

Digital local public services:

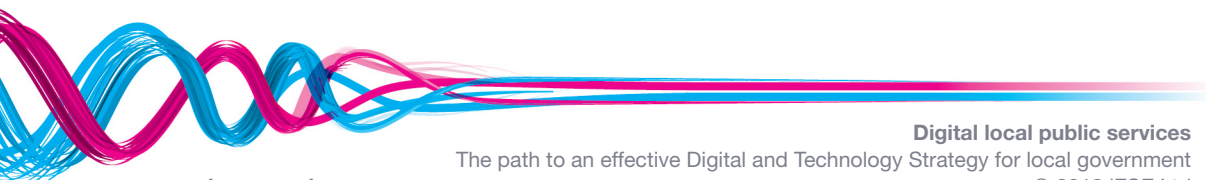


The path to an effective Digital and Technology Strategy for local government

An iESE White Paper by
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The public sector
transformation partner



Contents

EXECUTIVE SUMMARY	2
Findings	2
Recommendations	3
BACKGROUND	5
Digital Disruption	5
National initiatives	6
THE OPPORTUNITY: LOOKING TO THE FUTURE	7
Advancing Technology	7
The Role of Data	8
A new enabler “business” model	8
Changing Roles	9
IESE CONSULTATION	11
THE DIGITAL TRANSFORMATION STRATEGY	13
The power of digital transformation	13
The principles of a Digital Transformation Strategy	14
What does it need to achieve?	14
What should a Digital Transformation Strategy cover?	15
The key concepts needed to underpin the DTS	15
The Acid Test	15
Stakeholders	16
Navigation and Analysis	16
Architecture	17
Digital Platform	18
The community enabler model	18
THE PATHWAY TO A DTS	21
Keys to success	21
Overcoming the challenges	22
Culture	22
Research investment and direction	23
Funding & Infrastructure	23
QUESTIONS TO TEST WHERE YOUR ORGANISATION IS IN RELATION TO DIGITAL	25

Executive Summary

The world has seen a number of new, highly successful, businesses use technology to disrupt traditional markets with examples including Facebook, Amazon, Netflix and Google, with many more that have and are following in their footsteps. Their success is based on using digital platform technology, analytics and Artificial Intelligence, coupled with an ecosystem approach to aggregate supply and demand, facilitate and capture the creativity of the participants in the eco-system, and develop long term value chains, which generate improved growth and customer retention. These businesses have become global players who, whilst providing excellent customer service, can impact negatively on sustainable communities and their public services. However, they also provide lessons from which local public services can learn to transform their approach to the way in which they communicate, interact and support their local communities. For local public services already struggling to manage demand and support their communities radical reform is a necessity to maintaining the services people need and value, which cannot be delivered by retaining conventional practices and legacy mindsets of service delivery that are no longer suited to the 21st century technology business environment.

To close the gap, digital transformation must be embraced to demonstrate, evangelise and guide the right behaviours. Digital transformation is a vehicle for much broader business transformation beyond investing in technology. Instead the strategy must seek to create far more profound change with a larger goal of transforming the role of local government, the operating model, how local public service are delivered and how communities are engaged. Public sector organisations will need to become technological at the core, not just at the fringe to succeed and leaders have an important role in the implementation of digital transformation by leading their organisations away from legacy practices.

Findings

- An effective DTS is critical to future success, given the vibrant communities of the future will be dependent on digital and technology. In addition local public services will be co-dependent upon digital information and technology.
- To see real change and sustainability, the public sector will need to move away from the current “Vending Machine” model of prescribed service that limits vendor and service choice and drives higher prices. Improvements that work within this mindset and model will fossilize the insufficiencies in current practices. Instead the approaches used by digital innovators and disruptors outside the public sector should be used as examples to learn from and to drive fresh thinking.
- There is no possibility of managing the demand now arising, so it needs to be diverted by dematerialising the current operating model through the creation of geographic digital platforms and a new role that moves local public services from a customer centric service provider to a community enabler.

- The adoption of the strategy and the new technologies inherent within it, will allow local public services to work more efficiently in innovative new ways through more direct interaction with citizens and communities. By utilising a digital platform, the public sector can redefine its role from being a provider of services to becoming a catalyst and conduit for matching local supply to local needs rather than seeking to meet the needs themselves. By connecting individuals and communities it can build their resilience and capacity to self-solve problems with the local public services acting as the custodians of the market place, dealing with democracy, governance, data and the analysis of need.
- A platform approach can be used to create a digital ecosystem that aggregates the demand of individuals with a market place of suppliers, without the need for direct involvement in service delivery. Shared objectives of stakeholders create mutual benefit with multipurpose use of digital services. The public sector has the supply chain and customer base to achieve the economies of scale and scope needed to best benefit from this approach, and its inability to meet the needs arising in its communities is a powerful driver of change.
- The success of the DTS relies principally on a shared vision but should also be a continuous process of optimising processes, functions, and services across the separate ecosystems of the individual organisations. This requires strong leadership and partnership working.

Recommendations

- Build a digital transformation strategy that is holistic in nature and addresses all the elements within the geographic area of the local public sector with a redefined relationship between the public sector and its citizens, neighbourhoods and communities, its partners and local stakeholders, as an enabler of services.
- The strategy should focus on developing an intelligent council that is both customer centric and rewires public service to be delivered in new ways from within the local community. The ultimate focus should be building resilience within the community, developing its capacity to solve and deal with its own problems thereby reducing the direct demand for public services. At each stage local public services should be asking, “have we diverted demand in the way that creates the maximum value for the community and built its resilience?”.
- Perhaps the most effective approach will be to use local public services experience of building local partnerships used to develop their Community Strategies to align local vision, objectives, resources and decisions to avoid technology being a separate, technical subject owned by the specialist staff within individual organisations.
- The strategy needs to allow an organisation to evolve and change, without huge effort or cost in a way that minimises disruption whilst future proofing the approach to best affect. It should incorporate design principles and standards that contribute to solving immediate challenges.

Councils should seize the opportunity to create the platform for new local services, giving a level playing field to local businesses and building an authentication approach for local services that puts control of privacy with the customer.

- Local government needs to challenge the current lack of dedicated research funding going into local public services in the UK recognising what could be achieved with both adequate spending, proportionate to the existing costs of service delivery, and directing research of solutions that reduce or divert demand away from local public services.
- With a coordinated sector approach there is an opportunity to use the asset base of local public services to create and monetise the technological infrastructure required for the country, creating the 'highways' for the digital society. A 'Neutral Host' model should be adopted where the public sector maintains ownership of key assets and can roll-out local networks themselves. In turn connectivity services can be offered to all operators, enterprises and public bodies on a transparent basis at a fair market price. This way infrastructure is shared and capital expenditure for each operator is greatly reduced allowing them to compete faster with new services and contributing to the costs of local public services.
- Local government should use its buying power to encourage a move to geographical licensing rather than traditional organisation licensing.

Background

Digital Disruption

Local public services need to continue to learn from the likes of Facebook, Amazon, Netflix and Google, who have been the digital disrupters of their own market places. The dematerialisation of the previous business model through the creation of digital platforms that connect customers to suppliers without any direct involvement in service delivery has achieved great success and rapid growth. The huge size of these organisations and control they have in their respective market places raises big questions about their impact on the economy, particularly the retail sector with the increasing loss of chains from the high street, on jobs, conditions of employment, and highlights the inadequacy of the current tax systems to deal with these internet giants. The impact they are having is fundamental and will increase as they experiment with and invest in new forms of delivery such as drones. This creates an urgent need for government to review such business models, with arguments for things like drones to be subject to a local taxi license rather than a national CAA license thereby replacing the loss of business rates and the contribution they make to funding local public services.

Local public services have begun to assimilate these new business models and will increasingly do so through digital platforms, but with the recognition that there will remain a need to continue to deal with not just data, but infrastructure too. After-all you cannot have a digital road or deliver a care package solely through software.

By learning from these examples and past experience, local public services will need to be entirely reinvented. There is no possibility of managing and meeting all demand, so it needs to be diverted, allowing people to live more independent lives.

“There will be a fundamental re-imagining of the role of the state... one thing is for sure - if we move in anything like this direction, whilst continuing to protect health and pensions, the role and shape of the state will have changed beyond recognition.”

Paul Johnson, Director, Institute of Fiscal Studies

National initiatives

There have been a range of Government and ‘think tank’ national studies, initiatives and strategies undertaken designed to highlight and facilitate the use of technology in the public sector. Examples include Local Gov Digital’s, ‘Improving collaboration across local government digital services’, November 2018; Government Digital Service Technology in Government Survey, August 2018; Institute of Government, ‘improving the management of digital government’, Sandra Vogel’s, ‘A look at some of the UK’s best digital skills initiatives’, January 2019; Artificial Intelligence for Government Review; Changing the face of local government with digital transformation, June 2019. These together with the Government Transformation Strategy of 2017, and Government Technology Innovation Strategy 2019, demonstrate the huge opportunity technology represents for the public sector, and risks associated with not getting the approach right from the outset.

The Government has often responded to the opportunity by making funding available to local public services via processes, in which there is competition for funding for local initiatives, with criteria encouraging local public services and their local stakeholders to work more closely together. Whilst such initiatives have seen success, the competitive nature of the process does perhaps contribute to a culture of competitive behaviour between authorities and regions, which can be seen to have some negative consequences. There is a dearth of research and development funding in relation to the main challenges facing local public services. It is perhaps time for the approach to change and for transformation to become research led, particularly by the research councils, with sufficient funding focussed on specific challenges to come up with credible solutions applicable to the whole of the local public services sector rather than funding individual pieces of best practice.

The opportunity: looking to the future

10 years ago, no one could have predicted we would be where we are today, and the same is true for the next 10 years. However, it is essential strategies are developed with the future in mind, to understand and anticipate, in so far as it is possible, the challenges that the public sector and its leaders will face going forward. So, what might we reasonably expect the immediate future to hold?

Advancing Technology

The future is likely to see the convergence of key areas of technology in relation to social media, mobile devices, use of the cloud, artificial intelligence/analytics, and robotics. All of which will make use of the increasing levels of data becoming available from the 'internet of things', connecting sensors and devices in things like smart buildings, cars including clean energy vehicles (the current push is electric – with recharge points becoming recharge mats, and now recharge roads envisaged) and driverless technology and flying vehicles (driverless taxis are being trialled around the world, as is drone delivery and the first flying cars are already on sale), white goods, street furniture etc. These new technologies will move transformation on from efficiencies in the back-office systems to include the physical services, allowing local public service employees to be freed from the tasks that are automated and targeted at complex needs where they can have the biggest impact.

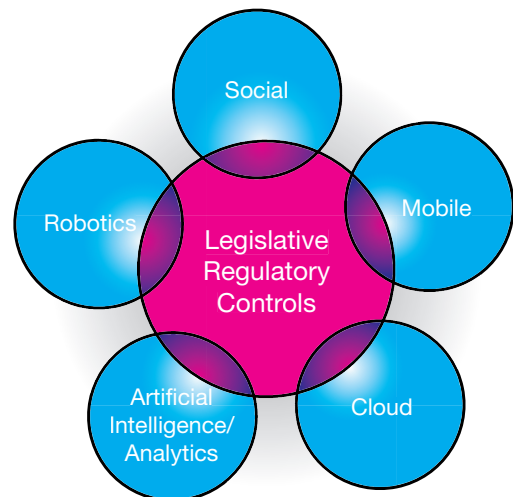


Figure 1 Future Digital Technology.

The environment for local public services is one of increasing legal responsibilities, reducing resources and increasing demands. This in turn is leading to the adoption of new technologies to deal with the increasing challenges faced, including the use of electronic data to manage assets and resources more efficiently, allowing local public services to interact more directly with their citizens and communities and work with them in exciting and innovative new ways to better deliver public services, which reduce costs and improve the quality of peoples' lives.

A PA Consulting Insight blog¹ suggests the public sector is entering what they term a second wave of digital public services, borne of the constant pace of digital innovation and ever-changing human behaviour. This is characterised by seven themes:

- AI and Robotics – automating arduous manual tasks, increasing user access and letting human resources focus on the most vulnerable and the biggest threats.
- Platforms – enabling re-use of digital services on multiple tasks and let others, like businesses, use those platforms for their own needs.

1. <https://www.paconsulting.com/insights/the-second-wave-of-digital-transformation-2018/>

- Data science – getting genuine operational value out of data and embedding it into day to day working, rather than just looking at what has been done before.
- The digital workforce – adds greater creativity and technological innovation skills, essential for the thriving UK economy in a post Brexit world.
- The power of community – gains benefits from shared objectives using ecosystems of start-ups, community groups, the gig economy and the third sector.
- The increasingly physical world – uses internet-enabled objects to deliver services and data.
- Emerging technology initiatives – like GovTech, RegTech, Fin/tech, provide fit for purpose technology to industry sectors.

PA Consulting suggest these new platforms and technologies are the new foundations of the public sector, just as the civic buildings of Whitehall were before them. Public sector organisations will need to become digital at the core, not just at the fringe to succeed.

The Role of Data

Data, its protection and trading will become increasingly important, with artificial intelligence, predictive modelling and the availability of advanced design tools leading the public sector away from large, centralised software systems to using platform technology and ‘applications’. The applications making use of the platform technology can be designed and written at very low cost, with a product life cycle measurable in days and weeks rather than months and years. This provides the means to move decision making into real time, allowing greater opportunity to focus on prevention, and to test possible solutions in advance of their deployment, allowing previous experimentation in areas such as ‘gamification’ to become real, savings costs and increasing the chances of success.

Local public services who have the trust of their communities have a fundamental interest in and role to play in how individuals’ data is collected, stored and used. The current census arrangements are bureaucratic, expensive and unfit for purpose. These need to be replaced with a process that gives real time information to manage demand. However, such considerations will highlight the tension between public access to data and need for privacy, with future technologies making it possible to separate the validation of an individual’s circumstances without direct access being needed to their personal information and records.

A new enabler “business” model

The engagement of local citizens and communities will be indispensable to local decision making and how local needs are met. Donald Kettl described Government as akin to a vending machine², whereby citizens pay taxes in return for public services in support of their lives. When these public services do

2. Donald F. Kettl: *The Next Government of the United States: Why Our Institutions Fail Us and How to Fix Them*

not measure up to expectations, participation in the public service process is limited to protest/complaint, or in other words shaking the vending machine. In this “vending machine” model, the menu of available services is determined beforehand, with only a minority of vendors able to get their products and services into the machine, creating limited choice and high prices.

To see real change and sustainability, the public sector will need to move away from the approach described by Kettl to the “community enabler” model, becoming a catalyst and conduit for matching local supply with local needs. In this model the local public services act as the enabler and catalyst rather than seeking to meet the needs themselves. This ensures greater involvement of local citizens, neighbourhoods and communities in meeting their own needs, with open access to appropriate technology facilitated by geographic, place based licensing approaches³ allowing local communication and collaboration. This will move local public services towards a greater emphasis on democracy, governance, income and cost control, than service delivery.

Changing Roles

The change in position means the role of local public services will be more about quality assurance and less about service delivery. This doesn't mean an abdication of responsibility, however, as they will still need to set the standards and ensure equity, access and fairness are built into the new ways of meeting needs. It is possible to see a future where local public services franchise the services they deliver, with them being transacted between customers, the franchisee and supplier. The local public services become custodians of the market place, dealing with democracy, governance, data and the analysis of need. The best possible position for the local public service will be that the customers don't turn up, because their communities can look after themselves. In such a world local public services would need to ask not just, have we done everything possible to divert demand, but have we diverted demand in a way that creates the maximum value for the community and built its resilience.

The role for elected members will also change, using their local knowledge to bring together supply and demand, facilitating how needs can be met locally. More time and better communication might enable a different demographic to engage. For example since 2011, the Swedish Institute has handed over the keys to the country's official Twitter account @Sweden to a new Swede every week, letting them tweet anything they want. The goal was to show the country as it really existed through the eyes of its various citizens.

3. A geographical licence approach enables the local authority to develop and run applications used by partners in the areas to join up services. Traditional licensing would require each to hold a licence and create a barrier to transformation.

IESE Consultation

iESE have undertaken consultation in relation to the above and found the following:

- Strong support for the background in which the public sector finds itself - increasing demand, more regulation and less resources, with digital seen as part of the solution going forward, but without understanding how it can be used to best effect.
- Current approaches to digital tend to be built around the practical areas having the most impact on the public sector, such as improving web sites, opening up access and effective communication. Developments have tended to be driven by specific priorities rather than a comprehensive strategic approach.
- The speed of change and mindboggling nature of the digital market place faces public sector leaders with a challenge in understanding how they can maximise the use of technology in their organisations, and ensure real transformation is achieved. Whilst clear they do not need to understand the technicalities, they do need to understand what is possible through technological transformation, how their organisation can best make use of what is available and what they can do to galvanise their people into action.
- Local government has a great track record of delivering digital change to the wider benefit of the UK. We need to learn from what has had the most effective impact on the public sector before. Examples of success include the introduction of GiS and local government creating the conditions and the specification for digitising the Ordnance Survey map base as well as the online sharing of learning and training materials through Learning Pool. These will help develop understanding of the best way to approach technology to ensure success as a sector and the joining up of local public services.
- More needs to be done to get the public sector working together, so that they can maximise their leverage and combined buying power. Procurement is regularly seen as a barrier, often because it is complex and involves doing things differently. The barriers created by traditional procurement processes can be overcome, such as the use of framework contracts obviating the need for expensive, bureaucratic processes. However, some areas of technology, as in wearable and household health monitoring technology, may be moving too fast for any traditional procurement, including frameworks, to ever be effective.
- We need to use technology to explore the future role of public services such as a 'platform' equivalent to Amazon or Google, and the implications of this to the future of public service delivery. Both Amazon and Google have trust issues and there is also the concern about what impact such large organisations have on independent businesses.
- Lots of work has been undertaken in relation to data via GDPR, FOI etc, which has been resource hungry and challenging. However, this work can be used to good effect in the development of a 'trust' based approach to digital local services.

The Digital Transformation Strategy

An opportunity exists to reposition local public services to better service their communities with the development of a Digital Transformation Strategy (DTS)

The power of digital transformation

Digital transformation can be defined as the profound transformation of organisational activities, processes, competencies and models to leverage the changes and opportunities that digital technologies can deliver, both now and in future.

The LGA in their paper, 'Transforming local public services - using technology and digital tools and approaches'⁴ suggest that for councils and their partners, these tools can enable:

- A deeper understanding of local patterns of need and interaction with government, allowing resources to be managed, planned and directed to where they will have the greatest impact.
- More effective management of demand – enabling user self-service and supporting peer-to-peer advice-giving and assistance via social media.
- Faster, more reliable and precise handling of routine, repetitive tasks – allowing costly and scarce professional expertise to be better utilised.
- Faster access to, and sharing of, data between councils, customers, and partner organisations – avoiding the need to collect the same information multiple times, saving time on research and information collation.
- New ways of working that potentially reconcile the goals of providing a better quality of customer experience while cutting costs.

As digital technologies become ever more pervasive and integrated into people's daily lives, it's essential the public sector continues to exploit their potential. This journey, expressed as a continuum as set out in Figure 2 below, was established in feedback from over 100 authorities in the UK for iESE's first White Paper, "From Surviving to Thriving"⁵.

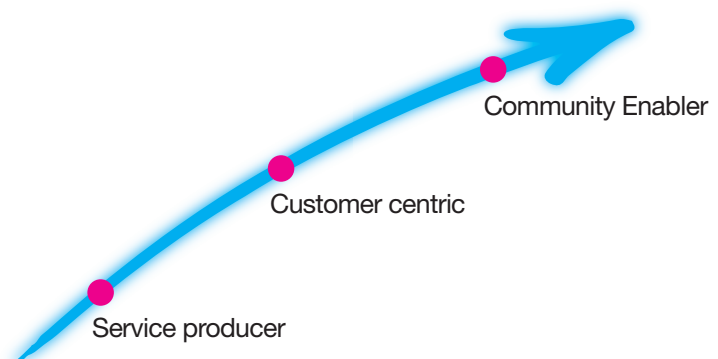


Figure 2 The Transformation Journey.

4. <https://www.local.gov.uk/sites/default/files/documents/transforming-public-servi-80e.pdf>

5. <https://www.iese.org.uk/surviving-thriving-paper-2-consultation-outcomes>

However, such a transformation can only be sustained, not only to analyse the problems of the future but to achieve scale, both with the advent of digital and the associated technologies. This will also require thinking beyond getting services on line, largely as they currently exist. Whilst simply moving our current service online will undoubtedly bring improvements, this ‘fossilises’ business practice rather than diverting demand by thinking of services in a very different way. Such an approach to digital transformation needs a broader view considered from three dimensions:

- Digital local public services – what will these look like if we truly reinvent our role?
- The technological community – what will residents and businesses need to thrive in the future?
- The technological ‘area’ – what infrastructure is needed for resilient, thriving communities?

The principles of a Digital Transformation Strategy

What does it need to achieve?

A digital transformation strategy should aim to deliver in three key capacities:

1. Support the development of an intelligent council. One that is customer centric and can rewire public service, joining up local business to residents and lowering the cost of living and participation of local residents and business.
2. Facilitate the reinvention and redesign of public services as we know them. Instead replacing many with services delivered from within the local community via the support of networks of capacity, involving multiple organisations across multiple sectors.

The DTS should support community to community, and not just community to local public services interactions, allowing and facilitating inter community social prescribing. All the while supporting economic growth, educational attainment, business incubation, the development of new industries, and roll out of new infrastructure. This will require supporting the joining together of individuals to find ways to make the imperfect work rather than wait for it to become perfect. An example being the ‘Mind of My Own’ application, which is designed for the use of young people to communicate issues they find difficult to talk to their social workers about, such as abuse, using pictures/emojis.

3. Establish the capability required to exploit the opportunities and possibilities of new technology faster, better and in more innovative ways to solve the immediate challenges at the same time as providing the basis for future success. This involves connecting people, processes and things through an ecosystem that supports all the stakeholders. The result should be cheaper, more flexible and simpler to manage and work in the real world where citizens, neighbourhoods and communities live.

What should a Digital Transformation Strategy cover?

- The connecting of people, processes, and things, which requires strong partnership working and an ecosystem that can support all users from suppliers, staff and contractors to customers and their connected devices, including availability of a robust, high-speed network that is secure, smart and crucially, is trusted.
- Analysis of the vast amounts of data already available to create real time intelligence that can improve decision making, make better use of resources and enhance performance.
- The creation of new business models, which are cheaper, more flexible and simpler to manage than the previous traditional systems.
- The move towards a single, simple platform, which whether based locally or in the cloud, supports the communication and collaboration of all relevant stakeholders.
- Account for all relevant technologies to ensure true transformation can be achieved by integrating digital with physical technologies, and moving beyond software into the physical world e.g. refuse collection, street sweeping, meals on wheels etc.
- A compelling business case that provides the bridge between the underlying purpose, desired outcomes, resources and the available funding.

The key concepts needed to underpin the DTS

The Acid Test

The DTS needs to be holistic in nature and address all the elements within the geographic area of the public sector but be local enough to draw on the detailed local knowledge required to deal with local challenges, problems and issues. A DTS's scope can be summarised as in Figure 3.

The DTS will by necessity redefine the relationship between the public sector as a provider of services and its citizens, neighbourhoods and communities in a way that is less to do with business concepts and more to do with the unique nature of public service. As a result, a new “acid test” should be used to test the strategy.

The key difference between a private sector business and a local authority is that for the authority the best possible position is that customers don't turn up because communities can look after themselves. This means the needs that arise don't turn into demand for public service. For a business this would be commercial suicide, but for the local authority it is nirvana.

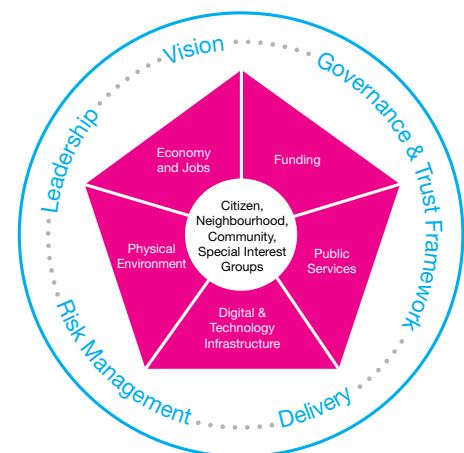


Figure 3 The scope for the Digital Transformation Strategy.

When we use this paradigm as a test then we need to ask not just “have we done everything possible to divert demand?” but “have we diverted demand in the way that creates the maximum value for the community and built its resilience?”.

Stakeholders

As the public sector evolves from ‘Producer’ to ‘Customer Centric’ and on to ‘Community Enabler’, all of the stakeholders in a given geographic area will need to access and interact with the appropriate digital technologies in their various roles. This can be summarised as set out in Figure 4.

Previously this was the preserve of individual organisations and their internal intranets, however, the holistic approach required for a successful DTS means access will have to be wider than ever before. This will in turn require greater levels of security to be maintained.

Generally, the public are not interested in the different bodies and organisations involved in delivering the services and support they are seeking. This suggests the simpler access can be made the more effective it will be. Access can be summarised as set out in Figure 5.

Each area will need to have appropriate levels of access to the various systems, tools, processes and intelligence necessary for them to be used effectively.

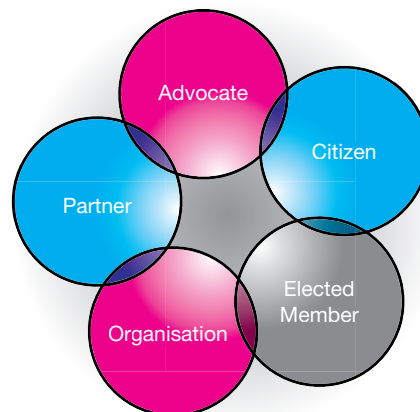


Figure 4 The stakeholders in a Digital Transformation Strategy.

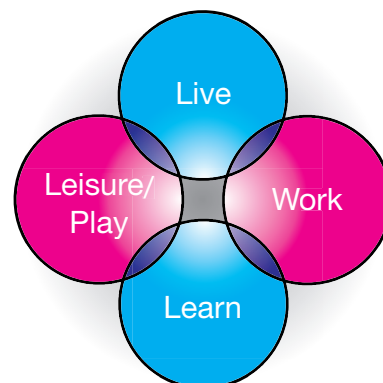


Figure 5 Resident roles.

Navigation and Analysis

Public sector information needs to be accessed and searched via common standards of reference. The physical nature of buildings, land and people have in the past focused efforts on implementing:

- Unique Person/Organisation Reference Number/Comprehensive Customer Relationship Management System (CRM)
- Unique Property/Land Reference Number/Comprehensive GiS System (GiS)

Despite these concepts and systems having existed for decades there has been limited use. Often individual specialist software applications each have their own versions of CRM and GiS systems embedded in them. However, the future use of digital technologies will not be simply about record keeping. Rather future CRM systems need to be able to create a single version of the truth about an

individual or organization, appropriate to the use for which the information is being accessed the use of identification number enables the bringing together of data to verify that a person or organisation is eligible for a service but can be designed to give control to the customer and increase their privacy. In countries with regional population registers, the national statistics agency invokes processes to create census statistics without access to individual records. Similarly, the customer can authorise the access to their information for the purpose of a transaction. Traditionally GiS has been used to ask to simple questions “what is where?” and “where is what?”, in the future it will need to create an understanding of the changes that will happen across a given geography. This means providing the whole life to date of a building or place, so they can be used to best effect with proper context and understanding.

Analysis to understand needs and how they will drive demand if unmet, will be at the core of local public services. This encompasses needs arising in the community, from short term events and long-term trends, and how we create the conditions for the community to meet those needs. With live feed from health information we might envisage delivering antibiotics to vulnerable residents where data shows a chest infection emerging within the community as a preventative measure. Likewise understanding long term trends and how they affect the cost of living for local residents and businesses will lead to community enabling activity to lower those costs and increase the resilience of the community. Councils have already successfully engaged in these practices from rolling out broadband to buying energy.

Architecture

As has been stated the scope of a DTS will by nature cover a myriad of processes, functions, services and ecosystems across individual organisations. Across which the processes, functions and services are delivered, including partners and those involved in the supply chain. To simplify the understanding of the complex nature of the architecture we can refer to Figure 6.

With the continuing evolution of the Internet of Things, increasing sophistication of identity/data validation and the advent of organisations like data trusts to house and look after data, the days of organisations creating, protecting and using their own data stacks are limited. As these developments progress, more and more of the data currently found within organisations, and considered part of their competitive advantage, will instead be readily available via the internet and easily validated in terms of their source. In such a future an organisations competitive advantage will be based on the use they make of data, using advanced analytics and artificial intelligence, to achieve their purpose, moving them away from the separate collection and ownership of data.

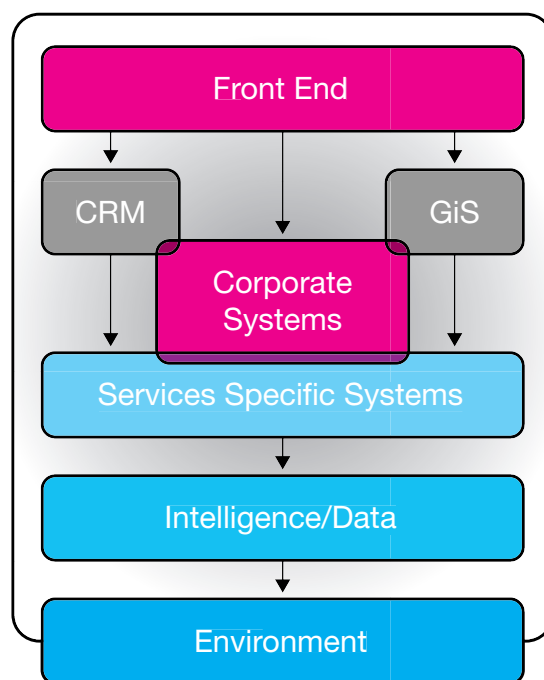


Figure 6 Digital Transformation Architecture.

Digital Platform

The potential for becoming a public sector version of an Amazon or a Google relies on exploring how a digital platform can be used to aggregate the demand of individuals with a marketplace of suppliers. Figure 7 sets out simplistically how the digital platform operates.

Social media is already used in a variety of ways for people to trade. The public sector can become another type of platform, linking not just local public services but local businesses, community groups and even time banked hours within and across geographic areas. This meets the needs of citizens, neighbourhoods and communities by allowing them to access a market place of appropriate suppliers.

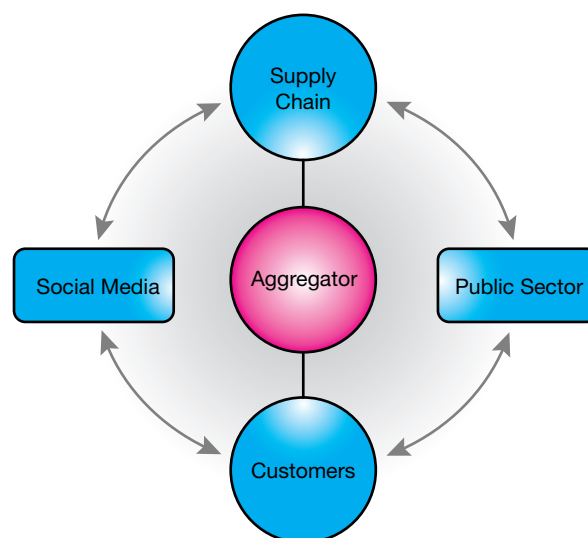


Figure 7 Digital platform operation.

The history of the technology industry suggests the most successful companies are those that build platforms that allow a whole ecosystem to participate. One of the best examples is Apple who built a platform to allow virtually anyone to build applications for their technology, leading to an explosion of creativity. Other examples include Amazon, AirBNB, eBay and Uber, all of which are growing exponentially using the platform approach to connect supply and demand. Many of these companies have reached a size and scale of operation that creates significant barriers to others following in their footsteps. However, the public sector has the supply chain, customer base and potential to benefit from such an approach, without such barriers to entry. Furthermore, it has levels of trust far greater than some of the private sector players and can ensure that tax becomes local not offshored.

The community enabler model

By connecting citizens, neighbourhoods and communities through a local public sector platform, they can be linked together within a regulated, ethical, protected and trusted environment. This creates the opportunity for each to participate in solving their own problems and the challenges affecting them locally, with the public sector in the role of custodian of the marketplace

In 'The Cathedral & the Bazaar'⁶, Eric Raymond uses the image of a bazaar to contrast the collaborative development model of open source software with traditional software development. This can be analogised to the difference in the public sector "vending machine" approach, as described earlier, and becoming a community enabler. Unlike the fixed list of services, small number of vendors and potential for high prices in the vending machine model, the platform approach creates a marketplace with rules

6. RAYMOND, E. S. (2001). *The cathedral and the bazaar: musings on Linux and Open Source by an accidental revolutionary*. Beijing, O'Reilly.

set by the public sector, where participants can exchange goods and services. This approach allows solutions to evolve through the participants interactions with the local public sector in the platform, rather than the local public sector needing the solutions upfront.

Elected members have a critical and vital role to play in ensuring the standards of the marketplace are appropriate to their use, using their detailed local knowledge as a catalyst for solutions and making sure that people understand, trust and have access to the new arrangements with an appropriate level of knowledge and skills to use them.

The pathway to a DTS

Keys to success

As with all strategies the success of the DTS relies principally on a shared vision of what needs to be done. This, together with the underlying objectives, priorities, decisions, resources and delivery need to be aligned so that everyone is understanding of and performing their role in achieving it.

The pace of change means the DTS should be a continuous process of optimising processes, functions, and services across the separate ecosystems of the individual organisations. The speed of technology change is placing an increasing strain on ICT infrastructure, which has led to a chaotic mix of workload-specific hardware and software/platforms that are costly, difficult to manage and high-risk. To be effective the DTS must transform infrastructure in a way that minimises disruption and contributes to solving immediate challenges whilst providing the basis for further future success. By necessity this will involve finding the right mix of traditional/legacy and new ICT systems, which are able to meet the organisational needs, and affording flexibility to integrate new technologies where needed and maintain legacy systems where appropriate.

Further enablers of DTS success as acknowledged through iESE consultation include:

- A clear understanding of the critical factors to consider in deciding a digital strategy, including what digital is and what it comprises.
- It has to work at all levels, with an understanding of the principles on which it rests and whether there are specific/universal litmus tests and/or design rules to guide the development of the strategy.
- The strategy needs to be clearly set out and articulate the benefits for all; start with a purpose, then set out the operational principles, the tools used to achieve it, and end with the benefits that will be realised.
- It needs to be succinct and to the point, something people can engage with against a backdrop of increasing workload.
- The strategy needs to be outcome driven if it is to achieve success.
- It is key to ensure there is adequate digital infrastructure and the necessary skills to take advantage of it and use it to best effect.
- The fundamental outcome of the strategy must be to build resilience within the community, developing its capacity to solve and deal with its own problems and challenges thereby reducing the direct demand for public services, making what is left more manageable.

- Given the universal nature of digital, the most effective approach will be to embed via the type of approach used by local public services to create their Community Strategies to avoid digital being a separate, technical subject owned by the specialist staff within individual organisations - the equivalent of a garage having a 'spanner's officer'.
- The approach needs to set out the golden threads that can be used within organisations and across a geographic area to integrate the approach to public service delivery, with the digital element seen as an enabler. Such an approach can take advantage of the trust the public sector has of its residents for engagement and self-help.
- There is a need to accept the future is unclear, therefore the strategy needs to allow an organisation to evolve and change, without huge effort or cost. It should incorporate design principles and standards that future proof the approach to best affect, avoiding getting trapped into 'Small Building Syndrome'. This must include learning from best practice, understanding the challenge of knowing what is available and how it can best be brought together to get the best results; 'The future is out there but unevenly distributed'.

Overcoming the challenges

Culture

Risk-averse cultures make innovation and experimentation harder to achieve. A recent survey by Deloitte found digital culture is weaker where there is low tolerance for error, making leaders less willing to experiment and slower to innovate and collaborate using digital technologies.

They also found some of the sectors that deliver professional services are slower to invest in workforce skills to execute digital strategy, particularly higher education, health care, and social services. This could be because these are under extreme pressure but may also be because they traditionally place a high value on professional judgment, subject-matter knowledge, and interpersonal skills rather than organisational, digital, or transformation skills. Conversely, the levels of user focus are higher across sectors where the public service itself is about delivering knowledge services to citizens/customers—in particular, IT, education, and higher education.

The relationship between innovation and risk is important to note in a sector, which routinely deals with life and limb issues and should be considered in relation to the way change can be taken forward in particular circumstances.

Research investment and direction

Many of the traditional “big ticket” problem items will remain major challenges without adequate research and investment to find solutions. There is however little research commissioned by local government. Currently no dedicated research fund exists for local public services in the UK, except for the monies spent by the local government associations. The total grant for England covering all support is approximately £20m. Within the EU, Member States are encouraged to spend 3% of GDP on research. If 3% of local government revenue expenditure in England was available for research this would amount to £2.79Billion at 2016/17 figures. Furthermore, what research is commissioned is primarily focused on improved versions of dealing with demand rather than the means to remove the underlying problems that generate that demand.

It is important to recognise what could be achieved with both adequate spending, proportionate to the existing costs of service delivery and directing research to solutions that divert demand from local public services. By way of example take the big spend area of waste. Waste is transported, sorted, transported, recycled and incinerated, with demand rising and dropping with the weather. Increasing demand equals more service required so we must explore what drives so much demand. One dimension that creates waste is shopping, where behaviours and habits have created the need for packaging that hasn't been designed for reuse, recycling or release. Therefore, change will not only require changing the packaging to make it re-usable, but also changing behaviour and existing habits. This requires the business model to be changed at both a macro and micro level with appropriate solutions for both. This means instilling the values of reuse and cleanliness, across the transport, sorting and cleaning technology industries, going down to the micro level involving domestic appliances like washing machine, gas boilers and potential new technologies like domestic incinerators. The reward for investing in these solutions is removing the need to collect waste.

Consequently, one solution is for local government to challenge the research councils to direct their research to solutions that divert demand from local public services (ESRC spends some £190m and EPSRC £828m).

Funding & Infrastructure

Local public services have traditionally given away the rights to use public infrastructure in a vacuum, essentially giving away the crown jewels. The need for new digital and technological infrastructure requires funding, for which there is a debate to be had with government, about the best way of generating this funding and the contribution it makes to the support of local public services. This debate needs to include how the use of local public service infrastructure can create competitive advantage for local business, overcome the monopoly producers of service, and facilitate the use of franchise type models, which add value, allow local public services to have a share of the revenue being generated and benefit local communities. How licence revenues are generated, how our roads are used, how electricity is generated and distributed and how telecoms are managed and operated (including the deployment of 5G networks), all warrant consideration.

A 'Neutral Host' model offers a solution, proposing that the public sector should maintain ownership of key assets and instead roll-out local networks themselves. In turn connectivity services can be offered to all operators, enterprises and public bodies on a transparent basis at a fair market price. This way infrastructure is shared and capital expenditure to each operator is greatly reduced which will improve their business case and allow them to compete faster with new services. The public sector will generate income to fill the austerity gap, as well as boosting the growth of local digital economy. UK plc will benefit from increased productivity and competitiveness. In this case potentially everyone wins. 5G for example needs a high density of transmitters which local authority street infrastructure could mount and embed recharging into roads. This provides the opportunity to be the economic equivalent of the petrol station forecourt and potentially the electricity generator as well. The regulatory role the new delivery models will require creates the possibility of staking a claim for being the local data guardians too.

With a coordinated sector approach there is an opportunity to create and monetise the digital network infrastructure for the country, creating the highways for the digital society in the way that the first councils created the highways for physical transport.

With a coordinated sector approach there is an opportunity to create and monetise the digital network infrastructure for the country

Questions to test where your organisation is in relation to Digital

Based on the above the following are considered useful questions to consider in relation to your own organisation and where it is in its digital journey and what next steps to consider.

1. **Where does your organisation sit on the continuum between Service Producer, Customer Centric to Community Enabler?**
2. **What consideration has your organisation given in its consideration of digital to how it works with other digital public services, digital communities and the digital city/region?**
3. **What does the highest level of strategy within your geographic area say about digital and how is that reflected in the strategies of your own organisation? Does the Digital and Technology strategy encompass the three dimensions of:**
 - a. Digital local public services
 - b. The technological community
 - c. The technological 'area'
4. **Has the digital strategy within your organisation been co-created with other stakeholder organisations and the community?**
5. **How does your strategy underpin your role as the Intelligent Council?**
6. **How does your strategy seize the opportunity to create a platform for your area, setting new standards for authentication and privacy?**
7. **How does your approach to development of new systems and licensing promote joint working across organisations in your area?**
8. **How does your organisations digital strategy contribute to the entrepreneurial approach of your organisation?**

Digital local public services:



The path to an effective Digital
and Technology Strategy for
local government

An iESE White Paper by
John Comber and Andrew Larner



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