've set out, and together, I think we'll deploy something extraordinary with Dynamics 365."

Housing mergers and acquisitions
– *where does IT fit in?*

Housing Technology interviewed housing experts from Clearview Systems, Itica, Northgate Public Services, Torus Group and Vantage Business Solutions on the role and impact of technology on housing providers' mergers and acquisitions (M&A).

Existing technologies as M&A drivers

Although technology is fundamental to housing providers' operations, for any providers involved in a merger or acquisition, technology is unlikely to be the main catalyst but it is very likely to have profound downstream effects both during and after the merger.

Liz Haworth, chief operations and transformation officer, Torus, explained, "When Torus was formed in 2015, we did a widespread IT review to standardise systems across the new group and enable the integration of its operations. While this didn't drive the merger, the basis of the business case was to create efficiencies in order to improve the customer experience, strengthen financial resilience and build more homes. As a part of that, IT is a key driver for transformation, as the enabler for integration and efficiency."

Northgate Public Services' director of housing solutions, Trevor Hampton, said, "The driver for most M&As is finance rather than technology. Ultimately, it's about creating greater efficiencies and delivering more social value; things like IT infrastructure are secondary to those considerations."

Clearview Systems' managing director, Mark Hobart, said, "Given the investment in IT by all parties in a merger or acquisition, the opportunity to cherry pick best practice from the combined IT estate would have to feature highly in decision making. It may also be the case that 'best practice' doesn't necessarily come from the acquiring housing provider."

Smoothing the path

Technology tends to play a more prominent role once M&A decisions have been made as a means of making the actual merger easier and faster, as well as providing the solid foundations needed to then realise the merger's intended goals.

John Doughty, director, Itica, said, "In terms of IT infrastructure, M&As are an excellent opportunity to look closely at your hosting and cloud services which could provide good economies of scale for the newly-formed organisation. Infrastructure monitoring and exploration tools can be used to stress-test the performance of the existing networks and hosting environments to identify bottlenecks and weaknesses that will need to be addressed. And as part of the due diligence process, assess whether you already have the skills in-house to migrate systems or if you'll need help from external suppliers and other specialists."

Haworth from Torus said, "I'm not sure if IT makes mergers easier, but it is critical to the integration process. Technology is key if you want to move to a common operating model with common policies and processes and integrated teams. For example, at the start of Torus, the call centre teams had two screens, depending on which landlord the call concerned; IT integration enabled us to have one screen by creating 'a single version of the truth'. Integrating data is critical to this and to realising the planned efficiencies faster."

Navigating the 'best of breed' minefield

Northgate's Hampton said, "An overall look at IT is the best way forward because it allows you to streamline processes and standardise on a few systems that manage the majority of the work. The problems arise when IT is considered as a tactical tool rather than used in a strategic way; it's the 'encounter a problem and add another system' approach to IT development. For example, a typical housing provider might have 150 separate applications to maintain for specifc business areas, so when a merger takes place, that complexity will double (at least at first), so making small tactical additions to solve specific issues will not generate efficiencies.

Clearview's Hobart said, "Aligning the IT strategy of two organisations takes time. Both organisations might have the same housing management system but that doesn't mean they have implemented them in the same way, are on the same release or have pursued the same updates policy."

Itica's Doughty said, "When each orgnaisation has a different set of 'best of breed' systems then consolidation will require careful thought, with the prospect of temporary interfaces and integration being needed between most of the components. One of the biggest barriers here is a lack of standards-based integration for processes and data."

Which post-merger systems?

Regarding the choice of post-M&A systems, Hampton from Northgate said, "If one organisation is much bigger than the other in terms of stock and employees then that may be the deciding factor. Alternatively, one organisation might have invested more in its technology and has a very modern system that works well whereas the other organisation might have much older systems that are expensive to maintain and nearing the end of their useful lives.

"It's a more difficult decision when the two organisations are of a similar size and both have good IT systems. In that instance, you have to think about which of the systems are the most scalable and flexible."

IT factors to consider

When asked about the most important IT factors to consider during M&A activities, Itica's Doughty said, "Just some of the things to determine are: the costs of

'novating' IT/service agreements to a new legal entity; the different types of licensing agreements, applicable costs, terms, renewal dates, notice periods and any cancellation fees; a map of all interfaces and integration points between each component and/or third parties; the data migration requirements to/from the different components; and any data-quality assessments."

Northgate's Hampton said, "The most important thing is to focus on the quality of your data; quality issues in the data will multiply when you bring the two entities together. Also make sure that the IT systems are efficient, reduce the number of systems used where possible, and take the opportunity to move to the cloud if you haven't already done so – that alone can offer you huge cost-savings in the long run."

Business and IT alignment
When considering how housing providers should align their new business operations, culture and staffing requirement with IT, Vantage Business Solutions' operations director, Rob Bryan, said, "You cannot de-link these things. IT is a key enabler of change but to get the most out of it, it must be part of a wider integration programme. The challenge for many organisations is that their IT capabilities are moving faster than their operational capabilities. While this represents an opportunity for IT to drive innovation, the pace has to be aligned.

"For example, robotic process automation offers a great opportunity to streamline processes, but there's little point in automating ineffective processes or if key staff don't appreciate how technology can free up time and drive greater efficiency.

"IT needs a board-level presence; the amounts of money being spent on IT and housing providers' reliance on technology to deliver change perhaps warrants a re-think. Could the savings generated from merging other key board roles free up the funds for an IT champion on the board?"

Itica's Doughty said, "The important thing is to make sure that the IT transition is a proper programme of projects and recognised as such with clearly-stated business outcomes, fully supported by all levels of the new organisation and wrapped with appropriate governance. Whatever the direction of travel, the key element is to carry out comprehensive capability diagnostics to identify gaps that must be filled in order to ensure the effective alignment of business and IT."

Torus's Haworth said, "My role includes IT, organisational development, frontline delivery and leading the transformation programme; the rationale for setting up my role was to ensure that it's all linked together. For each workstream, someone from IT, communications, data, finance and organisational development are working in the business and supporting the teams in how they deliver the change."

Business as usual or a blank piece of paper?
Is the M&A process a good opportunity to add new IT services and/or start with a 'blank sheet of paper' or should 'business as usual' take priority? Hampton from Northgate said, "In an ideal world, one would start with a blank sheet of paper but the challenge is that it then takes three to five years to build and realise a new IT vision. In the meantime, you would have to run two separate organisations under the same banner and you wouldn't see any immediate benefits.

"Set out your vision and strategy but don't forget your day-to-day 'business as usual' responsibilities – you have to continue to deliver high levels of service to tenants throughout the merger at the same time as working towards your longer-term vision."

Clearview Systems' Hobart said, "Priority should be given to processes that are underperforming. Either adopt the system that works or, if neither party's systems work well enough, implement a new one, taking the opportunity to combine forces and make efficiencies where possible."

Vantage Business Solutions' Bryan said, "The question of business as usual versus a fresh start will depend on the wider strategy of whether each organisation wants a period of 'getting to know each other' or whether they decide to 'jump straight in'. If they choose the former then that provides an opportunity to re-shape a new model that is better than either of the existing systems and services. If it's the latter then often the 'stronger' of the two parties will subtly insist that the new partner adopts their existing systems, which may not necessarily achieve the best long-term results."

'Day one' operations...
How do you achieve smooth operations from 'day one'? Haworth from Torus said, "Testing is key, as is implementing the change in a systematic way. We moved from 27 systems to seven and went live with them all in just one day. This had an impact on performance and people and there were lessons to be learned; for example, we couldn't give tenants accurate rent balances and our contact centre staff couldn't answer tenants' questions. You will always have teething problems but the more you test and pre-empt those problems, the better."

Northgate's Hampton said, "I would recommend picking, say, five champions at a management level from each organisation and bringing them together as an independent team that's part of the new identity. This way, they lose their allegiance to their old organisations and become ambassadors for the new one.

"Share IT best-practice between the two organisations, ensure that IT is represented on the executive board, have clear 30, 60, 90 and 180 day plans from the start and from a communications perspective, make sure that all communications technology is in place from day one so the two organisations can collaborate and share documentation."

M&A pitfalls
When thinking about the most common technology pitfalls associated with M&As, Itica's Doughty said, "By far the biggest 'gotcha' is data quality, particularly with legacy housing management systems. While these systems are often described as 'cumbersome', they are in fact usually highly configurable through parameters, codes, switches and other elements. This often leads to data fields being repurposed or 'local' configurations being created to cope with a particular tenant or property situation or to circumvent a lack of functionality in a particular area. These issues will take time to fix, but resolving data-quality issues and increasing data governance will pay dividends in the long term."

Clearview's Hobart said, "An over-arching pitfall to be aware of is making assumptions about the intended benefits arising from M&A activities that simply aren't achievable because IT teams weren't consulted at an early juncture. More specifically, a crucial first step is to ensure the correct alignment of information management, data quality and compliance initiatives."

Torus's Haworth said, "A lack of buy-in, a lack of testing and failing to pay attention to the data – these things really matter."

Extending Microsoft Dynamics – Going Mobile

Andrew McCormick, Managing Director, RedkiteCRM

In the March issue of Housing Technology, I wrote about how Microsoft Dynamics can be extended to tenant self-service portals; in this article I will discuss how Microsoft Dynamics can be extended to mobile devices.

There is an increasing emphasis in the housing sector on flexible working, whether this is because there is more face-to-face interaction with the tenant or whether there is more home working or perhaps a combination of both of these things. Whatever the reason, the overall trend is towards more flexibility as housing staff spend less and less time in the office. This trend necessitates that the systems that mobile workers use on a daily basis must be mobile-enabled.

Microsoft Dynamics is fortunate in that there are many options available out-of-the-box or as add-on solutions that provide this level of mobile flexibility. But before deciding to go mobile with Dynamics there are a number of factors to consider, such as functionality, ease of integration and device suitability. But probably the most important element of any mobile implementation is security.

Securing the app

When a mobile worker is out and about using their mobile device, the risk that the device could be lost or stolen is far higher than for the average office worker. Fortunately there are a number of Microsoft solutions, such as Intune (with multi-factor authentication), that can be used to secure the data for any mobile application linked to Dynamics. These solutions can also be used in tandem with other third-party, non-Microsoft applications but generally speaking, out-of-the-box security for some of the leading third-party mobile apps tends to be more robust than that which is available with

the Microsfot Mobile App. The security features that usually come with these apps feature encrypted SQL databases, device tracking and remote wipe options.

Security is probably a more important consideration to administrators than to the average user who will be far more interested in how easy it is to use. Some organisations who have successfully implemented a mobile solution often report that their mobile staff prefer to use their mobile device rather than the standard interface when using Microsoft Dynamics, and indeed this is one of the indicators of a highly-successful implementation.

The right core implementation

How do you ensure that whatever mobile solution you decide to implement is easy to use? First things first, the basic Dynamics system should be optimally configured because if there are any inherent issues with the underlying Dynamics core implementation, such as missing functionality, missing data or structural problems with the tables, these problems will inevitably be replicated onto the mobile device and will have an impact on usability. I have often seen projects halted because of such issues, when there is a dawning realisation by the business that the functionality or data needed on the mobile device is simply not there in Dynamics.

Assuming you have optimised Dynamics, the next step is to select the right mobile app for your business processes – the out-of-the-box solution may be perfect for your requirements now but will it be in the future? There are other apps on the market that are much more functional, secure and user-friendly than the out-of-the-box version, but does your business need all those extra benefits? And, of course, highly-functional software tends to come with a price tag.

Non-Microsoft mobile apps

If looking at non-Microsoft mobile apps, then there are broadly two types; apps

that are designed to integrate with Dynamics by default and apps that offer connectors to back-end systems but don't connect to Dynamics out-of-the-box. The integration of these latter apps will need to be custom developed, which isn't a problem in itself, but solutions with native integration will be far more functionally rich than the alternatives when it comes to replicating Dynamics functionality. Also when Microsoft introduces enhancements to Dynamics, those changes will inevitably filter through into any application that is designed to work with Dynamics out-of-the-box, so the safe bet for implementing a mobile solution is to either use the out-of-the-box application or purchase one designed to work with Dynamics.

As with any project, data is often the hardest area to get right, but when implementing a mobile solution, there are some unique challenges. For example, if there is lots of data in Dynamics that needs to be replicated to the mobile device, data usage and therefore data costs will inevitably increase so there needs to be a balance between managing data usage and making sure that the user has enough information on their device to do their work.

Golden rules

When it comes to configuring your mobile integration, there are a few golden rules. Firstly, less is more. Being ruthless with the information available on the screen means that there is less unnecessary scrolling and moving from screen to screen and, of course, less data is synchronised when changes are made which minimises data usage.

Secondly, let everyone decide on the type of device they want to use, I realised how important this was during a workshop when there was a divide between older and younger members of the housing team who were testing the solution. The younger team were particularly enthusiastic about having the solution on their mobile phones whereas the older members of staff were in favour of tablets

Extending Microsoft Dynamics – Going Mobile
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because the screen size made reading and viewing information easier.

Finally, think about other integrations; for example, if Dynamics integrates with SharePoint for document management then the mobile apps should integrate with SharePoint too. Also consider the existing apps and functionality available on the

mobile device – whatever mobile solution you choose, check that it is compatible, at the bare minimum, with the phone's functionality. For instance, make sure that you can make calls direct from the app, that there's in-built integration to maps and therefore route planning, and integration with the camera to allow photos to be automatically linked to a record.

In summary, if you've done everything right during the implementation stage, the biggest challenge you will face will be getting users to use the desktop app again.

Andrew McCormick is managing director of RedkiteCRM.

INFRASTRUCTURE

Digital agents and robotic process automation

Harold de Neef, Group Director for Cloud, Civica

Cloud technology and adoption is growing rapidly, with many experts predicting that 50 per cent of the UK enterprise software market will be delivered via a cloud-hosted, software-as-a-service (SaaS) model within two years, double today's figure. With cloud underpinning deeper business intelligence, improved service outcomes and being more secure and greener than before, now is the time for housing providers to reap the benefits.

Enabling technologies
Most housing providers aren't ready to migrate everything to the cloud, but they should already be focusing on building a vision for the journey. Cloud solutions offer a springboard from which housing providers can test technologies such as automation and artificial intelligence, pushing innovation further to drive better experiences for their tenants. For example, chatbots are delivering lasting benefits for companies by providing accurate 24/7 availability. Elsewhere, data analytics tools

are helping organisations to gain valuable insights into their customers and making their businesses more customer-centric. In the case of Durham County Council, by moving to Civica's cloud-based Cx software, the council has improved real-time service delivery while also tailoring communications with citizens based on their individual needs and interests.

Cloud is a culture change
The ability to adapt to sudden change is crucial in today's digital world. Adopting cloud-based solutions will require a certain amount of flexibility and adaptability on the part of housing providers, so that both staff and tenants can drive true value from the technology. For many organisations, this is an opportunity for reworking processes and reframing approaches to work.

This should be considered as a unique chance for organisations to create a culture shift, focused on driving continuous innovation and an ever-stronger dedication to customer service. The cloud has the potential to further enable a truly dynamic, flexible culture within housing providers, which can only lead to more success and improved customer satisfaction.

Finding the best partners
Both public- and private-sector

organisations are looking for ways to reduce costs while continuing to drive innovation. Put simply, the cloud is a cost-efficient investment that enables housing providers to reinvest savings back into their businesses and build better-connected and safer communities for all.

The cloud's reliability, scalability and efficiency means that organisations can consistently meet their tenants' needs without increasing costs. When replacing an on-premise solution, the benefits of the cloud for customer outcomes are indisputable. But without the technical expertise in place, housing providers should look for a trusted partner to support them along their cloud journey, to navigate the complex cloud landscape and ensure that they really drive true value from their cloud implementation.

With so many public-service organisations now unable to afford the cost of old technology, aligned with higher security and compliance standards and keeping pace with tenants' expectations, embracing cloud technologies is the only rational choice; providing the scalability critical to growing and evolving organisations.

Harold de Neef is the group director for cloud at Civica.

Salix Homes is 'rethinking housing'

Sarah Henderson, Head of Business Services, and Chris Henry, ICT Manager, Salix Homes

We live in a 24/7 world, with a culture of immediacy where people expect things yesterday. The days of a successful business operating from nine to five are over.

The digital revolution and the rise of social-media platforms have burst into people's lives, creating this 'always on' culture, making it possible to reach customers, and for them to reach us, with just a few taps of their phone at any time of day or night.

But shackled by old IT legacies and systems infrastructures, the housing sector has failed to keep up, prompting us at Salix Homes to challenge ourselves and the sector to do things differently.

In 2018, Salix Homes set out our ambitions to 'rethink housing' in order to meet customers' needs and expectations in the new world.

Our history has been far from straight-forward, nor immune from external factors, but this has given us our backbone, and the challenges we faced along the way helped set a culture of determination and 'thinking big'. This is now part of our DNA, and has given us the foundations to begin our digital transformation.

We knew that our plan to 'rethink housing' needed to be more than just words. To fulfil our ambitions, we needed a fundamental rethink of our ICT infrastructure. And so began our programme to become the first housing provider to fully embrace the public cloud. This has involved migrating everyday operations to Microsoft Azure, including applications, databases and file-store servers, domain controllers, Active Directory and desktops from a legacy on-premise environment that had thwarted our previous ambitions at every turn.

Our infrastructure is deployed over two Azure regions to provide continuity and resilience for our key services, ensuring

staff have the foundations to support the services we offer.

These technologies will allow us to offer fully-digitised services to our residents, from an Uber-style repairs platform to smart home-sensor technologies, and increase our ability to deliver significant business transformation projects.

Azure also allows us to achieve our digital ambitions and innovate our services. The platform enables us to support our investment into emerging technologies such as IoT, AI and machine learning as well as large-scale data analysis with lower overheads than a traditional on-premise environment.

And it doesn't stop there. In a world of data hacking, ransomware and GDPR, our resilience to cyber-crime is now tighter than ever.

To put it simply, this has been the single biggest ICT project we have achieved and it was fundamental to our plans to rethink our services and finally sever our last ties to our old legacy systems.

When it comes to our customers, we know that people's expectations have changed. By 2020, there will be over six billion smartphone users globally, and every person will have six connected devices – we wanted to be ready for that.

The demographic of our customers is also changing. We are increasingly providing homes to 'millennials', yet as a sector, housing is generally failing to provide the services they've come to expect in the modern world. For example, when a customer calls to report an urgent repair and we say we will fix it in 30 days, the digital generation of millennials won't accept that, and why should they?

And it was this notion that prompted us to launch a radical review of our repairs service to match consumer expectations.

Coming this spring is the launch of our new digital repairs service, complete

with chatbot diagnosis and a UX-focused interface to mirror the offering from e-commerce platforms that consumers have come to expect. Removing the friction and legacy processes from our repairs and maintenance services has been a difficult yet necessary step in being able to deliver this, and marks our next step on our rethinking housing journey.

While it may be too early to quantify the impact on improved services and processes, it isn't over-exaggerating to say that the new infrastructure will facilitate improvements across the business; we anticipate an increase in digital transactions; processes for staff and customers will be streamlined and improved; and data-informed communications will be smarter and more targeted.

For Salix Homes, rethinking housing goes beyond technology. We've been applying the same principle of 'doing things differently' across all of our services, thinking beyond the realms of what's gone before to tackle some critical issues facing our sector, most notably the housing crisis.

In a bid to create more homes, we've been repurposing empty buildings – shops, pubs, an old jobs centre – and transforming them into affordable and social housing.

The technology is minimal, but the ideology is the same; rethinking the way we do things in order to meet the challenges of a modern world with an ambitious and forward-thinking vision.

What Salix Homes lacks in age, we make up for in accomplishment, and while there's still much work to do, we are well on our way to becoming an ultra-modern and digital housing provider of the future.

Sarah Henderson is head of business services and Chris Henry is ICT manager at Salix Homes.

Smart data lakes in housing

Richard Holland, Assistant Director of Technology & Innovation, Waltham Forest Council

Waltham Forest is by far the coolest borough in London; it's located in East London and has a vibrant and diverse community, making it the ideal title-holder for the first ever London Borough of Culture.

Waltham Forest is a predominantly residential borough, with one of the smallest economies in London. High population growth during the past decade has been driven by international migration, and we have a high rate of population churn, with 74 per cent inflows from other London boroughs. We have a young demographic compared with the UK average, with over 65,000 children and young people representing about a quarter of the population and this is a big part of why Waltham Forest is so vibrant and cool.

To put it simply, we are awesome.

We do have our problems. We have a rapidly-aging population and we were ranked as the 35th most deprived local authority in England in 2015. We are under extreme budget pressures and we have to look for better ways to provide public services for less.

We have approximately 2,800 officers and 60 councillors running services for 280,000 residents. We run everything you can imagine, from collecting rubbish and recycling to building control, social care, housing, libraries, parking and roads.

We have an IT department of 70 staff, with over 150 systems, 85 customer portals and websites, and one chatbot called Walt, who allows residents to report fly tipping.

Dispersed data

We have loads of data, but it's very difficult to aggregate information to produce reliable real-time results. We have data silos, complex legacy architectures and a lack of shared insight across the organisation.

We wanted to bring information together across our systems, understand our customers and gain insights about the services we offer. We also have statutory responsibilities which we need to protect and we want to keep our streets clean and safe for our residents.

We didn't want to run a data warehouse project to bring information together and spend an enormous amount of time developing it only to realise the benefits in three or four years' time. We needed to be fast and gain immediate value from our services and, above all, the project had to be 'smart'.

Ultimately, we needed to resolve a problem, so we picked one and created a proof of concept.

Tackling rogue landlords

Waltham Forest has a 'selective licence' scheme for private landlords. The scheme is designed to allow local authorities to tackle rogue landlords who aren't taking managing their properties responsibly. Our landlords need to adhere to conditions we set in our licences in order to rent out their property. Our problem is that we don't know if we have all the private landlords identified. Social landlords and home owners are also exempt but we don't know where they all are in the borough. Lastly, we wanted to deal with antisocial behaviour and improve our communities.

The data is spread across five separate systems, So, working with Amazon Web Services (AWS) and NG Data, our first step was to match the information and create a data lake. Using the power of AWS in the cloud and Informatica technology, we were able to connect and match systems and propagate a data lake. The system was able to intelligently work across the data schemas and provide a workflow to connect to other systems. In addition, it made guesses of how to match it up, cleansed the information and introduced master data management across the entire platform.

After some minor amendments to the workflow engine to verify that the information was matching correctly, we moved on to produce a real-time dashboard to display the information. The data was in an easy-to-use format to allow officers to drill down for further investigation if needed.

However, that's not the end of the story. We could clearly see the properties that we knew about (i.e. those that were already licensed) and we also had social housing properties. But what about the properties we didn't know about?

Making predictions

We needed an algorithm which could predict the likelihood that a property could be rogue. By looking at key indicators from the datasets, we could calculate a score to show the likelihood that a property could be run by a private landlord; for example, for any property which has regular changes in council tax over a short period of time as well as changes in the electoral roll, then there is strong possibility that we have a private landlord. Again, if we look at antisocial behaviour reports and other indicators such as pest control, then we could have a private landlord who is not licensed and is not dealing with those problems.

Creating a regression model as the second step and using the power of AWS, we were able to provide indicators for likelihood and data accuracy. This means officers have percentage scorings to indicate if there is a high likelihood of a private landlord and that the data really is clean.

Smart data lakes in housing
Continued from previous page

At this point, the officer can open an investigation and look for evidence about whether they are keeping to the terms of the licence. The dashboard is shown below.
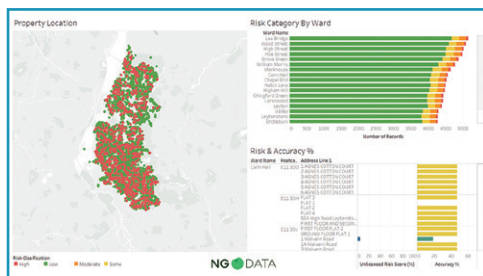
The dashboard also shows information for antisocial behaviour, fixed penalty notices, pest control and legal summons, all of which is useful indicative data to understand how a private landlord is performing.
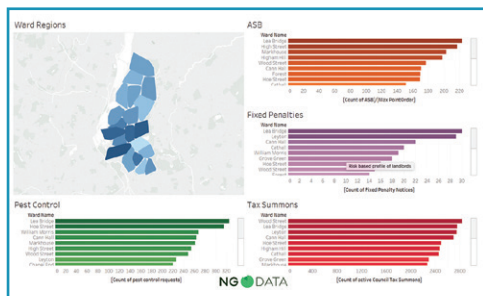
Why is this important?
The smart data lake in this specific proof shows that we can rapidly connect information and then visualise data. This means that for the first time we can help officers to target the right the properties, rather than manually trying to find out what's going on. It also means that we can be proactive and stick to our promise to make Waltham Forest clean and safe for our residents.

We also know that we can update information direct to our back-office systems using the smart data lake. This means we can plug in apps, sensors, chatbots, AI and smart devices to create the beginnings of a 'smart borough' and then automate services. For example, we can use the data to power intelligent chatbots to provide information to residents without needing to have face-to-face conversations, so that our officers can then focus on the residents who really need our help.

Information is essential for understanding our residents in ways we couldn't do before. By plugging in our CRM system, we can gain insights into the needs of our customers and provide better services; for example, if we can identify that we have a university student living in the borough, then perhaps we can send them a welcome pack to help them make best use of our services. In fact, what we would love to do is to help that student stay in the borough and start a business when they finish their studies.

Prevention is better than cure
Another way to think about how bringing data together can help our residents is in terms of prevention and intervention at the right time. If we can understand which families have children who end up in a gang, for example, perhaps we can work with our colleagues in the police and neighbouring councils to prevent our younger population from making bad choices in the first place and offer opportunities which really inspire them.

We want to continue to provide great services to our communities and, considering our very tight financial pressures, the only way to do that is by bringing our data together in order to provide a smarter way of delivering those services.

The smart data lake is a cornerstone for the future platform, and that is awesome.

Richard Holland is the assistant director of technology and innovation at Waltham Forest Council.

Network Homes signs with Hyperoptic for gigabit broadband

Gigabit broadband provider Hyperoptic is set to supply around 20,000 Network Homes' properties with direct fibre broadband. Network Homes' tenants will have a choice of packages with speeds up to 1Gbps (1,000 megabits per second), which Hyperoptic said is over 21 times faster than the UK average.

The deal with Hyperoptic will cover Network Homes' portfolio across 36 local authority areas in London, Hertfordshire and the South East of England.

Suraj Shah, head of strategic asset management and planned works, Network Homes, said, "We chose Hyperoptic based on the high-quality service it has offered to us and our tenants. We already had a small number of properties connected to Hyperoptic's network but based on our experience so far and great feedback from our tenants, this new deal expands this to our entire housing portfolio."

Mobile-centric, zero-trust security

David Critchley, Regional Director for UK & Ireland, MobileIron

Mobile working can help housing providers deliver a more engaging, customer-centric service based on the principles of convenience and self-service. For instance, mobile technology has the potential to reduce the amount of time tenants are left waiting for repairs and home improvements by giving workers the ability to diagnose tenants' problems remotely, and then calling for the required professional assistance.

In addition, mobile also has the potential to improve payment methods, with mobile devices being used as portable payment systems. Mobile working also drastically improves housing providers' internal operations by providing workers with a more effective communication channel.

BYOD in the housing

Recent figures suggest that the average employee could save around 80 minutes per week in productivity by using their own mobile device at work as well as saving employers around £1,000 per employee per year in device and software costs.

There are clearly many benefits to enabling housing staff to use their own devices, but those benefits aren't without some associated issues. The main problem lies in how the devices are secured; allowing a privately-owned device the ability to connect to a corporate network immediately raises organisational security concerns due to the danger of malware on the device spreading to company servers, putting very delicate data at risk.

There are risks with BYOD, but with a well-thought-out plan these risks can be mitigated and the clear benefits of BYOD realised; below is some practical advice.

A changing security landscape

Smartphones and tablets have overtaken
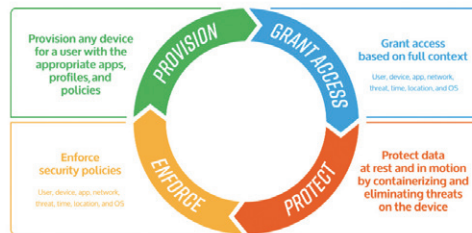
PCs and laptops as the preferred device for people to get their work done on. All you have to do is check the app store and see that business apps are now the second most popular category. This, combined with the performance gains 5G will bring, means that mobile has won – it's what the users have chosen.

This move to mobile isn't the only revolution we are seeing within the enterprise; access to apps have accelerated the adoption of cloud services. Today, 77 per cent of businesses use cloud services, and on average, an enterprise is using over 1,000 cloud apps.

This means modern work takes place on mobile devices connected to cloud networks, taking it beyond the control of traditional security measures and multiplying the number of access points for attackers. As a result, the modern working environment can no longer be governed by the traditional security perimeters and boundaries of yesterday.

This change creates three main challenges for CIOs and CISOs:

- Drive business innovation with mobile productivity by giving employees the ability to use mobile, cloud and endpoints.
- Enforce corporate security without impacting users' experience.
- Redefine enterprise security strategies to address a perimeter-less environment.

The zero-trust approach

To overcome these challenges, security professionals are forced to reconsider the best practices on which they have previously relied. The more adaptable have realised the best solutions provide a secure contextual connection, based on device, app, user, environment, network, and everything else that's involved in accessing their data.

One approach that organisations are investigating is called 'zero-trust' and was first coined by Forrester Research in 2010. Around the same time, a similar idea was being embraced by Google as a way to connect its employees to their internal applications. The Google BeyondCorp methodology was born out of this need and led to a specific adaption of the software-defined perimeter (SDP).

The zero-trust model treats all devices or 'hosts' as if they're internet-facing, and considers the entire network to be compromised and hostile. It assumes that all access to corporate resources should be restricted until the user has proved their identity and access permissions and until the device has passed a security profile check.

Mobile-centric security

There are several different ways to implement zero trust. The main approaches are focused on identity, gateway and the device. However, as the tide of mobile and cloud continues to intensify, it is clear gateway- and identity-centric approaches simply aren't enough. Only a mobile-centric approach addresses the security challenges of the perimeter-less modern enterprise while allowing the agility and anytime access business needs.

A mobile-centric approach really raises the security bar and goes beyond traditional identity management and gateway point solutions. It demands several more answers from a complete set of attributes before granting access to the user. It validates the device, establishes user context, checks app authorisation, verifies the network and even detects and remediates threats before allowing secure access. Importantly, this all happens instantaneously.

David Critchley is the regional director for the UK & Ireland for MobileIron.

Re-imagining housing – Are you IoT ready or not?

Kyle Hill, Director of Emerging Technology, Hitachi Solutions

The internet of things (IoT) isn't a technology revolution; IoT is a business revolution enabled by technology. This powerful statement was the crux of a presentation I gave at the recent Housing Technology 2019 conference.

I explained that innovative organisations are taking advantage of a comprehensive set of technologies to make profound changes to their business systems and operating models. The combination of mixed reality, the internet of things and devices, AI and advanced mobility solutions means that operations can be completely reimagined. While the topic of IoT may seem to have been rehashed several times, I once again posed the question of whether it's all just hype or is there genuine value to be had from investments in these technologies and the associated digital inclusion?

There were some interesting insights that I shared from Housing Technology's 2017/8 'Internet of Things in Housing' market intelligence report. These insights hinge on the fact that while the possibilities were in reach, there seemed to be a hesitance from organisations to take the leap and seize them. To validate the point, the following findings from the report were discussed:

- **Importance of IoT to housing providers' overall strategies:** Despite the relative new-ness of IoT-based technologies, almost half of housing providers (46 per cent) rated IoT as being important to their overall strategies.
- **Existing IoT strategies:** Very few housing providers (six per cent) have yet established an IoT strategy, although a quarter of them are already considering their options regarding how they might deploy IoT projects, demonstrating the

potential growth of IoT over the next few years.
- **Timescale for deploying IoT devices:** Of the housing providers with IoT plans, over half of them are scheduled for deployment within the next 12 months, and around three-quarters within the next two years. And despite 41 per cent of housing providers having no current IoT plans, the figures and associated timescales suggest an explosive growth of IoT deployments by the majority (59 per cent) of housing providers.
- **Senior executive/board understanding of IoT:** For a relatively new area of technology, it's perhaps surprising that housing providers' senior executives and board members are generally considered to have at least some understanding of IoT (53 per cent), perhaps in part because they are familiar with consumer-grade IoT devices such as Nest and Hive.

Clearly, from Housing Technology's report, the opportunities IoT can facilitate have been grasped, but the worrying fact is that there seems to be a distinct lack of senior management buy-in and championing, despite three-quarters of housing providers planning to have at least one IoT initiative live within the next 24 months. This was echoed by several conversations from the Housing Technology 2019 conference that summarised IoT as an exciting technology but the conference participants weren't sure of where it would fit in their organisation. In answer to these questions, I highlighted the following statistics from IDC and Microsoft before diving into some relevant examples:

- There will be 30 billion connected devices by 2020;
- The average increase in operating income for digitally-transformed enterprises is £1.15 million per annum;
- 10 per cent of the data on earth will come from IoT by 2020 (that's next year!);
- The market for business process automation tools will be £7.65 billion by 2020.

These numbers are truly impressive and when you consider that Microsoft alone is investing $5 billion through to 2021, the only surprising thing is that the technology hasn't seen more rapid adoption.

One factor that could contribute to this is the fact that often IoT is considered an IT and technology solution rather than something that can fundamentally change and optimise business operations. IoT is too often seen as technology for the sake of it, and where IoT solutions are implemented, the majority focus on B2C scenarios.

McKinsey & Company highlight that 70 per cent of the value enabled by IoT will come from B2B scenarios, so the suggestion is to focus on a number of these use cases to realise genuine value from IoT. Some examples of where IoT can generate value for a housing provider are as follows:

- Advice, support and assisted living;
- ASB and enforcement;
- Billings and collections;
- Change of circumstances;
- Contract management;
- Defects and stock condition surveys;
- Fixed assets and inventory management;
- Health, safety and accessibility;
- Key/fob management;
- Repairs and planned maintenance;
- Tenant self-service;
- Tenant visits and inspections.

In order to realise this value, housing providers do need to capitalise on IoT and there are three relatively simple steps to achieving this:

- Connect your 'things';
- Turn data into insights;
- Transform your business through actions.

With a relatively clear roadmap of how IoT can facilitate value and be implemented in a social housing context, why haven't more providers embarked on this journey? We had a look at some more research from McKinsey & Co to define what separates the leaders from the laggards in the IoT space:

Re-imagining housing – Are you IoT ready or not?
Continued from previous page

"Leading organisations are aggressive; by pursuing a large number of IoT use cases, they quickly climb the IoT learning curve and pass the point at which new applications consistently generate a great deal of value. They develop a clear idea about the commercial opportunities associated with IoT, and they align everyone in the organisation, from the executive suite to the front lines, towards a common set of goals. And they're pragmatic about how they implement their IoT plans, building their IoT offerings around existing products and services, and relying on outside partners to furnish them with sophisticated technologies."

The key point above is to engage with partners on several smaller IoT projects to both prove the value of IoT and to adequately prepare the business to embrace IoT.

While maybe not as obvious as the other point, the statement also refers to building IoT offerings around existing products and services. This should also be a major consideration when evaluating how IoT will integrate with existing business applications. Further insights from Housing Technology's IoT report agree with this sentiment and state that the integration of IoT devices and their associated data with housing providers' business applications is uniformly seen as being an important consideration (78 per cent).

In closing, I suggested to the conference attendees that they needed to be practical in the execution of their IoT use cases and leverage already-proven solutions such as the 'IoT House' from Hitachi Solutions and Microsoft. The key thing to understand is that IoT is here and that you need to own it and 'inspire the next'!

Kyle Hill is the director of emerging technology for Hitachi Solutions.

Dumfries & Galloway's unified comms with Castleton

Dumfries and Galloway Housing Partnership has awarded a unified communications contract to Castleton Technology as part of an ongoing digital transformation programme.

As part of a seven-year contract, Castleton is providing an end-to-end managed service, with the foundations of the project involving the migration of DGHP's everyday ICT operations away from its legacy on-premise systems to a private cloud, as well as a desktop refresh (including Microsoft Office 365), new telephony software with unified communications and an omni-channel contact centre.

Hugh Carr, director of finance, HR and IT, Dumfries and Galloway Housing Partnership, said, "This exciting development marks the next stage in our journey to become the best landlord in Scotland. Our programme is ambitious but it will confirm DGHP as a progressive housing association of the future, enabling us to continue to provide excellent services to our customers and create a great place to work for our 200 staff.

Castleton's managed service will include ongoing application hosting, business continuity, information governance, network management and cyber-security management, as well as continual service improvements through service-desk management, device management and technical support.

Hugh Carr, Director of Finance, HR & IT, Dumfries & Galloway Housing Partnership

Castleton was chosen following a rigorous assessment carried out with help from Alysium Consulting, DGHP's independent advisors, who helped identify which tools were needed to achieve the housing provider's digital ambitions.

Phil Riley, lead technical consultant, Alysium Consulting, said, "Castleton demonstrated throughout the tender and implementation process not only that it has innovative services but also a good understanding of the needs of housing providers."

Popstar turned curate turned housing patron...

Reverend Richard Coles, Vicar of St Mary's The Virgin (Finedon) & Patron of Wellingborough Homes

Housing Technology's publisher and founder, George Grant, interviewed Reverend Richard Coles, the self-styled 'popstar turned curate', patron of Wellingborough Homes and one of the keynote speakers at March's Housing Technology 2019 conference, about parish life, social housing and IT.

As a parish priest and BBC broadcaster how do you juggle life?

With varying degrees of success! I'm a 'half-time' vicar (at St Mary's The Virgin, Finedon in Northamptonshire) because my parish can only afford a half stipend, but there's no such thing as a 'half-time' expectation or a 'half-time' life, and broadcasting takes up a lot of time too.

I aim to hold them together by having in mind a standard to which I aspire. I try to host sensible, civilised conversations that assist and enable people to live lives that produce public benefit. It's about how you sustain the life of a community imaginatively and practically.

Is housing a problem in your parish?

Yes, there's far more demand for social housing than we have the housing to meet. One issue is that we are a very coherent community that people wish to stay in and we don't always have housing stock available in the right place at the right time for particular tenants. Sometimes they are offered a move out of the community and it may only be a few miles away, but nevertheless, it is out of the community they want to be part of; managing that can be quite difficult.

How important is social housing to your local community?

It is fundamental; the provision of decent housing is the foundation on which thriving communities are built. And there are two other roles which are now important.

One is that housing providers are forums in which all kinds of creative thinking about social enterprise can happen. Resources can be mobilised from across a wider spectrum than in the old days of local authorities and that creates all sorts of opportunities.

The other is that we are, I think, the biggest stakeholder in our communities so we know what's going on because we have a direct link to the people who form those communities. So we're aware of problems that emerge, particularly around antisocial behaviour, parking and all the everyday things that erode people's wellbeing, and we're able to draw on other agencies.

At our advice centre in Wellingborough, people can come and get support not just for housing, but for any social problems they might have. We provide support for those resources so people can get what they need to sustain their lives in sometimes very difficult circumstances.

A lot of our tenants are not well paid or are on benefits, and some of them have particular needs which make day-to-day living harder. We're able to provide for those people in ways that are, I hope, thoughtful and imaginative.

How do you think technology is impacting life in a social housing context?

There are two answers to that. Firstly, Wellingborough Homes recently had an audit so we can establish our NPVs (net present values) – it's amazing how many housing providers don't know what they have because the way they acquire properties can be complicated. We found out what we've got and what we're worth so we could raise finance to fund our building plans and other projects.

But it's not just about your balance-sheet values. The enormous social values that come out of social housing are much harder to measure. Sometimes you would like to show the board not just the financial value of your material assets, but also the social benefits involved.

One of the ways technology can really help is by developing metrics that can capture and reflect the social value of what we do and to make a more powerful case; numbers can tell a story, but not the whole story.

Secondly, it's being able to respond better to the needs of our tenants. Through technology, we have much better individual knowledge of our tenants and from that you can build a picture about whether things are going well or not, if we're meeting their needs and expectations, and indeed whether their needs and expectations are realistic or unrealistic. It's a much more informed and reciprocal conversation. Tenants can now engage with us far more easily if they want, and that all requires management.

Like many organisations, particularly those with a public-sector background, we used to think of IT as being like paperclips – it was like stationery, it was something to do with office supplies. What we've come to understand is that IT drives everything we do. To be what we want to be and to do the best we can for our stakeholders, we need to make sure we have the IT that works for us.

What's changed since you've been patron of Wellingborough Homes?

I've really noticed the impact of IT in making us a more confident organisation. The big story over the past 30-40 years has been the flow of wealth and dynamism away from the public sector to the private sector, so trying to address those questions and using the energies of the private sector to do so has been very interesting. Getting that into shape, giving us a clear knowledge of what we are doing and a confident ability to plan for the future, has made Wellingborough Homes much more dynamic – we've really been able to invest in our IT and it has transformed the way we do things, and that creates an organisation that has a very positive feeling about it.

Popstar turned curate turned housing patron...
Continued from previous page

What message would you give today?
I would be really excited about the opportunities of working to mobilise all the expertise, experience, creativity and imagination in the IT end of what we do to inform everything else we do.

Create an atmosphere of possibility and a culture in which transformation is not just an empty word but is actually linked to positive, concrete steps that take your organisation to where you want it to be – IT is the most essential tool in all that, and if
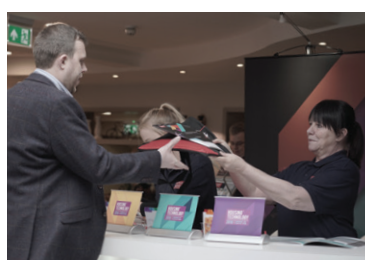
you don't get that right, you're never going to get the whole thing right.

Reverend Richard Coles is the vicar of St Mary's The Virgin, Finedon in Northamptonshire, and a patron of Wellingborough Homes.

Housing Technology 2020
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Housing Technology 2020 will take place on Wednesday 04 and Thursday 05 March 2020 at DoubleTree by Hilton The Oxford Belfry. Our annual conference is now the leading and longest-running technology event for senior IT and business decision-makers in the UK social housing sector. Through 40+ detailed talks and multiple networking opportunities (including three informal evening events), you'll come away with enhanced knowledge and confidence to help transform your organisation.

Housing Technology 2020 will mainly focus on the following core topics:

• **Business imperatives –** Using technology for cost reductions, business change and innovation.
• **Solid foundations –** Making the most of your core business applications (housing,

asset, finance, mobile, CRM, etc, and incl. legacy integration).
• **Digital transformation –** From tenant portals, self service and UX to data management, automation and collaboration.
• **Seriously mobile –** Moving towards 'mobile first' now that smartphones are almost ubiquitous.
• **Small but perfectly formed –** IT strategies, software (incl. COTS) and services for smaller housing providers.
• **Refreshing your infrastructure –** Cloud migration, unified communications, PaaS, cyber security and DR/business continuity.
• **What's next?** Low code, AI, machine learning, STP, robotic process automation, 'digital twins' and other innovations.

Please note that after the overwhelming success of this year's conference, each day of Housing Technology 2020 will be capped at 300 participants, with staggered presentation times throughout to maximise networking opportunities and reduce over-crowding.

As a consequence, while the roster of speakers, presentations, sponsors and exhibitors will only be announced from July 2019 onwards, registration for Housing

Technology 2020 is already open **(www.housing-technology.com/events/htc20)** for anyone keen to reserve their place (including onsite hotel accommodation).

Why you should attend:

• **Meet all of your peers...** Compare your business & technology priorities with hundreds of your peers who've already registered.
• **Be inspired...** Break out of your daily environment, spark new ideas & refresh your enthusiasm for what you could achieve.
• **Proven, unsurpassed quality...** Always 100% relevant to you & a brilliant use of your time.
• **Make new connections...** The best networking event for housing IT.
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Please contact **alastair@housing-technology.com** if you or your organisation is interested in sponsoring, speaking or exhibiting at Housing Technology 2020, or visit **www.housing-technology.com/events/htc20** for further information.

Do your projects use colourful language?

Steve Dungworth, Founder, PeopleDataTech, Simon Green, Interim Director of Digital Transformation, Accent Housing, Suzanne Shaw, Facilitator & Trainer, Ascent Development

Accent Housing, with help from Ascent Development, has been using 'colour workshops' to improve communication and collaboration within and between its technology team and other departments.

Accent Housing's digital team of around 30 people includes business analysts, data analysts, technicians, product managers and developers as well as team members working on the service desk managing the needs of their internal customers. The internal customers comprise a variety of people including senior managers, finance, housing officers, the contact centre staff, HR and the communications team.

Accent's director of digital transformation at the time, Steve Dungworth (see opposite), wanted to find better ways of collaborating with the digital team's internal customers and improving coordination within the ICT team. In particular, when dealing with internal customers, it was often felt that ICT and the wider business were speaking different languages (after all, ICT professionals can sometimes be seen as different and reserved or defensive).

A one-day 'Insights Discovery' personal-effectiveness workshop was initially held with the digital leadership team, coordinated by Suzanne Shaw from Ascent Development. This was designed to explore the Insights Discovery colour model of behaviour, with all of the ICT managers completing an online questionnaire so that their personal profiles could be produced.

Self-awareness through colour

The model is based on the work of Carl Jung and enables individuals to increase self-awareness with the simple yet highly-effective use of colour. This enables individuals to better understand others and adapt their communication and behavioural styles accordingly, creating more productive and effective working relationships. It can also be the bedrock of developing 'emotional intelligence'.

The exercise was widened to include the whole team and a 'team wheel' was produced to show the team members' different behavioural preferences which helped them to understand why some working relationships were easier than others, both within the team and in the wider business.

'Light bulb' moments

The first workshop had an immediate impact. A couple of people had 'light bulb' moments when they realised they were opposite types; there had been some previous irritation between them because one of them needed precise, detailed information whereas the other colleague's preferences were the antithesis of that. Their new-found understanding enabled them to agree how to communicate with each other better which had a massive impact on their working relationship.

As a result of the first workshop, Steve Dungworth understood why different strategic views occurred with his right-hand man, Simon Green, because they were opposites (Steve is what is known in Insights terminology as a 'motivating director' whereas Simon is a 'supporter'). Similar stories emerged as people finally understood why some of their intra-team relationships had been strained.
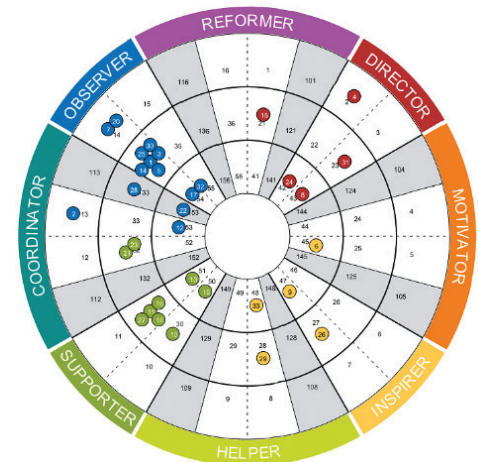
People now have a common language which enables the team to work better together. As other teams within the business started to work with Insights Discovery, understanding other people's behavioural preferences helped to improve communication with internal Accent customers.

Behavioural strengths

As well as the way in which people communicate, Accent's digital team has developed some ways of working which has helped embed the language. The digital team's aims and objectives have been 'coloured up'. Senior managers now have responsibility for the area which plays to their behavioural strengths, and 'red', 'blue', 'green' and 'yellow' team meetings are now held.

For example, the red meeting is a 30-minute Monday morning meeting where service-desk performance is reviewed and the priorities for the week are decided, whereas the blue meeting is the more in-depth CAB style where details of projects and changes are examined in detail.

Steve Dungworth said, "We revitalised the team and have come away with tangible working practices that have really helped our business. Insights Discovery has completely surpassed our expectations – it's a really inspiring and practical way of working."

Accent's digital team is much more aware of their strengths and areas for

Do your projects use colourful language?
Continued from previous page

development. They are great at the technical and analytical aspects, being able to react to incidents and crises, and looking after each other as a team. The areas which need some work are marketing themselves, communicating with customers, saying 'no' (politely), and not allowing meetings to run on and on and on.

Ultimately, performance is driven by behaviour. Now that the team understand their behavioural preferences, they are more in control of driving performance excellence, particularly when working with customers and each other.

Having been Accent Housing's director of digital transformation until April 2019, Steve Dungworth has since set up PeopleDataTech (peopledatatech.co.uk). Simon Green is the interim director of digital transformation at Accent Housing. Suzanne Shaw is a facilitator and trainer at Ascent Development.

High hopes for low-code projects

Nick Pike, Regional Vice-President, UK & Ireland, OutSystems

Any public-sector organisations providing a service, especially those for which people have to pay, such as council tax or parking permits, are expected to provide a seamless, digital solution for technology-savvy users. And as with many areas of the public sector, housing providers are under increasing pressure to meet the challenges and opportunities presented by modern technologies, forcing them to quickly and efficiently adapt to the trend for digital transformation.

There will always be a certain level of resistance, on immediately discounting legacy systems and swiftly deciding to move to another approach to develop customer-facing services. However, lasting, positive changes can be made through using a low-code approach to digital transformation projects, helping housing providers to overcome the problems associated with legacy systems.

Moving away from legacy systems
However, there are a number of challenges that housing providers face, one of which is the resources needed for long-term digital transformation initiatives. Furthermore, the logistical problems of moving from legacy systems to new ways of working, such as collaborating with a

digital transformation partner, can prove difficult. With housing providers being squeezed financially, balancing tenants' demands and doing more with less make it hard for IT teams to deliver.

Housing providers' IT teams are typically small and are often focused on day-to-day objectives, reducing their ability to foster and deliver innovation. And there is inevitably resistance to immediately discounting legacy systems and moving straight to a hosted approach.

That said, when budgets are spent on new, more efficient technologies, the long-term costs of manual process are reduced. While public sector budgets are challenged by myriad political pressures, the opportunity to innovate can be revolutionary if funding can be found for new digital initiatives. Furthermore, when starting a new project, migrating away from legacy systems will ensure the amount of technical debt is minimised.

While the initial outlay of moving to another provider may be high, the long-term efficiency and financial benefits can be extremely fruitful, saving money in the long-run. However, this will be likely to involve not only a significant technological but also a cultural shift; quickly adjusting to this may require the support of a digital transformation partner, such as OutSystems, to be layered on top of the core IT team.

Low-code development
Furthermore, public-sector budgets are tied to political cycles, which means that new projects must show results quickly. An

example of this was OutSystems' delivery of a brand new app for Worcestershire County Council within eight weeks. This demonstrates that, if approached correctly, new digital transformation projects and new solutions can be quickly introduced using low-code development platforms, helping to deliver a positive return as soon as possible. In addition, moving from a capex to an opex approach to paying for IT equipment and services, where data is migrated from expensive legacy systems, frees up capital and supports scalability for growth.

Although numerous challenges can make it difficult to start a digital transformation project, the opportunity for greater efficiencies and growth can justify the journey. Some of the benefits include:

• Better ability to meet tenant expectations;
• Increased collaboration between departments;
• Improved IT agility to meet the business needs;
• More innovation across the business;
• Faster strategic decision-making;
• Greater productivity in core areas;
• Reduced operational and IT costs.

If housing providers can obtain the required internal support, as well as gain the much-needed funding and showcase a positive RoI, then they will be able to readily make improvements to yield short-term operating efficiencies and lay the groundwork for the long-term process of digital transformation.

Nick Pike is the regional vice-president for the UK and Ireland at OutSystems.

Why mums are the missing link in the 'women in tech' discussion

Holly Rafique, Head of Digital, #techmums

"We need more women in tech!" That's the rallying cry being shouted from every corner of the country.

There are countless organisations and initiatives aimed at achieving this, ranging from addressing the gender imbalance when selecting further education, through to making it easier for women to return to work after a career break. These are all commendable activities, and yet the figures don't seem to be changing.

In a recent report by PwC, only 27 per cent of young women said that they would consider a career in technology and only three per cent said that technology was their first choice of career. The reality is that women fill only 17 per cent of all the jobs in technology. Some of that is just a matter of time, so we should have patience to see the results of better inclusivity and awareness in school children, but in part it seems that society is treating the symptoms rather than addressing the underlying problem; women and girls do not see where they fit into the technology sector. There remains the perception of a white male playing computer games; even when we know the stereotype isn't the truth, it is still hard to dispel it.

At #techmums, we want to change this; we want to rewrite the narrative to ask "how can we bring technology into more women's lives?" By reframing the problem this way, we can immediately widen our audience to include all women and all households. We are not insisting that women abandon other industries and passions but, instead, we are encouraging them to think about how they can use new technologies creatively to enhance what they are already passionate about.

Embracing digital literacy

For many of us, the internet is an integral and pervasive part of our lives in modern society. We rely on it to support and enhance our lives in an increasing number of subtle ways. It allows us to work remotely and flexibly, promoting a better work-life balance and making a career a more feasible possibility. We stay in touch with family, friends and colleagues who might be abroad or outside our immediate locale. For those of us with communication difficulties, it gives us an alternative to the dreaded phone call. We can monitor our expenditure and are not restricted to the products and prices in our local neighbourhoods.

Digital literacy is now as important a skill for this generation of children as the ability to read and write. They don't even recognise these devices as computers any more; internet connectivity is as natural to their generation as free-flowing water and electricity is to ours. When we turn on the tap, we expect there to be water, when we turn on a light switch we expect there to be light, when our children turn on a device they expect it to connect to the internet.

The internet has opened up our worlds and, with the amount of time we spend using technology, you would expect everyone's trust and confidence in it to be pretty high, not to mention it leading to equal opportunities for everyone.

Except it's not. It is a sad truth that far too many households are still struggling to engage with technology. Recent data privacy scandals, hoaxes and media hype have lead to fear rather than enthusiasm. Furthermore, most people see their role in technology as being consumers, not creators, subsequently feeling at the mercy of technology.

At #techmums, we believe there is one person in the household who can change all this but who is too-often overlooked: mum.

Our mission at #techmums is to empower women, their families and communities through technology. The average mum usually puts her children first and is only engaged by technology initiatives in terms of getting her children engaged. We work to change that and show every mum that technology is also for her and that she can benefit so much from having an understanding of technology.

The confidence conundrum

Many mums suffer from a loss of confidence after having children; no matter how many books you have read or classes you have attended, there is nothing that can quite destroy your confidence like your own tiny little baby who will not stop crying no matter what you do.

Then as they grow and you hit new parental challenges, you increasingly feel that you have no idea what you're doing; you are constantly bombarded with conflicting advice on the 'right' parenting approach so it's not surprising that a large proportion of mums feel powerless. For those mums who were working before having children, they are likely to have missed the introduction of all-pervasive technology in the workplace and now feel that they can't catch up.

These days children pick up digital skills very quickly, with a large number of mums already feeling that their children know far more about technology than they do. Parents want to protect their family from online dangers but they lack the skills to do so and they know it; they become so terrified that a knee-jerk reaction of restricting access to technology seems to be the only option.

Challenging the patronising rhetoric

Patronised by a world that uses phrases such as 'mumpreneur', 'mom jeans' and "it's so easy even your mum could do it", the whole image of a mum is not dynamic, exciting or intelligent. Hard-working and frazzled certainly, but mums are rarely portrayed as capable and connected. We've seen at first hand how a woman's whole attitude and posture changes when she discovers that she is far more knowledgeable and capable than she originally thought.

Why mums are the missing link in the 'women in tech' discussion
Continued from previous page

When you take all these issues together, it's easy to see why many women have a negative attitude to technology and don't embrace digital solutions in their home.

Digital parenting
The beauty of upskilling mothers is that you touch at least two people's lives – the mum and the child. Children increasingly need access to technology for their homework; they can quickly be left behind if their home is negative towards the use of technology. In addition, parents hold a lot of weight around children's aspirations and attitudes. Children need their parents to act as their digital guides; someone whom they can trust to teach them to navigate the online world. A child needs to know that their concerns will be met with an understanding attitude and an informed response.

Despite family dynamics moving towards a better balance, in many families the mother is still the parent that children interact with the most. Mums tend to organise extra-curricular activities, playdates and camps, and if they don't understand the benefits of technology then it's far less likely that they will arrange technology-based activities for their children. Future jobs will almost all require an element of digital awareness, so when parents engage with technology they are furthering their children's social mobility and career aspirations.

Spreading the knowledge
Empowering women in technology clearly has a positive impact on the community through increased diversity in the workforce. Not only are diverse teams generally more successful but they are necessary to tackle any unconscious bias in solutions (particularly in artificial intelligence) and to ensure products meet the needs of all members of society. Many products are designed by all-male teams so that the different needs of women are unconsciously missed.

Beyond the obvious benefits to communities, educating mothers will also lead to a more sensible community response to potential threats. A lack of understanding leads to fear and hysteria, particularly when the sensationalised news headlines are the main source of information. Incidents such as the recent 'Momo hoax', supposedly challenging children to self-harm, and fears over computer game addiction can be far better handled when the women in the community have confidence in their own understanding of technology and its associated risks.

#techmums are connecting with mums through a number of digital outreach programmes. In 2018 we launched #techmumsTV in partnership with Home-Start UK and Facebook as a live-streamed chat show to demystify and normalise discussion of technology. The key concept of #techmumsTV was to celebrate young mothers, how they are using technology in their everyday lives, how they are running businesses from their phones and to positively tell their stories, with the other aspect of #techmumsTV being to upskill viewers about online safety, financial technology and increasing knowledge around the technology sector. By using social media and Home-Start centres, we were able to reach demographics of mums who are particularly hard to engage with through other methods.

Our new initiative for 2019 is the #techmumsclub, an informal gathering of 20 mums where they are introduced to a wide range of topics from blogging and web design to app design and coding. We currently have five clubs running at various host partner's across the country and have two more launching after Easter. We work with the 20 mums across a 10-week period, with sessions lasting two hours, usually within the school day. We support partners with facilitator training and provide all course materials and online support throughout the programme.

#techmums is also working with the University of Leeds, FutureLearn and Black Tech UK to produce a series of online courses to bring 21st-century workplace digital skills to those who don't usually engage in online working.

By giving mums the foundation digital skills that they are missing, we can help them to pursue their passions and become the positive role models that their children will need as they venture into their digital future. We are confident that these three programmes will bring technology to more women and in turn get more women into technology.

Holly Rafique is the head of digital at #techmums.

Skillsarena launches housing employment tests

Skillsarena has released its new employment tests created exclusively for the housing sector. The tests have been created in response to a marked rise in enquiries regarding pre-employment and skills testing from housing and care providers and local authorities.

Jason Pierce, managing director, Skillsarena, said, "Although we cover all business sectors, one area we now specialise in is providing pre-employment assessments for positions in housing.

"With our extensive library of ready-to-use housing employment tests, we now provide dedicated tests for a variety of housing positions and areas including contact centres, care and support, finance, property services, housing operations and housing options. Alongside these tailored tests, we also offer our bank of popular core skills assessments which evaluate literacy, numeracy and IT competency in Microsoft Office."

What does productivity actually mean?

Stephen Green, Chief Marketing Officer, TSG

Productivity is one of those business terms that is over-used and misunderstood yet critically important when it comes to business process, efficiency and ultimately successful delivery, regardless of the objective. It's fine when used as a high-level concept but what does increasing your productivity actually mean? How do we translate a concept that has its origins on the shop floor to the back office? Most importantly, how will it help you achieve your goal of improving the service you provide to your tenants?

Ultimately, it's about freeing up your staff to focus on adding the value only they can add, whether that's enabling your customer services team to deal with more queries, giving your engineers more time to spend evaluating or repairing property issues or implementing new procedures dedicated to supporting vulnerable tenants.

The importance of use cases

When it comes to driving productivity by deploying technology, particularly in the social housing sector, use cases are essential. The more you can identify and resolve, from the very simple to the very complex, the more likely it is that technology can make a contribution to helping your housing association achieve compliance with the value for money standard.

Our recent presentation at the Housing Technology 2019 conference highlighted one technology investment that many in the sector have already made, that has the potential to transform productivity across multiple areas of your organisation. 'Potential' because most haven't looked beyond the obvious, hence the title of our presentation: 'Hidden Treasures'.

Your Swiss Army knife

It's probably more than two years ago that we started referring to Office365 as a 'digital Swiss Army knife'; you're armed with tools that you might not use all the time but will come in pretty damn handy if and when you need them.

The reality is that the tools are multi-functional and can be applied almost universally. So, it would appear that Microsoft's mission to "empower every person and every organisation on the planet to achieve more" is all about productivity and it's an ethos that's well and truly embedded into Office365.

The challenge lies in the fact that very little in terms of what can be achieved with these multi-functional tools is explicit; having a powerful workflow automation tool, app builder, all-in-one storage solution, collaboration suite and data visualisation tool at your fingertips is great if you know where to start and what you're trying to solve or achieve.

Shared DNA

That's where use cases come in; and those use cases might be as diverse as basic internal processes or complete systems or complex projects. Break them down into their component elements and we'd suggest that there's a significant amount of shared DNA.

For example, data capture, information sharing, approval processes, tracking, document retrieval and reporting are all common building blocks but it sometimes takes a bit of imagination to understand that an audit tool actually shares the majority of its DNA with an expenses management solution. Of course, they fulfil very different functions and support completely different departments across the organisation.

One key piece of DNA that they both share is their contribution to productivity. Let's face it, there's nothing productive about collecting grubby, moth-eaten paperwork and manually inputting data to process and analyse.

Frustration and insights

The number of different solutions we've built over the past couple of years is almost equal to the number of housing providers we've worked for, and that's both frustrating and insightful.

Frustrating because we, or rather the sector as a whole, run the risk of re-inventing wheels, and insightful because we're gradually building a bank of use cases that we suspect are universally applicable.

Expenses management, holiday approvals and tracking, declarations of interest, board governance and task management, audit systems, task and case management, tenant onboarding… the list continues to grow.

The results are as myriad as the tools are multi-functional; a reduction in paperwork, elimination of unwieldy email trails, replacement of spreadsheets (which seem to multiply like rabbits), greater accuracy, data completeness, improved visibility, huge savings in time and resources… sounds remarkably like a definition of productivity. And, we suspect, result in people achieving more.

Every little helps…

To quote another household brand (albeit completely out of context), 'every little helps'; while your starting point might be a small project, we would argue that the results will be anything but. At a relatively basic level, we're also seeing the idea of 'self-serve' emerging; although that brings with it the challenge of control and governance, so tread carefully.

The real game-changers come when entire processes are tackled and revolutionised.

What does productivity actually mean?
Continued from previous page

A combination of intelligent forms, workflow automation and data visualisation built by TSG experts helped H. Malone & Sons, an M&E contractor to housing provider the Byker Community Trust, to fully digitise a discrete project to audit the heating and domestic water systems of more than 2,000 properties. It also tracked the progress and cost of remedial and repair work and provided full management reporting. More importantly, it's a stepping stone towards the strategic goal of maximising its investment in technology through digitisation.

George Smith, H. Malone & Sons' IT manager, said, "The solution TSG has provided not only streamlines our daily data recording tasks but also simplifies our back-office invoicing and payment workflows. It has the added benefit that we can pass important asset data back to the Byker Community Trust team so that they can keep track of the project's progress and, more importantly, import data into their own asset management tools. We are almost at the point of achieving the holy grail of a 'paperless office' on this project."
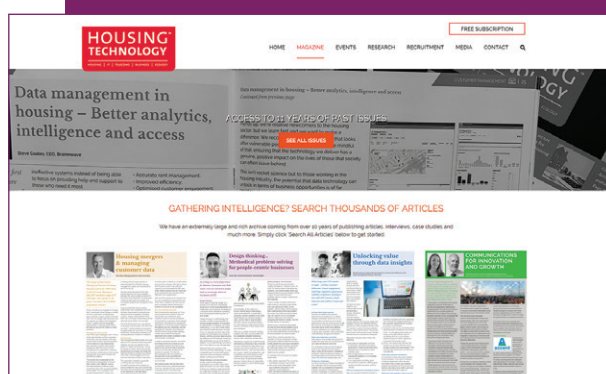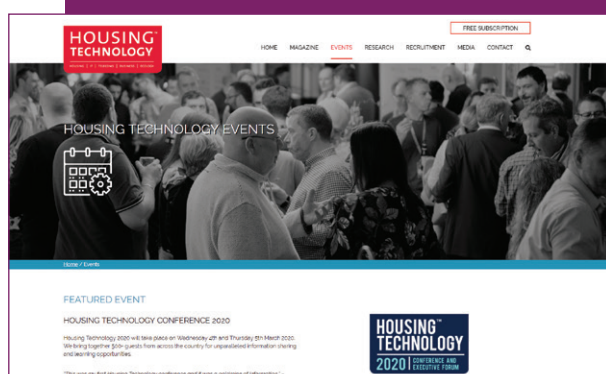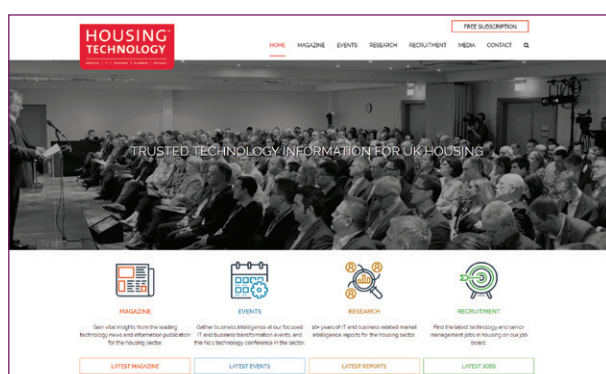
Cultural changes
An improvement to your operations is essential to any project you undertake, otherwise what's the point? But it's important to understand the impact it can have on people, too. By making the lives of your staff easier, it inevitably also has a positive effect on your customers. By implementing a digital job management solution that integrated with the organisation's ERP system, TSG not only saved Energetics a lot of money on postage, labour and invoicing processes, we also helped its people.

Maureen Duff, Energetics' systems associate director, said, "The digital job management solution has delivered significant back-office savings in time, resources and costs. However, what's been more satisfying is the response of our team managers and the impact they've reported on their daily operations."

The link between Office365 and your tenants' experience sounds a bit tenuous until you really dig deep into it. Making your employees' lives easier sounds great, sure, but it's the tenants that really matter. But you can do both, and it's not too good to be true. If that's what productivity is about, then bring it on.

Stephen Green is the chief marketing officer at TSG (Technology Services Group).

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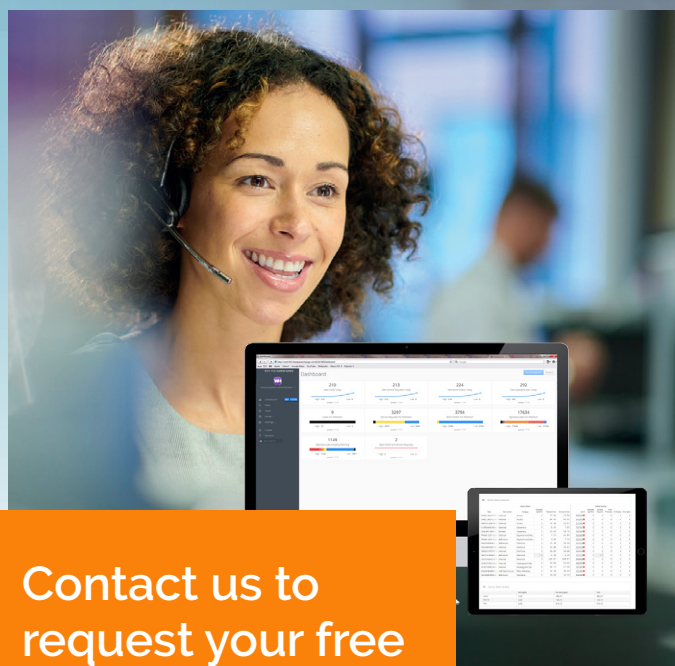
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