

A PRACTICAL APPROACH TO CLOUD IN LOCAL GOVERNMENT

Successfully harnessing cloud services
as part of a digital transformation

CONTENTS

Shared wisdom	3
A changing mindset	4
Five epochs of digital transformation	5
The legacy issues	7
Leadership and organisational change	8
Technology choices	10
Opting for the hybrid	12
Austerity and the pragmatic approach	13
Research participants	14
Research partners	15
Pythagoras	15
UKAuthority	15

SHARED WISDOM

The benefits of cloud are well known today, but just how do you successfully harness its power to drive your digital transformation?

Thought leaders from 13 local authorities – from London boroughs to districts, those with shared services and some newly devolved regional authorities – participated a series of round tables in London and Manchester and one-on-one interviews staged by UKAuthority and local government solutions specialist Pythagoras to investigate the real keys to success in the cloud.

Most authorities now have some applications running, or data stored, in cloud services, and all are planning to make further use of these as they move towards working in a

digital environment. Not all migrations are straightforward and without care cloud can upset the foundations of an organisation's IT architecture and business processes.

In addition, there are often fiendishly difficult issues to overcome around legacy arrangements, organisational cultures and the choices on what goes into or stays out of the cloud.

Our thought leaders debated these issues, shared experience and proffered advice about how cloud can be harnessed to drive successful digital transformation in local government. The key points are summarised in this paper.

A CHANGING MINDSET

The advantages of cloud computing are now widely known. They include:

- The ability to reduce the cost and effort involved in managing the on-premise IT estate.
- The potential savings in a 'pay as you go' model for storage and applications.
- Expertise in information security among recognised cloud providers.
- The scope for frequent, iterative, upgrades to refine the capabilities of software-as-a-service.

These are accompanied by the fact that many commoditised cloud tools are providing more capabilities and flexibility in how they can be used, making it possible to configure them to specific processes and solutions. And they can provide the basis for a radical shift in how IT teams contribute to their organisations.

“There is a big opportunity for IT people to harness cloud technology and skill themselves to move higher up the value chain.”

“There is a big opportunity for IT people to harness cloud technology and skill themselves to move higher up the value chain,” was one of the comments to emerge.

Over the past year the support for migration to cloud has intensified, with CIPFA, the body for finance chiefs in local government, highlighting the business benefits of cloud and urging councils to make the transition¹.

Some organisations have claimed savings of 30% or more from its adoption, and that the benefits go beyond the straightforward costs savings or running the IT estate.

Its report² said that some organisations have claimed savings of 30% or more from its adoption, and that the benefits go beyond the straightforward costs savings or running the IT estate. Cloud can also lay the ground for more extensive mobile working, giving staff the freedom to spend more time in communities, and help authorities to reduce their office space. And it can support more collaborative IT services, providing scope for a wider range of people to share information and coordinate activities.

¹ <http://www.ukauthority.com/UKA-Local-Digital/entry/7067/council-finance-chiefs-association-gets-behind-cloud>

² <http://www.cipfa.org/-/media/files/cipfa%20thinks/insights/insightsaccountingforthecloudfinal.pdf?la=en>

Five epochs of digital transformation

This gives cloud a crucial role in digital transformation, supporting progress in the adoption of radical new solutions in public services. This evolution in service delivery away from the traditional 'face-to-face' route has been characterised by five epochs identified by Pythagoras, the latter of which are only now taking shape:

- **Telephony:** The first step was adoption by public authorities of the telephone as a prime route of contact, with customer contact organised accordingly.
- **Web:** When they first harnessed websites as a channel for public information and supporting the customer in obtaining access to services. In some cases this was a step forward, although in others it made the information difficult to find, and it did not involve a real change in how those services were delivered.
- **Digital services:** Development of viable transactional services on organisations' websites, supporting a shift towards customer self-service. The change is not complete, but a lot of progress has been made in this area across the country and it has produced real benefits for both organisations and their customers.
- **Mobile:** Adapting online systems to work effectively with mobile devices, especially smartphones, acknowledging this as the channel of choice for increasing numbers of people. This is where most public

authorities are currently concentrating their transformation efforts; although the broad range of services provided by the public sector, and the investment that is necessary, makes this a stiff challenge for many.

- **Bots/Artificial Intelligence:** This is new ground for most in the public sector, but many authorities are looking at the potential to automate processes currently carried out by humans; and for the systems to react primarily to voice rather than a keyboard. This has immense potential, but organisations have to be careful that they do not use the technology just to replicate processes that are not working effectively: they have to ensure they deliver real efficiency benefits and that they really meet customer needs.

These are the epochs in a decades-long journey, with cloud being a major enabling feature on the evolutionary path.

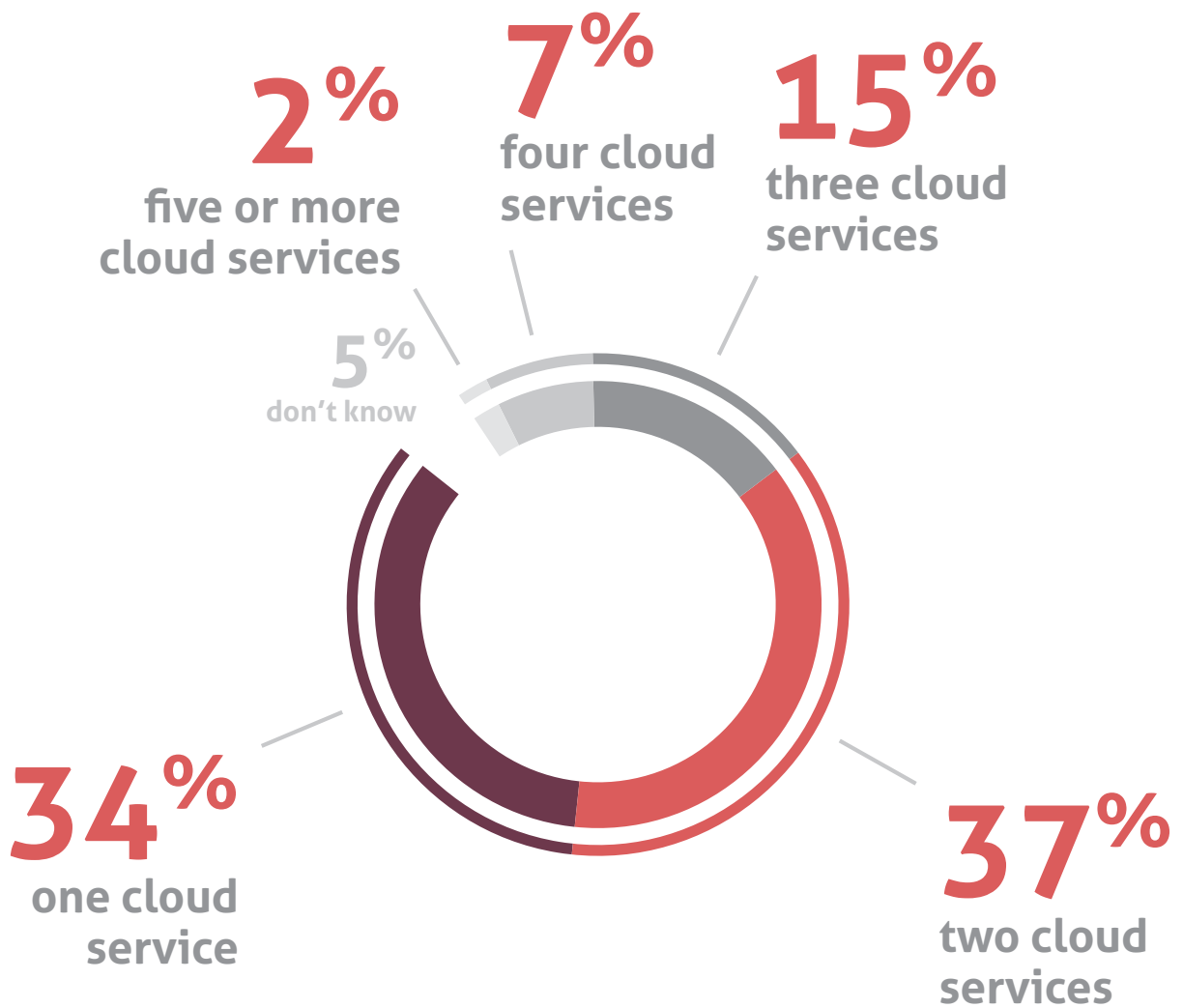
But organisations are at different stages and the take-up of cloud has been sporadic. Industry association the Cloud Industry Forum has pointed to surveys³ showing that public authorities are moving cautiously, expecting problems with their migrations and, so far, have concentrated on picking the 'low hanging fruit'⁴ of more straightforward services.

Participants in the discussions acknowledged that moving to the cloud can be difficult, but spoke of it as an essential element of transformation plans, and highlighted their successful approaches for overcoming the barriers.

3 <http://www.ukauthority.com/news/7218/clf-survey-shows-gradual-cloud-take-up-in-public-sector>

4 <http://www.ukauthority.com/news/7496/public-sector-still-picking-low-hanging-fruit-in-cloud>

Public sector cloud service usage⁵



⁵ Cloud Industry Forum figures, see <https://www.cloudindustryforum.org/content/cloud-driving-business-transformation>

THE LEGACY ISSUES

As with any major digital change, it is easy to see the advantages in moving away from legacy systems, but doing so is often no easy task.

It begins with making the case for change to the authority's senior business leaders. This involves acknowledging the need for a period in which an existing infrastructure remains in place, with all the associated costs, while the change is planned and implemented.

Getting to grips with the legacy infrastructure is an essential first step. Participants spoke of the time, well spent, in unpicking highly complex legacy infrastructures in order to understand both the opportunities and the limitations, which processes could be rapidly transferred to cloud services, and which ones would need a full redesign.

When legacy systems are causing problems for the business it can be straightforward to make the case for replacing these systems, but it can still be hard to win over the employees who use these systems – and often relate them to their own value within the organisation.

Despite user 'comfort' with old systems, participants spoke of the lack of coherence between different lines of business using different software packages acquired on an ad hoc basis – that makes it difficult to align into holistic processes. This is especially so when people have developed loopholes and workarounds over the years to make legacy software serve their purposes; and stored data in a wide range of systems and spreadsheets to which few people have access.

To add to the complexity, these systems come with existing contracts that can have

some time to run and their expiry dates can be spread over years.

This is where a clear message from the top of the organisation becomes important, especially when conveyed in the form of a corporate programme that sets out its strategic objectives and makes clear that the digital transformation, including the move to cloud, is an essential element. It conveys that the change is about the future of the organisation, rather than the whims of the ICT department, relating it to a viable future and improved services.

Leaders need to spread the message throughout the organisation, ensuring that it seen as relevant not only to ICT, but to overall priorities.

Leaders need to spread the message throughout the organisation, ensuring that it is seen as relevant not only to ICT, but to overall priorities. Some people will be scared by the idea of a fundamental change, and it needs an effort to assure them that they can benefit from it, in terms of developing their own roles and providing better outcomes for the public. The explanations, along with those of the benefits to the organisation as a whole, have to be conveyed through key messages that are easy to grasp and which make clear that maintaining the status quo is not a viable option.

LEADERSHIP AND ORGANISATIONAL CHANGE

Most leaders now recognise that transformation goes beyond the ICT infrastructure to a wide ranging organisational change. This involves addressing a series of technical and people issues to deliver the required behavioural change. In other words, successful transformation is not just about replacing existing IT, but dealing with the legacy of how people have been working, and overcoming the residual resistance that often comes in the face of change.

"Successful transformation is not just about replacing the legacy IT, but dealing with the legacy of how people have been working, and overcoming the residual resistance that often comes in the face of change."

The discussions made clear that effective business partnering, internally and externally, can be a big asset for ICT teams in their response to these challenges.

Over recent years there have been calls for their leaders to learn the language and priorities of the boardroom. One participant made it clear in stark terms: *"The minute you use IT language you lose your seat at the top table."* But it is equally important that they make a similar effort with service teams

to understand the intricacies of what they do, their users' need and how they deliver services to meet these needs. This helps to bring them onboard, but also helps both sides grasp what is possible and how best to achieve it.

One observation was that, with much of a digital transformation focused on improving the customer experience, it should be the role of the service teams, not ICT, to design the change. The role of ICT teams is to deliver the tools, and while it can set the parameters – such as in pointing to a move to the cloud – it has to facilitate the service teams to define what the customer experience should be. It is a case of ICT understanding – rather than telling – the business what it needs.

It is a case of ICT understanding – rather than telling – the business what it needs.

"The feedback from business is often they can tell what is more helpful from a platform perspective," commented one IT chief. *"We need to be more responsive to business need rather than tech led."*

This has to be balanced, however, with making sure there are not too many concessions to the issues facing specific teams, or even individuals. Among the comments in the discussions was that there is a danger of 'losing sight of the obvious', or drifting away from the strategic direction

of the transformation. One participant said: *“The challenge is not to take your eye off the strategic direction but keep your eye on it to consolidate.”*

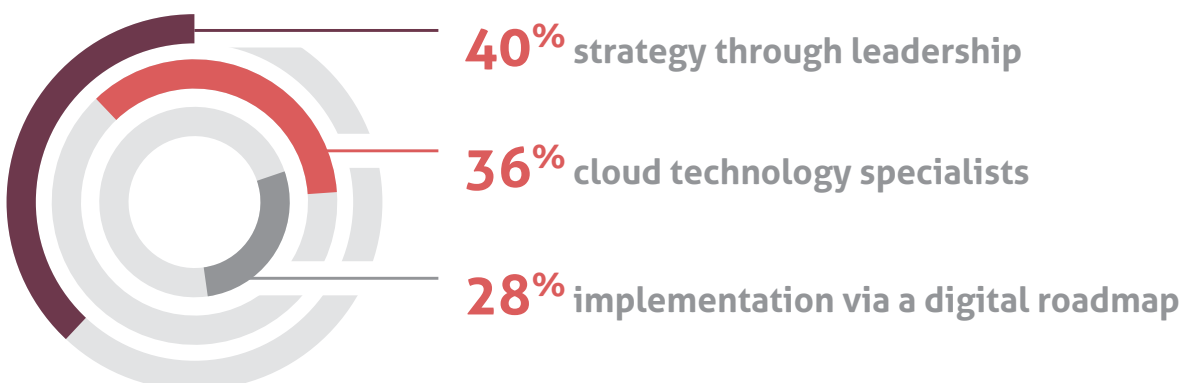
Again, this is where a continued reference to the ICT priorities in the corporate programme can play a big part in keeping the effort on track; and it may be necessary to sometimes call on the backing of senior officials to ensure a change is pushed through.

Transformation is not about reaching a point where the organisation can stand still, but getting people used to the concept of perpetual change.

Underlying all this is the need to convey that transformation is not about reaching a point where the organisation can stand still, but getting people used to the concept of perpetual change. Demands on services and the possibilities in technology are going to change over time, and any good public authority must be ready to respond. A readiness to accept this will become part of being a good public servant.

Meanwhile, technology leaders must ensure that 'the lights are kept on'. Delivering digital change through technology while ensuring that customer services run as usual during the transition is a critical hurdle for local government. However, adapting the 'aviate, navigate, communicate' approach used by pilots allows authorities to focus on maintaining service delivery whilst mapping out new journeys and digital service paths; and then communicating internally and externally to ensure a smooth landing for the transformation.

Required skills within the public sector⁶



⁶ Cloud Industry Forum figures, see <https://www.cloudindustryforum.org/content/cloud-driving-business-transformation>

TECHNOLOGY CHOICES

Local government is a highly complex business, with a wide range of service streams that have often developed independently, but where there is a growing recognition of the need for a more holistic approach with properly integrated processes. This creates the most demanding challenge in choosing the specific technologies, and the offerings from alternative suppliers, for a transformation.

It begins with developing a detailed picture of the legacy infrastructure and picking apart the different elements. But then it is necessary to decide which applications are most suited to the new infrastructure, and work out how they can be integrated for an effective service delivery.

The widely recognised exemplars for the major cloud service providers tend to be in the private sector, for companies with a handful of lines of business, while local government has hundreds.

The discussions produced a telling observation: that the widely recognised exemplars for the major cloud service providers tend to be in the private sector, for companies with a handful of lines of business, while local government has hundreds. While some cloud platforms are becoming more diverse and flexible in their range of applications, there is not

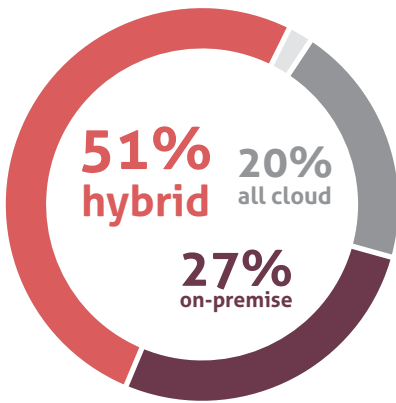
one today that provides everything for local government. That leaves the prospect of continuing to rely partly on specialist applications – some in the cloud, some on-premise – that must be integrated into the major direction of transformation.

None-the-less, said participants, it is still possible to significantly reduce the number of applications in use across the organisation. Most authorities have some that are rarely used, if at all, and some duplicate each other in managing a process – and these can all potentially be redesigned within common platforms.

“Some of our applications have not been used in years,” said one participant. “Don’t move them to the cloud, get rid of them.”

A transformation programme should involve looking at those that are not fulfilling a business need, or whether that need could be filled by a function of a broader digital platform. There is scope for the rationalisation of a software estate with modern, commodity, technologies that will make a significant contribution to long term savings.

There is scope for the rationalisation of a software estate with modern, commodity, technologies that will make a significant contribution to long term savings.



51% now regard the use of a hybrid model as their primary approach to IT, while 27% are still focused largely on premise and 20% are aiming for all cloud. 73% said they expect their organisation to increase its take-up of cloud over the next 12 months.⁷

A view became clear that fragmenting between disparate providers will create more complexity, not just in providing the technical integration of applications, but in dealing with different service level agreements and maintenance windows from different suppliers. The more fragmented the infrastructure, the more loose ends will have to be pulled together, and this demands time and costs that can undermine the original case for utilising the cloud.

There are no easy solutions, but maintaining the key focus of a transformation can have a positive effect. It is partly in tracking how the changes comply with the technology roadmap within the corporate strategy, and ensuring that they deliver the right data to the right people at the right time. Continually referring to these can be important in keeping the transformation on track.

"You need a sound organisational understanding of the technology roadmap and strategic direction," said one of the IT chiefs taking part.

Engagement with the supplier and other authorities is also important. It is rare for a local authority to dictate the development of new applications by itself, but a dialogue between a group of them and a major supplier can shape the latter's thinking. Also, there is sometimes scope to work with smaller companies in developing cloud based applications for specific local government processes.

It needs little imagination to realise that other authorities face similar challenges, and sharing experiences can often provide the insights that make a positive difference in dealing with these issues.

Looking forward, authorities are increasingly aware that robotics, machine learning and artificial intelligence are going to make big contributions to public services within the next few years. One comment to emerge from the talks was that it will not be possible to do anything with these unless the infrastructure of technology, data flows and processes are already in place. Determining the nature of that infrastructure is a priority.

⁷ <http://www.ukauthority.com/news/7496/public-sector-still-picking-low-hanging-fruit-in-cloud>
Cloud Industry Forum figures, see <https://www.cloudindustryforum.org/content/cloud-unlocking-transformation-across-uks-public-sector>

OPTING FOR THE HYBRID

While there is a consensus for increasing the use of cloud services, most participants had reservations about going the whole way in one step. Among the advice to emerge was that some of the complexities would be easier to manage if kept on-premise, that a legacy application might continue to be the best solution for a specialised process, and that it might be necessary to allay fears about moving highly sensitive data off-premise. The notion of having full control of an application and data for certain processes is still a strong one across the sector.

The notion of having full control of an application and data for certain processes is still a strong one.

One participant pointed to their organisation's experience in finding that for some systems it would not be cost-effective to move to the cloud, and said the market does not always provide an attractive price for the services. Another expressed some reservations about the risk liability for losses of data or disrupted services. This could be manageable for some services but not for others – in which case they are better kept in-house.

These points by no means dismissed the case for migration rather, participants argued, they indicated the need to make careful choices about moving specific systems to the cloud. Calculations around cost and risk for individual services should inform the relevant decisions. One size by no means fits all.

Calculations around cost and risk for individual services should inform the relevant decisions.

The general view was that most authorities will find it more appropriate to move to a hybrid model as a step towards their journey to the cloud, with cloud providing the foundations for most processes, but with some elements of the infrastructure remaining on-premise. It could be possible to build the infrastructure and platforms with layers at both levels, then add individual applications if necessary. The choices would depend on the organisation's core competencies, its risk appetite, and how much of the infrastructure and data it wants to keep under direct control.

AUSTERITY AND THE PRAGMATIC APPROACH

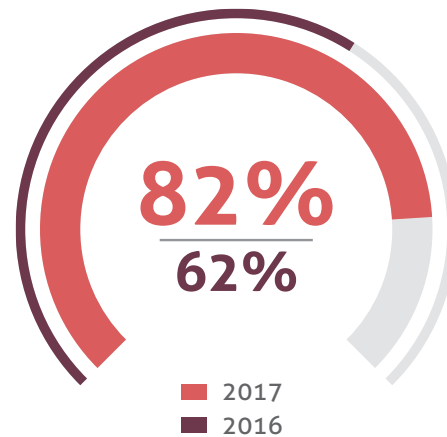
Underlying all this is the need for a pragmatic approach towards a cloud migration and a broader transformation effort in an austere world.

One IT chief stated: “*You have to approach this from both directions, looking at the technology that is available and the outcomes you want to achieve, look at the art of what is possible, and meet in the middle.*” Another comment was on the importance of looking for the “*realistic, viable product*”. Some warned that it can be a mistake to take the evangelist’s approach, claiming that there is a pervasive solution for all the challenges facing an authority, as it is impossible to lay out a master plan that anticipates every requirement and problem in advance in a world of such rapid technological change.

There is a need for a clear roadmap that relates the technology to the corporate strategy, and provides a framework within which choices and compromises will be made.

But there is a need for a clear roadmap that relates the technology to the corporate strategy, and provides a framework within which choices and compromises will be made. This should provide the foundation of making cloud services an integral element of local government.

Public sector cloud adoption



82% of public sector bodies have now adopted cloud services, up from just 62% a year ago, and 51% regard it as very important or critical to their digital transformation strategies.⁸

⁸ <http://www.ukauthority.com/news/7496/public-sector-still-picking-low-hanging-fruit-in-cloud>
Cloud Industry Forum figures, see <https://www.cloudindustryforum.org/content/cloud-unlocking-transformation-across-uks-public-sector>

RESEARCH PARTICIPANTS

With thanks to the following sector thought leaders who joined vibrant research round tables in London and Manchester or participated in interviews:

- > Andrew Tromans, Information Systems Manager, Dudley Council
- > Cara Williams, Deputy CIO, Greater Manchester Combined Authority
- > Ed Maguire, Head of Business Intelligence, Waltham Forest Council
- > Mike Weston, Assistant Director ICT, Sheffield City Council
- > Nadira Hussain, CIO, London Borough of Enfield
- > Omid Shiraji, Interim CIO, Camden Council
- > Paul Neville, Digital and Business Transformation Director, Waltham Forest Council
- > Priya Javeri, Director of Technology & Innovation, oneSource – providing shared services to Newham, Havering and Bexley
- > Ross McVicar, Economic Development, Tower Hamlets Council
- > Ruth Woodbridge, Head of Digital Transformation, QWest Services – a joint venture between Cheshire West and Chester Council
- > Salman Rahman, CRM Systems & Project Development Officer for Growth & Economic Development, Tower Hamlets Council
- > Simone Thomas, Head of Business Technology, Cheshire West and Chester Council
- > Tony Carroll, ICT Divisional Manager, Liverpool City Council

RESEARCH PARTNERS



Our team of local authority experts have more than 100 years' combined experience working in or with local authorities.

We fully understand the challenges within the marketplace and work throughout the UK to apply our experience in helping local authorities simplify operational processes, and streamline citizen engagement and self-service.

As a top Global Microsoft Gold Partner, our fully supported services and solutions are built entirely across the Microsoft Cloud (Dynamics 365, Office 365, SharePoint, Azure and Power BI).

UKAuthority

UKAuthority is the prime communication channel to public sector decision makers in the digital space. We are the trusted, independent media organisation, promoting innovation and best practice in the sector's use of technology and data for the public good.

www.UKAuthority.com is visited by over 63,000 visitors every month reading around 345,000 pages between them. Our weekly Extra e-newsletter is reach by 17,000 and our social media reaches over four million with stories that resonate and engage leaders in the sector.

EVOLVE LRG™

Evolve LRG by Pythagoras provides a compelling option to successfully meet the challenges outlined in this research note. Our transformational digital solution has been designed and built on the cloud based Microsoft Dynamic 365 platform specifically for local and regional government, and provides an intuitive solution to support customer self-service, along with tools for knowledge sharing and participation within local communities.

It pulls together disparate data, simplifies communications and business processes, and can be integrated with an authority's web portal to provide a number of benefits. These include improving service levels and customer trust; maximising productivity; providing savings; unlocking new revenue opportunities; and empowering staff to make informed decisions with the information they can easily obtain.

As part of Microsoft's 'evergreen' approach to iterative upgrade it is also future-proof, equipping an authority with a platform that can evolve over time to meet new challenges, and can fit smoothly within a hybrid model, allowing an authority to make its choices about which data and processes sit within the cloud or on-premise.



www.pythagoras.co.uk

