New Models for Transformation

Final Report Recommendations

Summary

Cambridge University Science and Policy Exchange

working with

Cambridgeshire County Council

New Models CUSPE Team

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Autumn 2017

Cambridgeshire County Council Policy Challenges

What are the next generation of models to transform organisations, and how could they benefit Cambridgeshire County Council?

Contents

Summary

As part of the Cambridgeshire County Council Policy Challenges, a team of three researchers was challenged to address the question of:

What are the next generation of models to transform organisations, and how could they benefit Cambridgeshire County Council?

The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organisation and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report provides an overview of the work of the project. This begins with an overview of the policy challenges and the brief provided to the team, before discussing the approach taken during the project, the key areas of interest identified and types of models examined, and finally providing recommendations and providing an evaluation and proposal for future work.

Further sub-reports provide detailed discussion of recommendations in each of the six areas, with brief rationale and examples.

The Policy Challenges

In October 2016 Cambridge County Council and Cambridge University Science and Policy Exchange (CUSPE) launched the policy challenges to connect the council with academic researchers to assess salient issues facing the County Council.

Each challenge brought together a small team of researchers to examine one of three key questions:

- What are the next generation of models to transform organisations, and how could they benefit Cambridgeshire County Council?

- Why is Cambridgeshire's educational achievement gap so bad, and what can be done about it?

- What actions would have most impact in reducing deprivation inequalities in Cambridgeshire?

This team focused upon addressing the first of these questions, the results of which are presented in this report.

Project Brief

Upon beginning the project with the council, the team were provided with a brief for the project. This brief outlined the need for transformation within the council:

> *'The need for transformation: Cambridgeshire County Council has operated a departmental based approach to business planning and budget setting process for many years. This engendered a culture and a set of behaviours that resulted in a very insular and defensive style of working. As a consequence there were very few cross-organisational, let alone cross-sector, solutions developed to address the financial challenges faced by the Council.'*
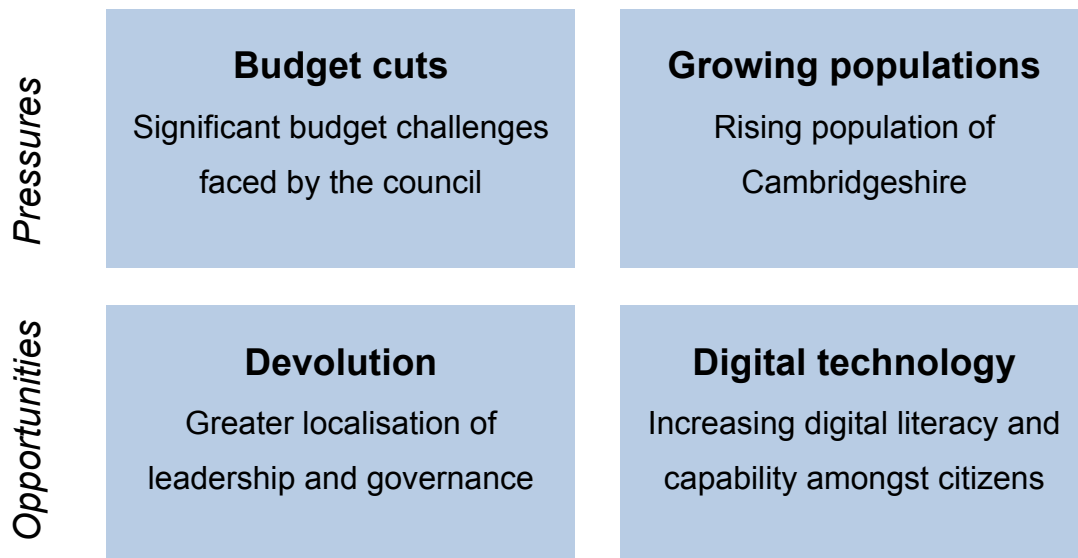
As part of transformation, the brief described a need to determine possible models for transformation at the level of project methodology:

> *'The models and methodologies behind this transformation are still to be determined – and the Council is interested to know what the vanguard models and methodologies are that we should be looking towards.*

This brief provided a wide scope for the project. Whilst initial examples of specific business methodologies such as Lean and the Agile were mentioned along-side this brief, it became clear during initial meetings, both with political representatives and officers, that the council was keen to explore broader examples of models for transformation, for instance relating how organisations are structured, how they are governed, and how this relates to the delivery of services to the citizens.

Context for Transformation

Transformation within the council is driven both by the need to address several main challenges and take advantage of the changing context within which local government operates. During the project four key influences on transformation were indentified.

	Budget cuts	Growing populations
Pressures	Significant budget challenges faced by the council	Rising population of Cambridgeshire
Opportunities	**Devolution** Greater localisation of leadership and governance	**Digital technology** Increasing digital literacy and capability amongst citizens

Key influences on transformation

The most significant pressure currently facing the council is the need to manage significant budget cuts, with the council facing a £100 Million Budget Challenge over the next five years[1]. There is therefore a need to consider how savings can be found whilst maintaining high levels of service provision. Cambridgeshire is furthermore experiencing growing populations, placing additional pressure on local services.

Coupled with these pressures, there are potential opportunities that the transformation process can grasp. Devolution provides the opportunity to ensure that services are driven by local needs whether through devolving management of services to citizens themselves, or through working at a regional level with the newly created Combined Authority covering Cambridgeshire, Peterborough and beyond. Finally there is a need to consider the opportunities provided by technology and digitalization. This is important for how the council internally manages delivery of services, how the data held by the council can be shared with others such as developers to make use of this data, and finally its influence on how citizens can interact with the council, with increasing digital literacy in society.

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[1] Cambridgeshire's £100 Million Budget Challenge, https://www.youtube.com/watch?v=9c7ka60lf-8

Project Approach and Process

Having been provided with a broad project brief, there were three main steps during the project. Firstly, six key areas of interest were identified and used to organise work around. Secondly, different models or practices were examined relating to these areas, including looking at case studies of where they have been previously applied, or could be applied to new projects. Finally, a series of recommendations were identified as well as providing an over-arching vision that captures these recommendations.

During this process, two main sources were used to guide the work.

Extensive interviews with councillors and officials within the council were used to understand the current transformation process, identify concerns across different stakeholders and examples of different case studies, and testing and discussing potential recommendations. The team met with 20 or more councillors and officials, including the Chairman and Vice-Chairman of the Highways and Community Infrastructure (HCI) Committee, the HCI Committee Spokes, the Transformation, Citizen First and Business Intelligence Teams. Furthermore meetings with external organisations including the Local Government Association (LGA) supported this work.

In parallel, literature relating to other councils and organisations was examined to understand different models and approaches to transformation.

The findings of the project were then presented at the council Senior Management Team (SMT) meeting in April 2017.
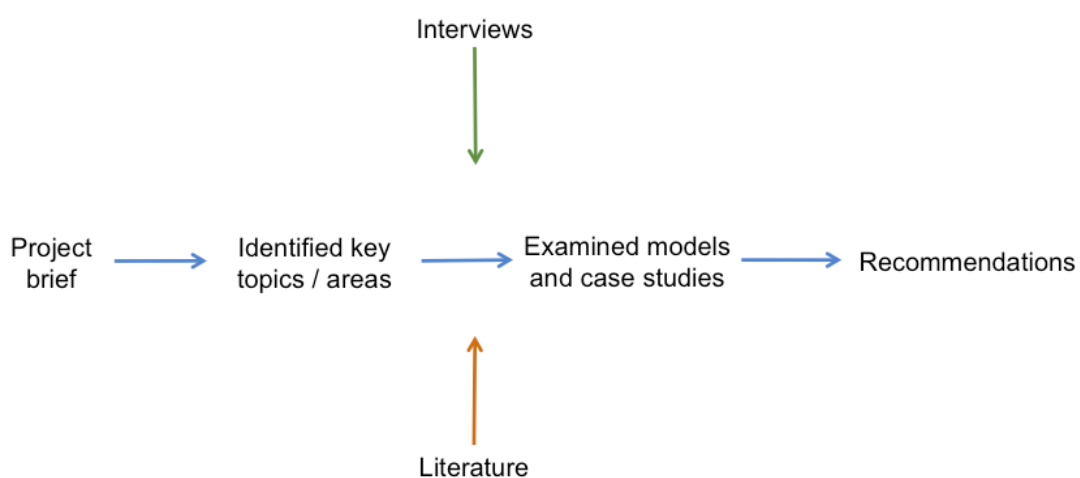
Approach taken to project

Key Areas Identified

Early in the project, six key areas of interest were identified. These include three main pillars of Governance, Organisation, and System Methodologies, and three cross-cutting themes of Leadership, Culture and Technology. These areas were used as a framework to categorize different issues and guide research and discussion around models for transformation.

Governance	Organisation	System methodologies

Leadership
Culture
Technology
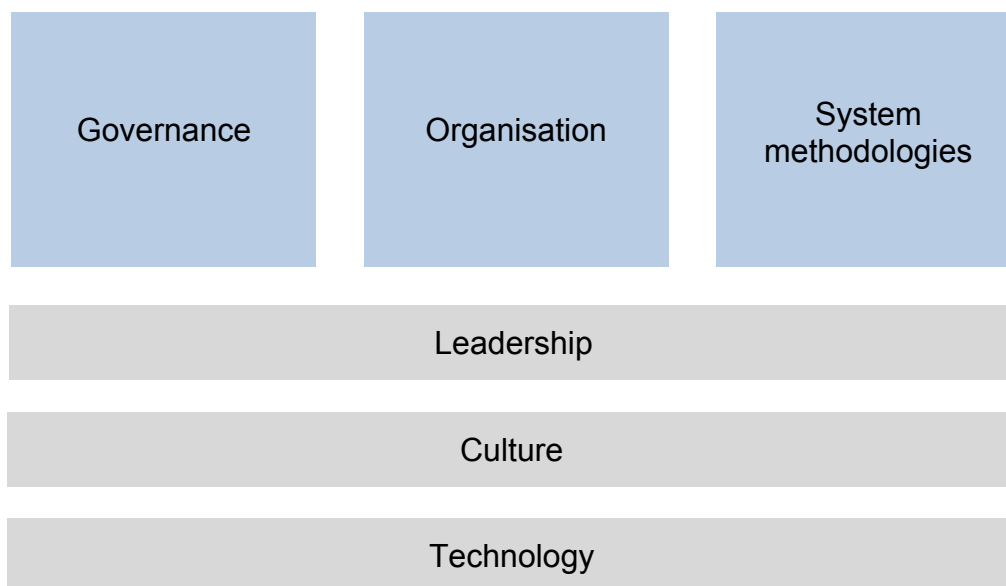
Key areas of interest identified

Examined Models and Case Studies

It is possible to identify numerous models that apply to each of these areas. For example there are many different models of organisational structure – some descriptive and some prescriptive. Similarly there are many models of leadership, for driving cultural change, for governance and so on. We were influenced in the choice of models by the (often implicit) models that interviewees appeared to be using, explicit models that were brought to our attention and the models we found in the literature, in particular models proposed by the Local Government Association and models that other local authorities appeared to be using with some success. We were also influenced by a desire to combine the models in such a way that if applied together they would provide an overall coherent and aligned set of recommendations.
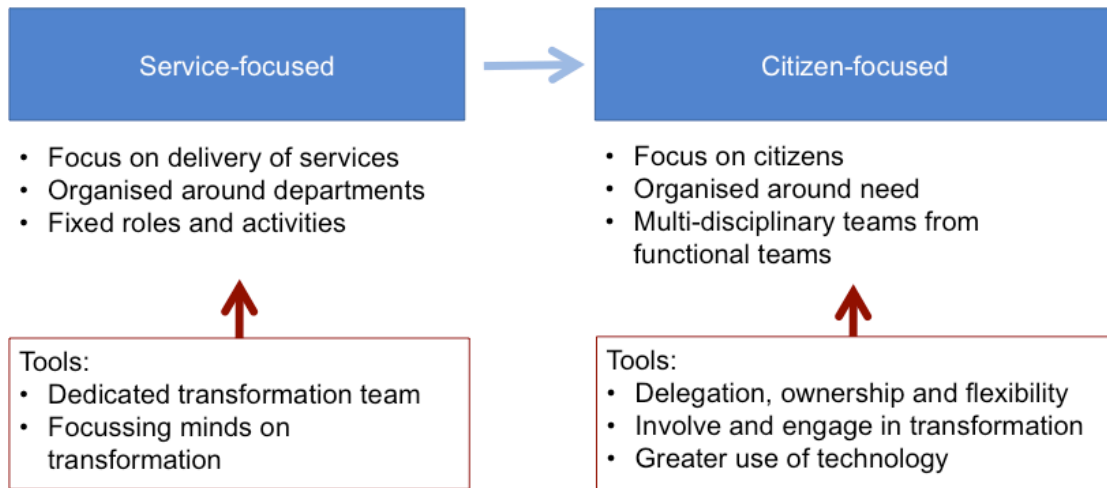
Recommendations and Rationale

Across the six key areas identified, over 50 recommendations have been made across each of these areas, further outlined in each of the sub-reports.

These recommendations can be brought together into a broader vision for council transformation. It was apparent from the outset of the project that the scale of the challenges facing the council means that a piecemeal or silo approach to transformation would have limited impact, hence the creation of the Transformation Team to provide a cross-cutting team to lead the transformation process. The next step of transformation could involve a more radical change across the whole organisation and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

Many of the recommendations are designed to involve and empower citizens in council activities, making services more personalised and focused upon priorities and outcomes for communities and individuals. The main mechanisms where cost savings are anticipated are through tightening the loop between decision-making and outcome, and further opportunities for achieving economies of scale could be brought about by working with the Combined Authority. In summary, implementing the recommendations provided involves the application of methodology and technology within a new culture, leadership and organisation framework, such that the whole process is made more flexible, responsive, relevant and efficient.

Making customer priorities and outcomes a central driver of council activity requires a different mind-set from setting up services that are aligned with the legislative framework. Instead of addressing one piece of legislation at a time, it requires considering communities, families and individuals holistically with each having its unique set of needs. This demands the joined up integration of services around priorities and outcomes that are measured, not in terms of the council's performance indicators (KPIs) or the legislative framework, but in the terms of the communities and users that the council is servicing.

Service-focused
- Focus on delivery of services
- Organised around departments
- Fixed roles and activities

Citizen-focused
- Focus on citizens
- Organised around need
- Multi-disciplinary teams from functional teams

Tools:
- Dedicated transformation team
- Focussing minds on transformation

Tools:
- Delegation, ownership and flexibility
- Involve and engage in transformation
- Greater use of technology

The potential next step in transformation

How this next transformation could be achieved in practice would require further examination and consultation with a wider base of stakeholders within the council. However, the schematic below provides an overview of how financing and delivery could be re-designed around community group / leader priorities to deliver particular services or projects, underpinned by staff pools and central infrastructure.

Current transformation

Potential next transformation
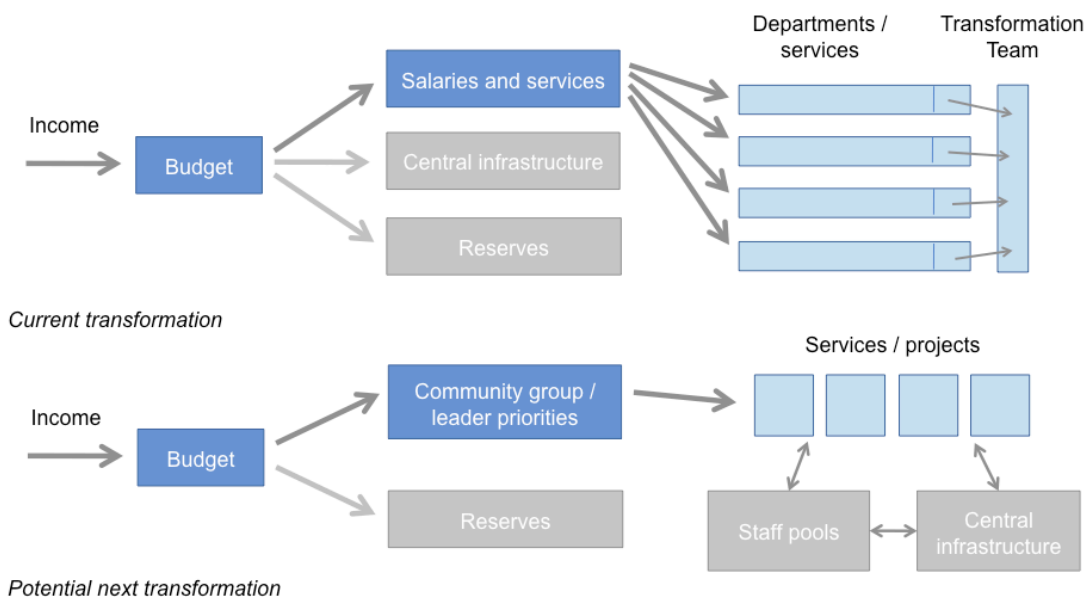
Schematic of how council financing and delivery could be re-designed

A brief summary of recommendations in each area is as follows.

Governance

- Adopt and communicate a policy of focusing on customer priorities and outcomes in terms of citizen wellbeing.

- Devolve decision-making and budgets to the lowest level, and involve citizens more in priority setting, exploring place-based leadership.

- Promote a policy of citizen participation in all aspects of the councils operations of developments (analysis, co-design, co-development, evaluation).

- Promote openness, open data and information sharing and track developments in open government and digital democracy.

- Use technology to open up decision-making processes.

- Set up working groups to explore where the combined authority can lead to greater quality of service and efficiencies.

Organisation

- Establish competence-based staff pools, and move away from fixed organizational structures towards flexible project-based working to address citizen needs.

- Create flatter structures and more distributed leadership, re-thinking staff motivations and incentives, and encourage spin-outs.

- Define roles in terms of outcomes rather than activities, and increase staff mobility and communication within councils and across the Combined Authority.

- Move towards 'place-based' organization and budget holding.

System methodologies

- Examine whole systems user-centred design (UCD) approaches.

- Use AGILE and iterative development for new projects and consider LEAN for well-established services.

- Use models for assessing social costs and benefits when evaluating project proposals, and develop statistical models for attributing the causes of outcomes.

- Re-focus performance metrics on citizen outcomes and other stakeholders.

Leadership

- Give leaders ownership of priorities and outcomes rather than ownership of staff, and allow for greater autonomy to set priorities.

- Develop models of place-based leadership and define processes for local place-based leaders to emerge;

- Promote 'authentic', 'distributed' and 'invisible' leadership defined by common purpose.

- Follow LGA Guidelines for developing digital leadership skills.

Culture

- Focus on customer priorities and outcomes as opposed to process.

- Loosen up to enable flexibility, mobility and responsiveness and devolve, decentralize and empower.

- Open up to enable data sharing, closer collaboration, greater transparency and accountability.

- Engage more with citizens, other organizations and other internal departments.

- Set up a guiding coalition to lead cultural change and encourage innovation.

Technology

- Examine a common architecture for data storage and secure/controlled access by different user groups (staff, citizens, developers).

- Examine technology to manage staff pools and project-based working.

- Develop notification and reporting technologies.

- Commission a technology roadmap (for the combined authority).

- Track developing technologies that could influence the provision of services by the council, such as cloud computing, the internet of things, blockchain, machine learning, big data and artificial intelligence.

- Consider the role of data in all new projects.

Evaluation and Further Work

This project has engaged with a wide number of stakeholders within the council and with wider organisations, as well as examining literature for examples of how other organisations are approaching transformation.

During the project members of the council were very open and keen to engage with the work. This included providing significant resources and support to arrange meetings with different stakeholders within the council, and external interaction with the LGA.

It is proposed that future work should focus upon how these recommendations could be implemented. This could range from examining radical whole-scale change across the entire council or considering specific recommendations that could be implemented in isolation.

A practical step would be to hold workshops with both senior management and those directly involved in delivering services to discuss the recommendations, and identify opportunities for their implementation and potential barriers that would need to be overcome.

Furthermore, it would be beneficial to determine how this work could feed into wider national discussions around local government, particularly through work with the LGA who were receptive to the project during discussions with them.

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Governance

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Note; It may be necessary to cut and paste some of the links in this document

Introduction

As part of the Cambridgeshire County Council (CCC) Policy Challenges, a team of three researchers was challenged to address the question of:

> ***What are the next generation of models to transform organizations, and how could they benefit Cambridgeshire County Council?***

The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report on governance considers the main issues of public participation, facilitating more agile and responsive decision making and capitalizing on the opportunities created by the setting up of the combined authority.

Current Situation

Main Issues

The following governance issues emerged from interviews:

- The role of public participation in governance issues, particularly policy, strategy, plans and budget allocations

- Governance structures, in particular the frequent need to refer decisions to committee for approval, made operational processes less agile and responsive. There were trade-off between committee and cabinet structures

- The advent of the new combined authority could involve, and perhaps facilitate, changes in governance structures

These issues cross-over with organization, culture, leadership, methodology and technology issues that are reported on elsewhere.

The council's constitution and the set of principles on which governance is based can be found in the 'Cambridge County Council's Constitution' and the 'Code of Corporate Governance 2016-2017' available at:

https://www.cambridgeshire.gov.uk/council/council-structure/council-s-constitution/

The councillors' main responsibilities in addition to maintaining the constitution, are to set and approve the policies, strategy, plans and budgets each year. Public election of the 61 councillors is held every 4 years and the last elections were in May 2017. Politically, the current council is made up as follows: 36 conservatives, 1 independent, 7 labour, 15 liberal democrats, and 2 St Neots Independent Group. The full list of councillors can be found at:

https://cmis.cambridgeshire.gov.uk/ccc_live/Councillors/tabid/63/ScreenMode/Party/Default.aspx

Within this framework, elected councilor, and the officers of the councils appointed and lead by executives / corporate directors, carry out the work of the council.

The councillors hold meetings that are normally open to the public to attend. A description of how council decisions are made can be found at:

https://www.cambridgeshire.gov.uk/council/councillors-&-meetings/decision-making/

Governance Structures

To ensure appropriate accountability and scrutiny, governance structures are constrained by law. They are also influenced by Local Government Association (LGA) guidelines and practice in other local authorities. However, there is latitude in acceptable structures to allow variation in response to local circumstances and some degree of autonomy. LGA guidance on governance emphasizes simplicity and the engagement of the community / key stakeholders, and can be found at:

https://www.local.gov.uk/our-support/guidance-and-resources/community-action/community-action-overview/six-guiding-3

Since the localism Act 2011 local Authorities have had the option to conduct to delegate powers to committees. In May 2014 Cambridgeshire County Council (CCC) adopted a decision making process based on a committee system. Case studies on local authorities that have changed from a cabinet to a committee system and an assessment of both systems can be found at:

http://www.lgiu.org.uk/wp-content/uploads/2014/12/Changing-to-a-committee-system-in-a-new-era.pdf

A guide to making changes in governance can be found at:

http://www.cfps.org.uk/wp-content/uploads/Rethinking-Governance.pdf

The organizational structure recommendations in this report are confined to (1) what can be done to facilitate delivering value to citizens within the current structure and (2) what might be done in relation the combined authority that came into being in January 2017. Most recommendations relate to governance policies that set the context for decision-making across the organization.

Combined Authority

Governance arrangement for the combined authority can be found in the 'Cambridgeshire and Peterborough Devolution Deal'. This creates a combined authority consisting of Cambridgeshire County Council,

Cambridgeshire City Council, East Cambridgeshire District Council, South Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council, Peterborough City Council, and Greater Cambridgeshire and Greater Peterborough Enterprise Partnership.

Future Vision

The future vision and recommendation of this report, in relation to the overall approach or strategy of the council, is to create a council that is entirely outward looking and focused on outcomes in terms of the wellbeing of its citizens. Doesn't the council do that already? The answer is yes, but for many political, budgetary, organizational and historical reasons the council and its governance is not as effective as it could be.

While citizens are kept informed and consulted on individual initiatives, they do not set priorities across the whole set of council activities. The council itself often operates in a siloed way that means services are often not as joined up and efficient as they could be. Any publically available measures of success are difficult to find and it seems likely that measures of success will be at a departmental level and couched in terms of departmental processes rather than outcomes for citizens. The council often gets immersed in delivering service offerings when it would be better focused on enabling and facilitating other public bodies, private organizations and citizens themselves to design, develop and deliver more joined up services. The council should deliver outcomes that genuinely increase wellbeing without duplication or being at the expense of other aspects of the community. It could focus more on preventing problems than patching solutions after the event.

Main Opportunities

The main opportunity we see for delivering higher quality services at lower costs are:

- To focus all activities on delivering value for citizens in the form of better measurable outcomes for their wellbeing.

- To make citizens the central focus around which all services are designed, developed and delivered. This means that citizens could, when acting in appropriate roles, set priorities, co-design and co-develop services and be central to monitoring their delivery and their evaluation

- To position the council increasingly as a leader and facilitator, orchestrating the development and delivery of services. This means taking greater responsibility to coordinate activities across public bodies and other organizations and ensuring the design and delivery of the most beneficial, cost effective and joined-up offerings. It also implies taking on less responsibility for the delivery of services as this is increasingly devolved to third parties and citizens.

- To take a holistic approach that personalizes services for individuals and joins-up provision around the individuals/family. This means reorganizing provision around people rather than around legislation.

The Role of the Citizen

There is a hypothetical spectrum of citizen involvement. At one end the local authority acts as all knowing with respect to citizen's needs, and simply takes all decisions on their behalf. At the other extreme, the citizen could be involved in every aspect of decision-making from determining the agenda, to setting priorities, to designing, implementing and monitoring the effectiveness of solutions and services.

The predominant current model is for the local authority to act on behalf of the citizen but to be accountable to them. This is for many reasons. The citizen is more interested in outcomes than in the processes of local government. The citizen is normally only interested in being drawn into the processes (e.g. of how services are delivered) when the process is not working for them. Also the citizen may not have the resources, knowledge and skill to be able to define the processes or even to set the priorities. The wisdom of the crowd can easily become the tyranny of the majority or the tyranny of the few citizens that have the interest, time and resources to become involved. The crowd is subject to much the same cognitive biases as the individual.

However, it is frequently the case that by not involving the citizen, the processes are not as effective or efficient as they could be. This is partly because it leads authorities to take a 'service centred' view that aligns with legislation. This fragments the provision to the citizen and leads to a siloed,

service based departmental organization where nobody (except perhaps in social services during situations of difficulty) takes a holistic view of the individual citizen in the context of their unique circumstances.

What then can be the role of the citizen and what are the most effective models for citizen engagement? From the point of view of governance, the main need is to work out mechanisms of citizen engagement that address the citizen's role in setting agendas, priorities, appropriate devolution of decision-making and control, and ensuring scrutiny and accountability.   For organization and methods, the emphasis is on the way in which citizens can best inform the way service provision is organized, designed, delivered and monitored.

Through these 'new models' reports, several models of citizen engagement are discussed at the levels of governance, organization, methods and technology. These include open government, open architectures and data, digital democracy, co-design, co-development and the measurement and monitoring of effectiveness in terms of outcomes.

An alternative, and more radical, model for governance would involve changes to the way in which citizens are represented. For example, instead of electing councillors from amongst a set of candidates that put themselves up for election, citizens could be chosen at random from the population in much the same way as happens for jury services.   For example, there is a movement started in Holland in 2011 under the banner of G1000 (http://www.g1000.org/en/manifesto.php) that promotes the use of 'sortition' (https://en.wikipedia.org/wiki/Sortition), a technique for randomly selecting citizens to participate in local decision-making. There is a local group in Cambridge (including councillors and officers) promoting this approach.

Implementation Ideas

Moving towards a more holistic approach, greater engagement, and devolution of power towards the citizen could be a more central part of the transformation strategy.

There are two main opportunities that could underlie the transformation strategy:

- To create more customer-centred and personalized services that focus on outcomes as exemplified by measurable benefits to the wellbeing of individual citizens

- To achieve greater economies generally (and economies of scale) through better organization, coordination, devolved development and self-management.

The first can be done by taking advantage of better mechanisms of organization, technology and methods for service development and delivery. The second may be most easily achieved through the opportunity afforded by the creation of the combined authority and new models of governance /organization.

However, the introduction of new models is difficult in every respect. There is inertia at all levels of organization, from governance through to front-line service delivery, and while technology can facilitate change it can also marginalize and disenfranchise those parts of the community that do not have access or are unwilling or unable to take advantage. These form part of the barriers to transformation and even if we can discern and agree a vision and direction, getting there is another matter and another set of problems.

Models for Transformation

In relation to strategy for transformation, the LGA offer guidance at:

https://www.local.gov.uk/our-support/guidance-and-resources/transformation

In particular they list several new models for transformation including **commissioning, cooperative, entrepreneurial, enabling, sharing and holistic.** No particular model is favoured over any other and there is no guidance on matching the model to the local circumstances. Whilst we are emphasizing a holistic approach we accept that other models have benefits and would propose a more eclectic approach that draws on all models as appropriate to circumstances and the skills and preferences of staff, citizens and members.

All models have their advantages and disadvantages but most aim **to achieve efficiency savings, manage demand for services, focus on residents priorities, build community resilience, encourage collaboration and encourage economic growth**. We would give greater emphasize to the last 4 of these and let the first two aims drop out of achievement of these. Making the first two 'aims in their own right' can be counter-productive to the aim of delivering the best value to citizens – it is easy to achieve efficiency savings and manage demand for the council while at the same time detracting from the wellbeing of citizens (e.g. by simply shifting the burden of provision onto citizens without any corresponding benefit).

In summary, we would discourage extended debate on the best overall model as this is something of a diversion. We recommend:

(1) dissemination of knowledge about these alternative models throughout the council, including it's governance structures, to better inform members and officers

(2) emphasizing the last four benefits of **focus on residents priorities, build community resilience, encourage collaboration and encourage economic growth**

(3) achieving the outcome objectives using an eclectic approach that draws on the best of all the available models.

Capitalizing on the existence of the Combined Authority

LGA guidance on communication models for combined authorities can be found at:

https://www.local.gov.uk/future-communications-models

The main opportunity to best exploit the existence of the combined authority is to use it to achieve economies of scale and the provision of more joined up services to citizens;

https://www.instituteforgovernment.org.uk/sites/default/files/publications/4564%20IFG%20-%20Joining%20up%20around%20local%20v11c.pdf

https://www.local.gov.uk/sites/default/files/documents/modelling-devolution-work-ea4.pdf

Devolution and the creation of a combined authority provides a unique opportunity to coordinate activities across the seven local authorities and LEP. The key to doing this will be to ensure that governance does not simply continue as it is in the seven authorities with one coordinating body at the top, but instead permeates to all levels. While a multi-level combined authority will allow issues of relevance to particular geographies migrate to the appropriate level, it can also capalize on the opportunities for cross coordination and cross-fertilization between the authorities. While there need not be either a merging nor a standardization of governance structures, there could be a cross-awareness of each others concerns and agendas, and groupings encouraged for the spread of information, best practice and the more efficient addressing of common concerns. Mechanisms to encourage cross-talk and co-ordination could be built into the new governance structures at an early stage.

The key enabler may be the encouragement of each authority to publish open data that can be inspected and used by other authorities and by outside organizations and citizens alike. Open data is also a key in putting the wellbeing of the citizen first and being better able to effect and monitor outcome-based commissions. It may enable organizations of all types to work

together more effectively including public and private bodies and the third sector. It will empower citizens and authorities alike to base decisions about priorities on evidence and understanding of needs across the entire geography.

The combination of devolution and technology may enable democracy and accountability to operate at the most local level. The principle of subsidiarity can operate at the local authority level as well as it can at the level of central government. Decision-making and budgets can be devolved to local communities, households and individuals as appropriate. Technology will facilitate keeping track of more complex distributed decision-making and better inform higher levels with more accurate aggregated statistics and evidence of need and preferences.

Governance is inherently top-down in its default assumptions about where power lies and decision making takes place. The default is that information flows up and decision making flows down. However, this model does not and need not hold. As the world becomes more networked and decentralized, information flows no longer hold to this pattern. Management information systems often only touch on the reality of the major factors affecting citizen's wellbeing and provide a poor mechanism of feedback on the effectiveness of decisions. In a volatile, uncertain, changing and ambiguous world some of the best organizations turn this on its head in order to be more responsive. A new model for organizations is to encourage a culture of innovation, openness, data sharing and more empirically based decision-making. Before this can come about, those at the top have to 'give permission' for this to happen. In this new model governance acknowledges that good ideas can come from any part and level in the organization. Mechanisms including budgetary arrangements need to be in place to facilitate the development of innovation and openness at whichever place in the organization it is conceived, and to be effective these need to be sanctioned and encouraged at the level of governance.

Technology has the potential to enable citizens to propose, deliberate and vote frequently and directly on individual issues, then, in appropriate roles, go

on to co-design and co-develop new services. Although, there are many barriers to overcome in making this work sensibly and democratically, if local authorities do not take a lead in progressing this then it is quite possible that decentralized decision making will happen by default, in a more or less uncontrolled way, as citizens become progressively more empowered by cheap and available technology. In time citizens may come to expect council meetings to be streamed live, recorded and transcribed. The mechanisms by which the empowered citizen can better feed into the governance of the combined authority should be thought through sooner rather than later such that CAMBRIDGESHIRE COUNTY COUNCIL   has a range of models identified for the engagement of the digitally empowered citizen.

Economies of scale

Economies of scale will not only derive from better governance and organizational efficiencies but also through joint commissioning of services and greater financial clout in negotiating contracts. A combined authority will facilitate pooling of resources, sharing of infrastructure, harmonized reporting, integrated case management, joint outcome frameworks, joint management teams and much more. Many of these economies can also be achieved by closer working with other public, private and third sector bodies. A study should be commissioned at an early stage to look at opportunities for economies of scale and mechanisms for sharing information and costs.

Measuring Success

The objective function that the council should aim to maximize is the **wellbeing of the citizens** in the local authority area. Measures of success should be based only on the impact on the overall wellbeing of citizens as opposed to inward looking measures of council activity, efficiencies and cost saving. The only measure of council efficiency should be the amount of value in terms of citizen wellbeing that it can deliver, given the council's overall budgetary constraints. There is research evidence to suggest that internal measures and targets are ineffective because they lead to game-playing whereby targets are met at the expense of outcomes. In fact, putting in place detailed Key Performance Indicators (KPIs) and targets for any part of the

organization is divisive because it encourages siloed working. If all measures and targets are in the form of generalized wellbeing outcomes for citizens, individually and in groups (e.g. families or other groupings) then all public services have to work together to achieve them.   This encourages team/cooperative working and discourages individual service providers from 'letting the side down'.

Governance recommendations

Ref.	Recommendation	Rationale and backcing
RG0	Explicitly adopt and widely communicate a policy of focusing on outcomes in terms of wellbeing for the citizen. Review performance measures so that they relate to outcomes rather than process.	Achieves better value for money by identifying and reducing activity that does not have benefit in terms of outcomes. Makes more explicit the relationship of intention to consequence, reducing impact of unintended consequences that negatively impact citizen's wellbeing. Gaming and Targets in the English NHS Alex Mears, Faculty of Health and Social Care, London South Bank University *Corresponding Author Universal Journal of Management 2(7): 293-301, 2014 http://www.hrpub.org DOI: 10.13189/ujm.2014.020705 http://www.hrpub.org/download/20140902/UJM5-12102398.pdf
RG1	Operate on the principle of subsidiarity and devolve power and decision making to as close to the citizen as possible. Facilitate the citizen in taking on power and responsibility with support from the local authorities. Explore options for how budgets might be devolved from services to citizen's and citizen representatives / leaders who would then buy	Demand-led activity will be more democratic, more focused on outcomes and less wasteful.

	back services from the service departments.	
RG2	Explore mechanisms whereby citizens can be more systematically informed and involved in setting the priorities over which projects are funded and their scheduling/timing.	Greater democracy and fewer assumptions about citizens needs and priorities.
RG3	Track developments in open government and digital democracy and provide an annual assessment of CCC's position in relation to these.	Better strategic assessment of what systems of digital democracy would work well and when they might be introduced.
RG4	Set up a working group to explore areas and make recommendations where quality improvements and economies can be gained through combined authority working (e.g. joint working, sharing of resources etc.)	Take full advantages of the quality and efficiency gains offered by the combined authority. Help establish early an ethos of collaboration and partnership working.
RG5	Explicitly adopt and widely communicate a policy of openness, whereby all processes and information are	Enables greater efficiencies by reducing duplication of effort in data collection, storage. Minimises costs and frustrations due to duplicated or inconsistent records. Enables third parties to provide (especially information –based) functions and analysis and relieve pressure on the councils. Increases transparency and

	open by default unless a case can be made on the grounds of data protection or security that access is restricted. Aggregate and anonymise individual data to facilitate openness. Encourage third parties including other public bodies and commercial organisations to make use of open data.	accountability.
RG6	Explicitly adopt and widely communicate a policy of citizen participation in analysis, design, development and evaluation of all council activities. Support and encourage the use of user centred design methods, co-design and co-development for all aspects of council activity.	More efficient and usable service designs. Less risk that developments fail through poor design. Greater democracy.
RG7	Adopt policies that encourage, support and grow initiatives like the 'Innovation Fund' that capitalize on the motivation and skill of local community leaders and groups to work	Achieves outcomes more efficiently, locally, transparently and accountably. Saves costs, empowers citizens.

	towards outcomes that would normally be provided by council services. Encourage services to use this as a model for empowering the community and delivering outcomes on a local basis, and moving the council more into the role of facilitator and commissioner.	
RG8	Explore and commission analysis and recommendations on how governance, organisational and project structures within the council can be 'loosened up' and made more flexible and responsive to changing needs.	The environment in which the authorities operate is becoming more volatile, uncertain, complex and ambiguous. Ridged structures are more likely to break under pressure while looser structures can adapt more quickly.
RG9	Consider equipping meeting rooms such that council meetings can be recorded (or even streamed live) and made available as podcasts.	Follows central government policy for open government. Makes council processes more open and accountable. Provides better information for citizens to base participation and voting than party promotional material.
RG10	Follow the LGA Guidance on Digital Transformation that makes recommendations	Focuses effort where there is likely to be the highest gains in quality of provision and cost effectiveness.

	about areas to focus on that will give the greatest returns and be coordinated with national programmes. These are: Integration of Health and Social Care, Troubled Families and Reforming the system of Benefits.	

New Models for Transformation
Final Report Recommendations

Organization

Cambridge University Science and Policy Exchange

working with

Cambridgeshire County Council

New Models CUSPE Team

Rod Rivers, Simon Davies, Nidhi Chaudhary

Autumn 2017

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Introduction

As part of the Cambridgeshire County Council (CCC) Policy Challenges, a team of three researchers was challenged to address the question of:

> ***What are the next generation of models to transform organizations, and how could they benefit Cambridgeshire County Council?***

The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report on organization looks at models for organizational transformation involving a strategic shift in council approach to 'co-production and delivery of local services', thus involving local people in the designing and delivery of services.

Current Situation

For the New Models of Transformation project, we were provided a brief that talked about the following:

> *'The need for transformation: Cambridgeshire County Council has operated a departmental based approach to business planning and budget setting processes for many years. This engendered a culture and a set of behaviours that resulted in a very insular and defensive style of working. As a consequence, there were very few cross-organisational, let alone cross-sector, solutions developed to address the financial challenges faced by the Council.'*

Our research consisted of in-depth interviews with 20 or more councillors and council officials, including Committee officials, the HCI Committee Spokes as well as officials from the Transformation, Citizen First, Business Intelligence and Digital Teams. Furthermore, meetings with external organisations including the Local Government Association (LGA) supported this work.

The research reveals that currently the council organisation structure is mainly service focused; with most structures, planning and budgets aligned to departments (such as housing, children and social services etc.). However, the Council realises the need for transformation given the fiscal deficit, devolution, growing population and increased digital capabilities. This is visible in the formation of new cross-cutting organisation structures as part of its first phase of its corporate capability review. We have been engaged in mainly interviewing these new cross-cutting organisation structures which has an agenda of "achieving strong, responsive and integrated corporate services". Although the newly envisaged structures have an agenda of being the council's transformation engine, their transformation impact is relatively modest (as they affect only 200 out of 5000 strong council staff) and is largely driven by the need to cut costs and provide cross-cutting functions.

Future Vision

As part of our research, we came across a number of endeavours within the council where the functional delivery structure has been organised around projects or customers rather than around internally defined functions/ domains which could be in silos. One of the good practice examples include the blue badge initiative which used agile methodology and a customer centric digital platform with a single decision maker, rather than a hierarchical decision-making process. The initiative showed positive results very quickly in the form of 60-70% reductions in the time spent on the application, which in turn reduced the volume of calls to the contact centre. Other successful projects within the council that were delivered based on consumer need and using digital technology as a transformation vehicle include merging of school transport and the application process, concessionary bus passes and total transport. What has been critical to the success of all these projects is their citizen centricity, clear work accountabilities and semi autonomy which has enabled both operational and delivery efficiency and effectiveness. These projects are important enablers for transformation but the scale of change requires the next step to involve more radical changes across the whole organisation and to its approach and culture, making it more collaborative, citizen focused, agile and responsive. Cost savings have to be achieved through better engagement and delegation of delivery, greater flexibility and improved infrastructure.

Given this context, the future vision which has emerged from the literature review of good practices elsewhere in the UK and our interviews, includes the following key recommendations:

1. Explore and recommend options for 'shared place' leaders for local growth for co-production and delivery of local services'. This would involve establishing place-specific policies, projects, service purchase

and commissioning. The Council has made an excellent start to this endeavour with its £1m Innovation fund which would empower communities and also help in cost saving especially in the social care for the elderly. What is now needed is for the council to explore viability and options to transition towards placing budgets with place-based leaders who would buy services and fund projects which would improve efficiency (almost like the NHS). There are several examples such as the Mildenhall public services hub, West Sussex; Your County, Your Way, Monmouthshire; the service provision in Devon; Greater Manchester Health and Social Care Strategic Plan[i], Bristol City Council local champions[ii] for enhancing digital uptake in the community etc where the notion of place leaders has been tried as part of programmes.

2. Another key recommendation involves creating flatter organizational structures within the council and more distributed leadership while at the same time re-thinking staff motivations and incentives as can be seen in the success of some of the council's initiatives. These multi-disciplinary teams of generic skills could be in the areas of customer engagement; process redesign; technology and risk management. This change would enable greater organisational flexibility and responsiveness to customer needs. However, the changes need to be synergised with transformation in organisational values and culture, where staff incentives are defined explicitly, and there are opportunities for the staff to develop skills, retrain and work flexibly.

3. To make the second recommendation work, there is a need to establish competence-based staff pools like the Civil Service at the Council, and with the roles becoming outcome based and empowered by digital technology to address citizen needs. This would facilitate staff movement between vertical and cross-cutting services with the council

and across the combined authority as per projects requirement, providing organisational flexibility and forums for staff of particular skill sets to come together and learn from each other. This would also break down silos and territorial thinking that may currently be reducing efficiency.

Implementation Ideas

There are various ideas for implementing changes to how the council works as an organization.

Firstly, it is important that the organization structures in the council are focused on community and citizens it serves, rather than delivery of services. This means a strategic shift in council approach to 'co-production and delivery of local services' thus involving local people in the designing and delivery of services. One of the models can be the Devon County Council case study, where the Delivering Differently programme with its Locality Leads enabled the local community and the voluntary sector to develop proposals and solutions for the future levels of youth services, libraries and wider community facilities/provision in three market towns – Totnes, Tavistock and Ottery St Mary. However, what case study such as North Dorset Council's new approach to provision of leisure services in 2 centres with community engagement highlights, is that different communities have different needs and capacities as it resulted in one leisure centre being run by a community group and another by a commercial operator. The council has saved £556,000 per year from the new approach to two leisure centres. On the other hand, in case of North Somerset Council, community engagement was integral to its commissioning of its park and street scene, contracting with local groups to take over the planting and maintenance of the floral displays in their local community. The successful contractor offered to supply bedding plants to the groups at no cost[iii].

What is important in all these case studies is that building trust between different partners takes time and cannot be rushed. Maintaining a level of engagement is important in keeping the relationships going. For example, in the case of North Dorset, community groups as well as parish and town councils are now routinely involved in its budget decisions. Similarly, in the case of Monmouthshire's Medium-Term Financial Plan, community

engagement has been the cornerstone of the development of business cases and projects. Widespread engagement has been facilitated through ideas sessions, prototyping, local service planning and community ownership models. The council, as part of its "Your Council, Your Way" initiative encourages a "*whole system*" approach for addressing what matters to customers, and for breaking down silos.

To make the citizen centricity happen, what is important is transformation of organisational structures within the council that recognises and responds to the rapid changes in technology as people embrace virtual working styles, social media and more near to real-time reporting. Monmouthshire "Your Council, Your Way" provides a good practice example where the council is encouraging agile and flexible working; intrapreneurship for developing the tools to deliver 21st Century public services; embedded Check-in, Check-out performance appraisal that enables teams and individuals to develop values and performance measures in relation to their role keeping in mind their direct knowledge of 'what matters' to the communities; and a RESULT coaching programme for everyone with supervisory responsibility to equip people with the capability to redesign and repurpose services in order to align learning with outcomes. Another good practice can be seen in case of Kirklees Council - Innovation and Efficiency Programme that was driving a transformation programme through a "One Council" approach that, in turn, improved the quality and efficiency of public services for citizens and communities[iv].

The table below details some of the best practices that have implemented in part/wholly some of the recommendations that we have outlined above.

Best Practices on New Models in Transformation-Organisation

Place	Initiative	Type	Reported or planned achievements	Main Approach
Devon[v]	Local communities identifying and solving service provision	Co-production and delivery of a new local service "offer" led and developed by Devon's communities'.	• Community conversations feeding into a broader service reform programme with communities active co-producers • 11 'locality leads' in place in November 2014 • Mapped public assets	• Service re-design • Engaging local communities in the co-delivery of services •
Monmouthshire[vi]	Your County, Your Way	• Implementation of a cultural transformation within the council to listen and respond more creatively to the needs of its communities • Central to this approach is an internal training programme, the Intrapreneurship School, which seeks to introduce council employees to the concept of innovation and what it means for service delivery. • Agile and flexible working – breaking down physical and cultural walls • Meaningful community engagement – co-creating and co-delivering	• Selected as one of six innovative councils by NESTA • focus on output and outcomes rather than measuring time spent in the office as part of agile work space strategy • 17 employee ideas incorporated into service mandates with an informal and effective Check in, Check out self appraisal strategy for 100% of staff. • Whole Place and Community Co-ordination planning and engagement recognising the distinctive needs of local places and unlocking people power to help deliver it; • Monmouthshire Engages events, discussions and roadshows focused on finding out what matters to local communities to prioritise resources	• Agile and flexible working • Role focus on outcomes rather than activities • Community needs driven role values and objectives • Change in organisational culture • Increased use of digital technology for • Co-creating and co-delivering services with communities

Place	Initiative	Type	Reported or planned achievements	Main Approach
West Suffolk[vii]	Mildenhall public services hub	• Aim of providing residents a single point to access a range of services delivered across a range of public agencies • Co-location of education, health, leisure, council, DWP, voluntary sector, library, police and fire services and enterprise space • Project to help in help in delivering Suffolk's radical agenda for integrating the delivery of all public services around localities and building community resilience.	• Relocate services from eight sites down to one easily accessible location for customers, close to the town centre • Reduce the running costs of the public estate by over 50 per cent (or £20 million) over 25 years • Provide a flexible environment for virtually any model of service delivery in the future, with strong community ownership. • Greater front-line integration between local and national agencies and the hub would also offer the ideal focus for piloting new forms of community budgeting and participation	• Service re-design and delivery based on community needs • Co location of services • Working with not for profit partners
Surrey[viii]	Family Support Programme	• Focus on combining services provided by local public agencies to structure them around the customer 'journey' in order to better address individual needs. • Local response to the national Troubled Families Programme. • Rather than individuals dealing with multiple organizations (17 in case of Surrey), services come together in a Team Around the Family • Objective is to help turn around the lives of identified families through an integrated multi-agency approach to service delivery and commissioning; and to achieve productivity	• Surrey's district and borough councils take on the role of 'place leader' for the Programme, coordinate the local services and provide intensive support services to families. • CBA focusing on high value transactions across key agencies estimates +£30m fiscal benefits over 5 years (starting 2014) • However, for the implementation to be successful what was required was a change in leadership culture as well as changes in the way of working for staff with shared risk management and collaborative working across services. • Further, some activities performed by certain services had to be stopped to avoid duplication and improve	• Place leaders to coordinate local services • Organisation restructuring to meet community needs • Integrated system approach to services • Changes in culture and ways of working

Place	Initiative	Type	Reported or planned achievements	Main Approach
		improvements and cashable savings in line with efficiency requirements.	efficiency of the programme model	
Greater Manchester	Greater Manchester Combined Authority GM-Connectix	Creation of a data-sharing authority – *GM-Connect* – to help break down the barriers which stop public services sharing information. • focus on health and social care integration • Reduce duplication caused by individuals having to provide identical information to separate public institutions.		Organization restructuring based on consumer needs
Lewisham[x]	Lovelewisham	• Web application and set of mobile apps for reporting and managing a range of environmental issues, such as graffiti and fly-tipping. • Integrated in Council's back-office systems and involved a cultural shift in frontline staff embracing mobile technology as a transformational tool • Required operational services taking ownership of the technology and app specification	• 73 per cent reduction in graffiti (since 2006) and improved graffiti removal times from 2.78 days • in 2003 to less than 0.5 days now • a 53 per cent reduction in fly-tipping • a 22 per cent reduction in casework in related services • a 33 per cent reduction in call-centre activity, saving £500,000 over the past five years. • Improved operational efficiency and has eliminated the use of overtime to collect missed bins (refuse workers now post reports showing collection problems), saving an additional £300,000.	• Organisation restructuring according to community needs • Use of digital technology to improve efficiency of services

Organisation recommendations

Ref.	Recommendation	Rationale
RO1	Balance vertical service structures with cross cutting infrastructure services.	Efficiencies in not dong same thing multiple times. Break down silos and territorial thinking.
RO2	Establish pools of staff based upon competencies or skill-sets, rather than service-specific recruitment.	More efficient utilisation of staff. Greater empowerment of staff to develop specialised skills and more choice in how thet=y are used. This will support movement between projects, enhance learning, provide organisational flexibility, and forums for staff of particular skill-sets to come together and learn from each other's projects.
RO3	Follow the workforce recommendations of the LGA on the '21st century public servant', Transformation and the Decision Making Accountability (DMA) organisational design / development methodology.	Operate within the new models of working recommended nationally.
RO4	Move from fixed reporting structures to project based working.	Greater efficiencies from a more fluid and responsive system. Facilitate risk taking (as budget allocations are smaller).
RO5	Transition from activity-based roles to outcome / objectives-based roles.	Focus on outcomes rather than process
RO6	Move from services-based staff contracts to organisation or combined authority wide staff contracts. Reflect the above recommendations in new forms of contract.	Facilitate movement of staff throughout the authority / authorities
RO7	Allow staff to move between vertical and cross cutting services as projects require, giving staff choice of what they take on. Facilitate staff to work simultaneously multiple projects. Put in place across the combined authority HR	Rationale: Helps disseminate knowledge throughout the organisation. Provides more stimulating environment. Gives staff autonomy and facilitates development of mastery.

	systems to (1) enable managers to search for and bid for staff with suitable skills for their projects, and (2) allow staff to enter and update their skills and experience, search and apply for suitable projects.	
RO8	Seek potential opportunities to share and exchange staff with others in the Combined Authority.	Greater efficiencies in efficient use of, better staff utilisation, increase staff job opportunities, faster dissemination of knowledge and skill.
RO9	Reducing working hours in preference to creating redundancies	Distributes jobs and incomes more fairly. Enhances productivity. Enables flexible working and work-life balance. Greater job satisfaction and organisational loyalty.
RO10	Explore and recommend options for 'shared-place' leaders to establish place-specific policies, projects, service purchase and commissioning.	Devolve decision-making and empowerment to the lowest level appropriate.
RO11	Explore viability and options to transition towards placing budgets with place-based leaders who would buy services and fund projects.	Locate budgets as near the end user as possible (NHS model). Achieve better quality and more efficient services through a demand-led mechanism.
RO12	Create 'flatter organisational structures' and 'distributed leadership' with mainly multi-disciplinary teams of generic skills in the areas of customer engagement, process redesign, technology and risk management.	Greater organisational flexibility and responsiveness.
RO13	Make explicit the staff motivations that would facilitate cultural and organisational transformation.	Helps define staff incentives necessary for cultural change (e.g. opportunity to develop skills and mastery, autonomous and flexible working, results only working culture, project working, re-training and wider job opportunities
RO14	Use the 'Applied' platform developed by the Behavioural Insights Team for recruitment (both internal and external). https://www.beapplied.com	Uses an evidence based system for fair and unbiased recruitment.
RO15	Put in place mechanisms whereby individual staff or small teams of staff can set up as legal entities independently from the council but still offer the council services.	Acts as a mechanism of spinning out work into the community and putting the council in a position to manage contracts for the delivery of services.

[i] http://www.gmhsc.org.uk/who-we-are-and-what-we-do/

[ii] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"

[iii] Department for Communities and Local Government (2014), "Good Practice in Local Government Savings", Shared Intelligence and Grant Thornton UK LLP

iv Department for Communities and Local Government (2014), "Good Practice in Local Government Savings", Shared Intelligence and Grant Thornton UK LLP

[v] Lonsdale,J., Schweppenstedde, D., Stolk, C.V., Guerin, B, and Hafner, M. (2015), "One Place, One Budget?: Approaches to pooling resources for public service transformation", Rand Europe, Prepared for Local Government Association, https://www.rand.org/pubs/research_reports/RR1017.html

[vi] http://www.monmouthshire.gov.uk/app/uploads/2014/09/People-and-Organisational-Development-Strategy-2014-17.pdf

[vii] Local Government Association and The Cabinet Office (2013), "One public estate: Unlocking the value In public sector assets"

[viii] Lonsdale,J., Schweppenstedde, D., Stolk, C.V., Guerin, B, and Hafner, M. (2015), "One Place, One Budget?: Approaches to pooling resources for public service transformation", Rand Europe, Prepared for Local Government Association, https://www.rand.org/pubs/research_reports/RR1017.html

[ix] https://www.greatermanchester-ca.gov.uk/news/article/39/pioneering_data_service_to_connect_greater_manchester_to_improved_services

[x] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"

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Final Report Recommendations

System Methodologies

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The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report focuses upon examining the methodologies used to support the management and delivery of projects and services. From the beginning of the project, it was clear that this was one main area of interest for the council:

> *There are a multitude of business methodologies, such as LEAN Systems Thinking, which are accepted tools for transforming organisations. But what are the next generation of these, and in particular how could these benefit complex organisations like Cambridgeshire County Council?*

This report firstly discusses different methodologies and approaches available to support the delivery of projects, before setting out the current situation in the council, providing a future vision for transformation and highlighting ideas for implementation. Specific recommendations are provided in a table at the end of the report.

Whilst this report focuses upon methodologies, as will be highlighted, these should be considered in combination with topics covered in the other five areas (governance, organisational structure, leadership, culture and technology). This includes developing looser organisational structures to support these methodologies and focusing upon citizen needs and outcomes, ensuring that the delivery of services is more flexible, responsive, relevant and efficient.

Background on methodologies

There are many different methodologies for supporting project delivery. Such methodologies aim to reduce costs, and improve the efficiency and quality of services. This can involve placing greater focus upon the customer of the service, removing waste and errors, becoming more iterative in their development, and designing processes that are more customer-driven.

This section will discuss four main topics: Lean, Agile, User-Centred Design and finally the role of behavioral insights.

There are many other methodologies and tools such as Six Sigma (focusing upon reducing variation, design defects and service failures), Business Process Re-engineering (focusing upon better understanding business processes, benchmarking and redesigning these), and Kaizen (focused upon continuous improvement using Rapid Improvement Events to record, evaluate and re-design processes).[1] These will not be discussed further in this report, but may be used in combination with methods such as Lean.

Lean

Lean Systems Thinking is based around recognition that only a small amount of the total time and effort spent delivering a service adds value for the customer. The method therefore places emphasis upon understanding customer needs and determining which steps add value for the customer, and determining those steps that do not and attempting to remove these. The concept was first developed in the manufacturing industry, originally used to describe Toyota's production process.[2] The five principles of Lean are:[3]

- Specify value from the perspective of the end customer.

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[1] Zoe Radnor, *Review of Business Process Improvement Methodologies in Public Services,* (Advanced Institute of Management Research, 2010).

[2] Lean Enterprise Institute, "*What is Lean?"*, https://www.lean.org/WhatsLean/ (accessed October 2017).

[3] Lean Enterprise Institute, "*Principles of Lean"*, https://www.lean.org/WhatsLean/Principles.cfm (accessed October 2017).

- Identify steps in the value stream and eliminate steps that do not create value.

- Ensure value-creating steps occur in tight sequence to ensure smooth flow toward the customer.

- Let customers pull value from the next upstream activity.

- Begin the process again and continue it until a state of perfection is reached in which perfect value is created with no waste.

The objective of Lean is to reduce waste, variability and inflexibility. In the public sector examples of these include:[4]

- Waste; such as scrap, waiting, holding inventory, unnecessary transport, over production and over processing.

- Variability; particularly the variation in gathering evidence for trials.

- Inflexibility; especially with regard to fixed staffing levels on the assumption that a standard service offers economies of scale, whereas actually customers require different levels and types of service.

An AIM review of business process improvement methods used in the public sector found that of 165 sources considered, over half focused on Lean.[5] In particular, Lean has been used in the NHS to improve the quality of care and safety, to eliminate delays, and to reduce length of stay.[6]

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[4] Zoe Radnor, *Review of Business Process Improvement Methodologies in Public Services,* (Advanced Institute of Management Research, 2010).

[5] Zoe Radnor, *Review of Business Process Improvement Methodologies in Public Services,* (Advanced Institute of Management Research, 2010).

[6] NHS Improvement, "*Lean principles*", https://improvement.nhs.uk/resources/lean-principles/ (accessed October 2017).

Agile

Agile places greater focus upon incremental and iterative development of projects. This process is better able to cope with unpredictability and feedback, originating in the software industry. The methodology is more adept to environments where there are changing customer preferences and/or options for providing solutions, as well as allowing customers to be better involved in shaping the outcome through feedback and learning during the development process.[7] One framework for introducing agile is through Scrum, whereby project teams determine themselves how best to approach work, and are self-organising and cross-functional to allow for greater flexibility, creativity and productivity.[8] Teams consist of a Product Owner, ScrumMaster and Development Team Members, and complete short Sprints to build the product during time-boxed intervals of one to four weeks.[9] The benefit of this methodology is the ability to frequently review progress and make changes iteratively throughout the product life cycle. This allows changing requirements to be included throughout the development process.

Lean and Agile were developed in the context of manufacturing or software systems, but can be used more broadly for the design and re-design of systems that involve both human and technology components and can drive both efficiency and responsiveness across the council's services.

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[7] Darrell K. Rigby, Jeff Sutherland and Hirotaka Takeuchi, "Embracing Agile", *Harvard Business Review*, May 2016, https://hbr.org/2016/05/embracing-agile (accessed October 2017).

[8] Scrum Alliance, *"The Scrum Guide"*, https://www.scrumalliance.org/why-scrum/scrum-guide (accessed October 2017).

[9] Scrum Alliance, *"Agile Atlas"*, https://www.scrumalliance.org/why-scrum/agile-atlas (accessed October 2017).

User-centred design

User-centred design (UCD) is increasingly important within government and promoted by the Government Digital Service.[10] UCD focuses upon placing users at the heart of the design of products or services and understanding how they will use them.

The approach involves a four-stage process, with steps including:[11]

1. Specifying the context of use - identifying who will use the product, for what, and under what conditions.

2. Specifying the requirements - determining the business requirements or user goals that must be met.

3. Producing design solutions - from a concept through to a final design.

4. Evaluating designs - ideally achieved using real users to ensure that it meets the requirements.

UCD is based around understanding users, tasks and environments, and involving users into the design, development and evaluation, through an iterative process until the user needs are met.[12] In the civil service, this has generally been limited to specialist activities related to digital implementation and operational delivery.[13]

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[10] Ulele Andrews, "What do civil servants need to learn about user-centred design?", *Policy Lab Blog*, *1*2 June 2015*,* https://openpolicy.blog.gov.uk/2015/06/12/what-do-civil-servants-need-to-learn-about-user-centred-design/ (accessed October 2017).

[11] useability.gov, *"User-Centred Design Basics"*, https://www.usability.gov/what-and-why/user-centered-design.html (accessed October 2017).

[12] Userfocus, *"User centred design"*, http://www.userfocus.co.uk/consultancy/ucd.html (accessed October 2017).

[13] Ulele Andrews, "What do civil servants need to learn about user-centred design?", *Policy Lab Blog*, *1*2 June 2015*,* https://openpolicy.blog.gov.uk/2015/06/12/what-do-civil-servants-need-to-learn-about-user-centred-design/ (accessed October 2017).

The Design Council has also partnered with the Local Government Association (LGA) to provide a programme on Design in the Public Sector,[14] with the intensions of equipping service managers with user-centred design skills. The programme involves organisations bringing projects to the programme to reframe challenges and determine new design-led opportunities, through understanding user needs and generating prototype ideas that produce lower-cost solutions.

Challenges assessed using this programme included those related to youth offending, domestic abuse, community resilience, co-production, mental health and policing, involving organisations including county and city councils, the Police, a Clinical Commissioning Group and a Housing Association.[15]

More broadly, extensive guidance on the design process and examples of the use of design in services delivery and policy implementation is available from the Design Council,[16] including case studies from the UK.

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[14] Chris Finnegan, "Design Council partners with the LGA to transform public services", *Design Council*, 14 January 2016, http://www.designcouncil.org.uk/news-opinion/design-council-partners-lga-transform-public-services (accessed October 2017).

[15] Design Council, "Design in the Public Sector: An evaluation of a programme of support for local authority service transformation", 2015, http://www.designcouncil.org.uk/resources/report/design-public-sector-programme-evaluation (accessed October 2017).

[16] Design Council, "Design for Public Good", 2013, http://www.designcouncil.org.uk/resources/report/design-public-good (accessed October 2017).

Behavioural insights

Behavioural insights, involving a mixture of economics, psychology and social sciences, use behavioural factors to support the design of government systems and public services, including taking account of the influence of "irrational" factors that influence decision making.[17]

This OECD notes over 100 applications of behavioural insights across the world, including their application to policy sectors such as consumer protection, education, energy, environment, finance, health and safety, labour market policies, public service delivery, taxes and telecommunications.[18]

A Behavioural Insights Team was set up within 10 Downing Street as the first institution dedicated to applying behavioural sciences (now spun out as a social purpose company). The unit has three main objectives:[19]

- Make public services more cost-effective and easier for citizens to use.
- Improve outcomes by introducing a more realistic model of human behaviour to policy.
- Enable people to make 'better choices for themselves'.

The objective of using behavioural insights is to reduce costs, increase efficiency and improve the quality of government services. The approach is highly empirical, using controlled trials to produce evidence as to the efficacy of interventions before scaling them up. An example of the use of behavioural insights in local government includes the re-design of council tax registration by Dacorum Borough Council, who used behavioural insights to better design the layout and wording of the application process.[20]

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[17] OECD, *"Behavioural Insights"*, http://www.oecd.org/gov/regulatory-policy/behavioural-insights.htm (accessed October 2017).

[18] OECD (2017), *Behavioural Insights and Public Policy: Lessons from Around the World*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264270480-en.

[19] The Behavioural Insights Team, *"Who we are"*, http://www.behaviouralinsights.co.uk/about-us/ (accessed October 2017).

[20] Local Government Association, *"Using behavioural insights to redesign and rethink council tax registration - Dacorum Borough Council"*, 31 August 2017, https://www.local.gov.uk/using-behavioural-insights-redesign-and-rethink-council-tax-registration-dacorum-borough-council (accessed October 2017).

Other considerations

Whilst attempting to implement new system methodologies broader issues must be addressed, which the aforementioned AIM report highlights as:[21]

- Organisational readiness – having a process-based view, a culture focused upon improvement, and understanding of customer and 'value'. This involves thinking holistically about processes and systems, rather than focusing upon the use of tools or techniques to improve specific processes.

- Factors for successful implementation - strong leadership and visible support from management, as well as effective communication, measurement systems, appropriate training and development, and sufficient resources and rewards.

- Barriers to successful implementation - lack of leadership and commitment from management, poor communication strategies, lack of methodology, poor monitoring and evaluation, poor engagement with employees and under-resourced implementation teams.

The report further highlights gaps and challenges associated with the use of process improvement methodologies in the public sector, including:

- Focus upon reducing cost and improved quality not based upon customer needs.

- The need to view the organisation as a system rather than independent activities, and developing a structure that is 'value-facing' rather than 'management-facing'.

- Developing a better understanding of demand to ensure that the organisation can be better organised to respond.

- Developing clearer performance measurement and monitoring systems to ensure continual improvement.

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[21] Zoe Radnor, *Review of Business Process Improvement Methodologies in Public Services,* (Advanced Institute of Management Research, 2010).

Current situation

The Transformation Team lead activity within the council to transform how projects and services are delivered through programmes and initiatives. This includes working with business units to sort through ideas during the initial assessment phase, advise on the process of writing the business case, and support management, resourcing and delivery of projects. The team was described as 'output driven', through specific project commissions, and support developing a project pipeline across the council. The Transformation Team also works with the Business Intelligence team, responsible for measuring performance.

Generally, the existence of various methodologies appeared to be well understood within the council. Whilst Lean was well known, the council had also moved onto testing other methodologies including Agile. This had involved testing Agile, using Short Sprints, on real projects, including the Blue Badge scheme.

However, issues identified during discussions included:

- **Prioritisation** - identifying the correct criteria for setting transformation priorities was further highlighted as another area. Whilst there were around 270 bottom-up initiatives considered and a pipeline for projects being built up, better prioritization was highlighted as an area for improvement. It was discussed that currently projects require a sufficient return (5:1) to be considered.
- **Integration of services** – generally work within the council appears to be service-focused, and consultations generally relate to a single service.
- **Categorisation** - better determining the methodologies / business models suitable for different projects.
- **Benefits realization** - better capturing and understanding the benefits realised by projects was highlighted as an issue, including benefits to both citizens and the organisation.

Future vision

Whilst several of the key system methodologies are already known to the council, and there have been efforts to test these on real projects, it is proposed that the future vision should focus more broadly upon how these methodologies deliver value to the citizen, better understand how their performance is measured, and how the organisation would need to change to support this.

The key feature of all methodologies is the need to begin with identifying customer needs and requirements as the starting point, rather than focusing purely upon process.

The broad recommendation is therefore to ensure that all processes for delivering services within the council are focused upon meeting the needs of citizens rather than simply looking at the processes themselves. This should also involve consulting citizens in the design and delivery of services to ensure that they meet their needs, as well as tracking and monitoring the outcomes of changes.

A whole system approach should also be adopted, whereby assessments of the benefit to the citizen should be considered holistically across multiple services rather than looking at the outcomes or impacts related to changes in individual services.

Furthermore, whilst the methodologies discussed provide a basis for examining how to change and improve processes, there is a need to underpin this with an organisation orientated towards delivering this. As the literature suggested, business process improvements in the public sector are heavily dependent upon having an organisation able and willing to deliver changes. This means considering the broader recommendations of this work relating to the organisational structure, governance, leadership, culture, and the role of technology. The success of transformation can depend upon factors outside of the methodologies used to deliver projects, and indeed, this leads to the broader vision for transformation presented in this work.

As was highlighted during one discussion with the council, where risks had been taken by testing Agile on the Citizen First / Digital First programme, there had been good outcomes. Such success depended upon a willingness to take risks, requiring greater leadership, autonomy and responsibility within the council.

Implementation ideas

There are various ideas for implementing changes to how the council works. These include addressing how projects are prioritised and delivered, the types of methodologies that should be considered in future projects, and the means by which benefits are captured and measured.

Firstly it is suggested that prioritisation and delivery of projects should be based on a holistic view of citizen needs and places the customer at the centre. By taking a whole system approach to delivering council services, ensuring that services are more joined-up and responsive to the citizen, it is anticipated that cost savings would be realised. This means ensuring that problems are not shifted from one service to another, and means that assessing the efficacy of the council's activities should focus across all of its services. This could be included in setting priorities for transformation, combining multiple services into assessments to understand the overall returns of cross-service initiatives rather than considering them in isolation.

Secondly, it is suggested that Agile could be further used on more projects within the council. The iterative nature of Agile could be applied to all projects, even if only during some of the project phases. Iteration and continuous re-design and evaluation allow projects to meet changing customer needs, especially given rapid changes in demand and the role of technology. There is also a reduced risk that would be associated with committing large budgets to projects with uncertain outcomes or where the outcomes quickly change in value. On the other hand, Lean should be used where services are well established and the effectiveness of its outcomes well demonstrated and understood.

The role of user-centred design and behavioural insights should be considered when re-designing services. This requires continuous engagement with the users of council services throughout the design process, to understand how they use services, as well as applying behavioural science to include the "irrational" factors that influence how citizens use services. The council is likely to hold data on the touch-points with citizens and this could be analysed in various ways, hypotheses generated, interventions designed to test the hypothesis and random controlled trials carried out to provide the evidence of which touch-points (with who, at what times etc.) were most effective in achieving their objectives. This approach integrates scientific method with the research activities of the council as part of an evidence base for continuous improvement.

Thirdly, there is a need to capture and understand the impacts of projects. This includes developing better models for assessing the costs and benefits (including social and less tangible costs and benefits) to different stakeholders of particular services and interventions. The development of statistical, causal and other models that can map back from impacts on citizen outcomes (positive and negative) would also support evaluation of particular service interventions.

Finally, it is suggested that the role of technology in delivering services should be reviewed. This includes consulting existing guidance from the LGA on Digital Transformation and developing local online transactional services, as well as reviewing the data the council collects, and how it could be organised and shared with the wider public to ensure that third parties can make use of the data.

It is highlighted that all recommendations in this report should be considered as part of the broader vision for transformation, along-side the other five areas discussed.

System methodology recommendations

Ref.	Recommendation	Rationale
RM1	Use a whole systems approach, putting the customer at the focus and maximizing the delivery of value.	Improved quality of service to the end user citizen through provision of more joined-up services, and greater cost efficiency in integration of services.
RM2	Use Agile and iterative methodologies for new projects. For larger projects iterate during analysis, design and evaluation even though this may not be possible for all aspects of implementation. Use Lean methodologies when a service is well established and the effectiveness of its outcomes well demonstrated and understood.	Agile achieves higher quality project outputs through continuous evaluation and re-design, to keep projects on track to deliver value in an environment of rapid changes in need and technology. Reduced risk of committing large budgets to projects with uncertain outcomes or where the outcomes quickly change in value. Lean achieves cost savings in areas of relative stability through focusing upon customer value.
RM3	Further examine using user-centred design principles and behavioural insights to better design services and improve interactions with citizens.	Continuous engagement with the users of council services throughout the design process will ensure that they meet the needs of users. Furthermore, behavioural insights offer opportunities for the council to improve the efficacy of interactions with customers of its services.
RM4	Develop better models for assessing the costs and benefits (including social and less tangible costs and benefits) to different stakeholders of particular services and interventions. Use these models are a routine part of the evaluation of proposed projects and projects in progress.	Helps identify and avoid projects that provide no overall value but inadvertently shift cost and befits from one stakeholder to another.

RM5	Develop statistical, causal and other models that can map back from impacts on citizen outcomes (positive and negative) to particular service interventions.	Facilitates assessment of the relative value of different service interventions. Provide a more rational basis for service development based on a better knowledge and understanding of outcomes.
RM6	Follow the LGA Guidance on Digital Transformation that makes recommendations about developing local online transactional services.	Builds on the experience of other authorities and promotes best practice.
RM7	Review the utility and usability of the datasets accessible via the Cambridge Insights website involving council services, third party stakeholder (other public bodies, citizens, companies, application developers) with a view to (1) making these datasets better documented and more usable (2) giving the datasets publicity amongst potential users. Make open data part of the evaluation criteria for new projects.	Improve quality of services and lower costs though sharing of data. Change culture and practices to promote open data.

New Models for Transformation
Final Report Recommendations

Leadership

Cambridge University Science and Policy Exchange

working with

Cambridgeshire County Council

New Models CUSPE Team

Rod Rivers, Simon Davies, Nidhi Chaudhary

Autumn 2017

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Note; It may be necessary to cut and paste some of the links in this document

Introduction

As part of the Cambridgeshire County Council (CCC) Policy Challenges, a team of three researchers was challenged to address the question of:

> ***What are the next generation of models to transform organizations, and how could they benefit Cambridgeshire County Council?***

The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report on leadership considers new models of leadership such as place-based leadership, devolved leadership, invisible leadership, authentic leadership, project as opposed to staff-based leadership, dissociating the role of leadership from the person, and giving leaders more autonomy in order to create a more agile organization that can respond better to a changing and uncertain world.

Current Situation

Main Issues

The following leadership issues emerged from interviews:

- Distributed decision-making prolonged the time it takes to approve projects and initiatives and hampers responsiveness

- Turnover of councilors and the political leanings of elected leaders creates a shifting policy backdrop

- The current departmental organisational structure tends to promote territorial leadership styles

- Leadership comes both from elected councilors and senior officers and there may be mis-matches in priorities or lags whilst these two groupings 'catch-up' with each other

- Whether to adopt a cabinet or committee model for senior decision-making and its implications for responsibility and accountability

- Re-organization (e.g. towards cross-cutting functions, the advent of the combined authority, in response to budget cuts) creates an uncertain and changing context

- Devolution creates change in the locus of control for decision-making.

- Citizen involvement in council decision making and local control of budgets

Many of these issues cross-over with organization, governance, culture, methodology and technology issues that are reported on elsewhere.

Council Structure

The council's structure can be found on the council's website at: https://www.cambridgeshire.gov.uk/council/council-structure/ Some key extracts from the website relating to leadership are:

Cambridgeshire County Council is led by Chief Executive Gillian Beasley and her Strategic Management team. Gillian Beasley was appointed in October 2015. This is a shared arrangement between Cambridgeshire County Council and Peterborough City Council. As Chief Executive, Gillian is the principal policy adviser to the 61 County Councillors and the statutory Head of Paid Service accountable for the Council's half a billion pound budget as well as the work of around 10,000 employees across the Council and Cambridgeshire schools who deliver services to the community.

The Lord-Lieutenant of Cambridgeshire is Mrs Julie Spence OBE, QPM. Her main duty is to represent the Crown. The Lord-Lieutenant is also Chairwoman of the Cambridgeshire Advisory Committee that recommends the appointment of magistrates.

Organisational structure charts including that of the five person strategic management team can be found at:

https://www.cambridgeshire.gov.uk/council/council-structure/senior-managers-and-structure-charts/

The frontline services are: Children Families and Adults Directorate, Economy, Transport and Environment Directorate, and the Public Health Directorate. These are supported by one Corporate Directorate and a shared services arrangement with Northamptonshire County Council: Customer Services and Transformation, and LGSS. Staff pay scales are available to view on the Open data page. Typically each directorate has an executive director who is reported to by service leaders.

Citizen / User Involvement in Decision Making

This issue is picked out for more detailed analysis because it was mentioned in several guises – e.g. citizen priority setting, user-centred design methods,

devolution, place-based leadership, and digital-democracy. Current mechanisms addressing this area are consultations, participation in council meetings, design and development methodologies and devolution of budgets (e.g. direct payments, personal independence payments, devolved school management etc.). Apart from 'devolution of budgets', there was little clear evidence that mechanisms like consultation or participation in council meetings were particularly effective in really engaging and involving citizens on a significant scale. This is perhaps partly because citizens lack expertise in council issues, and councils lack expertise in educating and involving citizens. Both the council and citizens appeared to lack the motivation (and probably also the resources) to engage with each other in a way that would maximize the benefits to both.

Future Vision

Leadership involves influencing the purpose, direction and culture of the council's activities. In a democratic organization designed to serve its citizens this is complicated by a potentially wide divergence in opinion about appropriate priorities, culture, organization and methods, and the need to take into account this diversity of views.   It is also complicated by a constantly shifting landscape of legislation, policy, budgets, national trends, and changes in technology.

Underlying the future vision for leadership is an acknowledgement that the environment in which the council operates is increasingly diverse, changeable, uncertain, complex and ambiguous. Also, it is increasingly understood that problems and solutions are not neat and discrete entities, but that everything tends to have an impact on everything else and that more systemic approaches are needed. By contrast, changes in technology mean that we can know a lot more about the current state of the world through big data sets and sensors, and distributed intelligence and feedback from control systems.

The implications for leadership are that leaders need to be more agile and responsive, and this in turn leads to the idea that leadership needs to be more local and distributed.   All this implies a breaking down of fixed hierarchical organisational and leadership structures and a move towards a flatter organization where leaders with appropriate vision and skills can emerge and act more autonomously to deal with the needs of the moment, drawing as easily as possible, on the best available resources.   There needs to be a move away from thinking of particular people as 'leaders' to thinking of temporary 'leadership roles' coming and going, that can be populated by people with the particular attributes that can achieve current objectives.   A particular person may be a leader one day and a project worker or consultant the next depending on the demands of the situation.

Making leadership more local, distributed, systemic and integrated would, at its limit, turn council leadership on its head. Instead of leaders being in the

council, they would be in the community and instead of one leader or a hierarchical leadership structure, each individual citizen would become the leader of their own affairs. This is not far from the model of 'direct payments, where resources are handed back to individuals in need, giving them autonomous control of designing and implementing their own customized and integrated care solutions. However, not everybody wants or is able to take total control over managing their own needs, and there is a trade-off between meeting needs centrally in a standardized way and giving the end user control where they cannot.

In an increasingly Volatile, Uncertain, Complex and Ambiguous (VUCA) world all fixed structures are at something of a disadvantage because they lack the flexibility to be highly responsive to change. New organizational models are emerging that are flatter and more flexible. This has long been the case for project based consultancy organizations that create teams on the fly as the need arises, to carry out a specific project, and then release team members back into the pool once a project has completed. The capabilities, experience, utilization and pay rates of individual staff are normally available to all staff with 'project management' capability so that they can put together teams as the need arises.

If staff and citizens can work on more than one project at any one time this can be thought of as a 'network organization' in which any structure is highly transient. Such an approach works most effectively when driven by the needs of the market (or, in the case of local authorities, by the needs of its citizens).

The appropriate structure, will to some extent, be dependent on how stable the demand for services is. With very stable demand a fixed structure can be more efficient, while in a volatile world a network structure can be more responsive.

Implementation Ideas

Changing the styles of leadership, together with where and how decisions are made, is difficult – partly because it potentially dis-empowers those who are currently regarded as leaders, and because those who are not leaders may resist taking on leadership roles.   Changes in the mechanisms and styles of leadership will need to go hand in hand with changes in culture, organization and budgeting. Adopting the following leadership 'principles' may help:

Purpose and invisible leadership: The need to identify individuals as leaders is an assumption. Firstly, if the purpose of an organization is well understood by all involved then the organization may not need explicit leadership. If there is a strong sense of community and group purpose then the purpose itself can be thought of as the force providing the leadership. This has been called 'invisible leadership. The purpose itself acts as a leader, providing motivation and guidance as to what is acceptable. Secondly, it is possible to separate the person from the role and have different people occupy a leadership role as the nature of a task changes – (e.g. from definition, to design, to development, implementation and business as usual). For projects, citizens, for example, may be better placed to lead on requirements definition while co-design and co-development more appropriate at some points and a spin-out from council staff leads business as usual operation.

Outcome orientation - Express purpose in terms of outcomes rather than process and relate outcomes to overall changes in citizen and community wellbeing. Use metrics that measure changes in wellbeing and drop metrics that relate to process. Reward leaders on the basis of changes in outcome. Make leaders responsible and accountable for outcomes rather than processes.   Put leaders and managers in charge of achieving outcomes rather than groups of staff.

Make the citizen the leader – Wherever possible, the citizen should adopt the leadership role. This may be the individual citizen (e.g. as in the case of Personal independence Payments) or it may be a community leader of some

activity (e.g. a youth group) or it may be a place-based leader representing the diverse interests of a local community.   This solves many problems. First, it allows the citizen to set the priorities and directly decide between possible options, relieving the council of difficult decisions and possible conflicts between departments, approaches or ideologies.   Secondly, it places the decision making as close to the point of need as possible, minimizing communication and misunderstanding. Thirdly, it saves time and cost by removing layers of decision-making and delays. Fourthly, decisions made at the point of impact will be better integrated with other needs because they are not made in isolation of systemic factors. Lastly, at least on the face of it, direct involvement of citizens in the detail of decision-making is more democratic. Such an approach does not obviate the council of a role. Rather the council becomes facilitator, expert advisor and resource provider but working for the community rather than delivering to it.

Citizens will not always have the necessary background and expertise to immediately take-up leadership roles. This means that specially trained staff from the council may be needed to nurture potential place-based leaders until they can operate effectively, and continue with lower levels of support once they are in role.

Engagement model – Promote communication, knowledge sharing and engagement at every opportunity, between staff and between staff, councilors and citizens. Blur the distinction between leaders and followers and adopt models of co-design and co-development.

Promote the values of authentic leadership: There is an emerging literature on authentic leadership. Authentic leaders have: consistency between values and behaviour, ability to 'connect' with people, consistency through self-discipline, compassion for people, and purpose with a passion. Authentic leaders show commitment, engender trust, promote autonomy and self-development, and make work enjoyable.   The values of authentic leadership can be promoted along side the seven Nolan principles of public life – selflessness, integrity, objectivity, accountability, openness, honesty and leadership.

Autonomy, ownership, accountability and responsibility: Once a person has emerged to fill a leadership role with respect to some function or task, they can be more effective if they are given autonomy to achieve the desired outcomes. Whilst the definition of the outcomes may be a task defined broadly within the organization, in the allocation of a particular person to the role, the organization has to trust that person to deliver in any way they see fit within a largely Results Only Work Environment (ROWE). Ownership, accountability and responsibility come with the leadership role and are assumed, albeit for a limited time, by the person occupying the role. Autonomy and accountability go hand-in-hand so that there is clear direct accountability and a basis for performance monitoring, whilst at the same time acknowledging the developmental aspects of some allocations of people to roles to enhance the organizational and individual's skill-set.

Best Practices on New Models in Transformation-Leadership

Place	Initiative	Type	Reported or planned achievements	Main Approach
Suffolk[i]	Lowestoft Rising	• Focus on combining services provided by local public agencies to provide a "whole system approach" to address Lowestoft social problems. • Objective is to secure improved outcomes by addressing local needs, generating efficiency savings and reducing duplication of services and the demand for public services through early intervention and prevention. • Approach is aimed at using funding in a more collaborative way, looking beyond organisational boundaries and taking wider effects on the Lowestoft community into account when making decisions on service level. • Strong partnership between Suffolk County Council (SCC) and Waveney District Council (WDC), as well as involving other key public-sector partners and the community sector	• The change in working culture is driven by Senior Executives as sponsors (forming the Sponsoring Group), who have a key operational person inside each participating organisation as a conduit (which forms the Support Group). This structure has evolved organically and the new way of working reflects a commitment to collectively deliver wider public good. • The involvement of the voluntary sector also includes a mapping of the local organisations by extending and mainstreaming an existing web-based database to which all organisations are encouraged to sign up. This provides an overview of existing resources. Furthermore, umbrella organisations such as Community Access Suffolk and a cluster of community organisations were involved. • 26 Outcome based indicators for monitoring the impact of 'Lowestoft Rising' in terms of the overall objective of making it a better place to live, invest and work in; and the effect of the approach on delivering better services and reducing demand. • Focus on long term commitment to the approach to achieve systemic changes	• Integrated whole system approach to services • Changes in culture and ways of working around community needs • Decentralising leadership and organisation structures around the needs of the community

Place	Initiative	Type	Reported or planned achievements	Main Approach
Surrey[ii]	Family Support Programme	• Focus on combining services provided by local public agencies to structure them around the customer 'journey' in order to better address individual needs. • Local response to the national Troubled Families Programme. • Rather than individuals dealing with multiple organizations (17 in case of Surrey), services come together in a Team Around the Family • Objective is to help turn around the lives of identified families through an integrated multi-agency approach to service delivery and commissioning; and to achieve productivity improvements and cashable savings in line with efficiency requirements.	• Surrey's district and borough councils take on the role of 'place leader' for the Programme, coordinate the local services and provide intensive support services to families. • CBA focusing on high value transactions across key agencies estimates +£30m fiscal benefits over 5 years (starting 2014) • However, for the implementation to be successful what was required was a change in leadership culture as well as changes in the way of working for staff with shared risk management and collaborative working across services. • Further, some activities performed by certain services had to be stopped to avoid duplication and improve efficiency of the programme model	• Place leaders to coordinate local services • Organisation restructuring to meet community needs • Integrated system approach to services • Changes in culture and ways of working
Barnet	One Barnet	• Outsourcing of Barnet's Customer and Support Group as part of its long-term plan 'Future Shape' approved in 2009, for transformation and cost reduction. • Aimed at co-design of services with users combined with significantly improved customer insight which can drive further change from a resident's perspective • Ambition is to provide a single customer account with levels of responsiveness matching that	• What was important for the initiative to be implemented was the sustained political and managerial leadership • The journey from the development of the 'Future Shape' report to coming into operation of the partnership with Capita for customer and support group outsourcing was led by three chief executives and three leaders. Ensuring that each new leader had an opportunity to review the approach and take ownership, as well as maintaining continuity, is a key factor	• Customer focused redesign of service • Leadership • Part of a longer journey • Governance and programme management

Place	Initiative	Type	Reported or planned achievements	Main Approach
		provided by companies such as Google and Amazon.	• Savings of £125.4 million over ten years which were used by the council to reduce the council tax burden for 2014/15 and freeze it for 2015/16.	
Monmouthshire[iii]	Your County, Your Way	• Implementation of a cultural transformation within the council to listen and respond more creatively to the needs of its communities • Central to this approach is an internal training programme, the Intrapreneurship School, which seeks to introduce council employees to the concept of innovation and what it means for service delivery. • Agile and flexible working – breaking down physical and cultural walls • Meaningful community engagement – co-creating and co-delivering	• Selected as one of six innovative councils by NESTA • focus on output and outcomes rather than measuring time spent in the office as part of agile work space strategy • Whole Place and Community Co-ordination planning and engagement recognising the distinctive needs of local places and unlocking people power to help deliver it; • Monmouthshire Engages events, discussions and roadshows focused on finding out what matters to local communities, staffed and facilitated by 120+ employees who give freely of their own time • Staff volunteering thousands of hours of their time, skills and expertise to their communities, special projects and programmes either as part of Town Teams, community forums, civic societies, service-user networks, community interest companies and local trusts for engaging with the local community • Radical changes to services through new technology, custom software development, eliminating waste and duplication, generating new income	• Change in organisational culture and leadership • Agile and flexible working • Role focus on outcomes rather than activities • Community needs driven role values and objectives • Co-creating and co-delivering services with communities

Place	Initiative	Type	Reported or planned achievements	Main Approach
			streams, developing new community ownership options and focusing on place-based needs and priorities	

List of Leadership Recommendations

Ref.	Recommendation	Rationale	Backing
LR1	Give leaders the ownership of outcomes and projects rather than ownership of staff.	Gives leaders more flexibility and autonomy in the way they go about achieving outcomes and how they staff services and projects.	Results Only Work Environment - See: https://en.wikipedia.org/wiki/ROWE .
LR2	Explore options and models for place-based leadership - how leaders would come into existence, develop, be supported, have duties, responsibilities, budgets and be accountable, measured against outcomes and incentivized.	To assess the viability of place-based leadership and review alternative models.	
LR3	Give leaders autonomy to	Faster, more efficient and more iterative decision making assessed	

	achieve outcomes but measure there performance and keep them open and accountable	on outcome rather than process.	
LR4	Provide a process for becoming a local leader, then let leaders emerge to a point where they are given a mandate.	Local leaders should emerge on merit and acceptability (rather than top down appointment) but once identified need an explicit mandate to lead in some locality for a defined period of time.	
LR5	Emphasize the traits of 'authentic leaders' and consider 'invisible leadership', where a strong common purpose drives behaviour, as a complement or alternative to leadership appointments.	The more credible the leader, the more explicit the purpose and distributed the leadership role the more motivated the organization will be to achieve outcomes.	Authentic leadership https://en.wikipedia.org/wiki/Authentic_leadership 7 Principles of Public Life https://www.gov.uk/government/publications/the-7-principles-of-public-life
LR6	Think in terms of temporary 'leadership roles'	Leadership is a skill that can be acquired and can be separated from the person. Thinking this way	Leadership and management are seen as skills that can be learnt through experience and review. http://www.local.gov.uk/documents/10180/7529640/L15-

		counters territorial leadership styles, allocates leaders with better skills matches and makes the organization more flexible and responsive	456_Emerging+Leadership+bookmarked.pdf/365b3510-c9cd-4aef-b657-20f7a68c443c Article, Hickman, Gill Robinson, and Georgia J. Sorenson. The Power of Invisible Leadership: How a Compelling Common Purpose Inspires Exceptional Leadership. Thousand Oaks: SAGE Publications, 2013. http://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1012&context=bookshelf
LR7	Adopt the LGA recommendations on Leadership (especially digital leadership)		'Developing local digital leadership skills and capacity' http://local.gov.uk/documents/10180/7572012/productivity+-+transforming+public+services+-+Developing+local+digital+leadership+skills+and+capacity+18+nov+2015/f6847754-0edf-44fd-a169-9b1ecbc51b9a 'Implementing programme leadership and support for digital' http://local.gov.uk/documents/10180/7572012/productivity+-+transforming+public+services+-+Implementing+programme+leadership+and+support+for+local+digital+18+nov+2015/5152bd68-e32f-48c5-8f1e-e430005f13d1

[i] Lonsdale,J., Schweppenstedde, D., Stolk, C.V., Guerin, B, and Hafner, M. (2015), "One Place, One Budget?: Approaches to pooling resources for public service transformation", Rand Europe, Prepared for Local Government Association, https://www.rand.org/pubs/research_reports/RR1017.html

[ii] Lonsdale,J., Schweppenstedde, D., Stolk, C.V., Guerin, B, and Hafner, M. (2015), "One Place, One Budget?: Approaches to pooling resources for public service transformation", Rand Europe, Prepared for Local Government Association, https://www.rand.org/pubs/research_reports/RR1017.html

[iii] http://www.monmouthshire.gov.uk/app/uploads/2014/09/People-and-Organisational-Development-Strategy-2014-17.pdf

New Models for Transformation
Final Report Recommendations

Culture

Cambridge University Science and Policy Exchange

working with

Cambridgeshire County Council

New Models CUSPE Team

Rod Rivers, Simon Davies, Nidhi Chaudhary

Autumn 2017

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Introduction

As part of the Cambridgeshire County Council (CCC) Policy Challenges, a team of three researchers was challenged to address the question of:

> ***What are the next generation of models to transform organizations, and how could they benefit Cambridgeshire County Council?***

The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report on culture looks at models for addressing cultural change by setting up a guiding coalition of citizens and staff to re-examining organizational values and aligning operational procedures with those values.

Current Situation

In the brief for the New Models of Transformation project we were told that:

> *'The need for transformation:* Cambridgeshire County Council has operated a departmental based approach to business planning and budget setting process for many years. This engendered a culture and a set of behaviours that resulted in a very insular and defensive style of working. As a consequence there were very few cross-organisational, let alone cross-sector, solutions developed to address the financial challenges faced by the Council.'

To some extent this view was confirmed by research and interview. The research revealed that this culture was not unusual in local government and that the organizational charts, strategy, plans and budgeting arrangements of CCC all assumed a mainly departmental structure aligned mainly to legislative categories (housing, social care etc). This alignment was also reflected in the committee structures. Our interviews were mainly with the new cross cutting structures that followed the corporate capacity review. These new structure appeared to be, at least partly, one mechanism for creating a new cross cutting and more innovative culture. Interviewees frequently referred to people 'working in silos' and despite some good initiatives (e.g. Cambridge Insights and the Innovation Fund) the sharing of data or close working with the community seemed to be the exception rather than the rule.

The people with whom our team met were, in general highly cooperative, and although they were well aware of cultural problems, seemed to express a sound set of values – belief in the democratic process, working in the service of the citizen, efficient use of public money etc.

In terms of public participation it was noted that most of the council meetings were open to the public, although in practice members of the public rarely attend unless they are involved in a specific item being discussed. There are opportunities for the public to address council meetings, but the impression was that this was not pro-actively encouraged, the process is proceduralized

and not particularly friendly or supported. This may vary from committee to committee. Also, there were mechanisms for public consultation on issues facing the council, although usually in practice, only a small percentage of people were likely to be aware of or participate in consultations.

The main difficulties with the organizational culture identified in the brief was that it was 'insular and defensive' suggesting that there was an over-concern about people protecting their territories and jobs and that this compromised cooperation and innovation that would better serve the community. This is what our cultural recommendations aim to address.

Future Vision

Some of the cultural issues arise out of the mainly departmental structure of the organization and the human resources policies. These are addressed in our report on 'Organization'. This report on 'Culture' focuses on behavioural aspects that might apply whatever the organizational structure.

According to Campbell (2000) in 'The Socially Constructed Organisation *"Organisations … create their own belief systems, and then people find it a struggle to discover new solutions within the old paradigm. A culture for deconstructing basic assumptions may be an essential first step"*.

Cultural behaviours are driven by an underlying set of organizational values, and by social norms. To create lasting cultural change it is necessary to go back to the first principles of re-establishing the organization's values and to re-assess whether the organizational structures and mechanisms that have evolved, truly align with those values. The set of values recommended in this report are intended to prime the process of re-examination.

An approach to behavioural change is to make the underlying values more explicit and have these reflected in a new set of social norms by which behaviour across the organization is judged and legitimized. There are also mechanisms and practices that can be introduced that act as a catalyst, or a support, for change.

Organizations generally often present a commendable set of high level principles and values that prove difficult to translate into the detail of operational procedures. The constraints of the established ways of working, heavily entrenched by habits, attitudes, training programmes and accepted wisdom; and modified over years by 'patches' designed to fix particular problems, budget restrictions, power struggles and other constraints, means that mis-matches can evolve between the espoused values and the reality of operational practice. The gap is often closed by stories created to reconcile the mis-match that, over time, become increasingly less credible.

The future vision is to promote a culture in which the values of the organization are re-examined and re-asserted, and the questioning of established ways of working is legitimized and encouraged.   In many instances, established ways of working may be appropriate but this should not prevent them being challenged and questioned in a way that searches for better ways of mobilizing resources to align more closely to the organizations values.

The values proposed are those set out in the recommendations and were endorsed by the Local Government Association (LGA) when we met with them. They include focusing on and measuring **outcomes** (as opposed to process); being flexible in the application of processes, more mobile, more responsive and agile (**loosen up**); valuing the sharing of information amongst staff and the community as well as being more transparent and accountable (**open up**); valuing **engagement** with and cooperation amongst staff, the community and other organizations; **devolving power**, control and budgets to as near the citizen as possible; and **thinking systemically and long-term**.

Examination of this set of value should involve not only all CCC staff but also a good proportion of citizens. They should become thoroughly familiar with the organization's values, have these embedded in the processes and social norms that apply to the day-to-day operation of the council, and to empower staff at any level and citizens, to easily and routinely challenge behaviours that appear to not align with the value system. At the same time it is important to take care not to create a culture of blame (i.e. by only challenging the behaviours rather than the person).

Implementation Ideas

Cultural change will only come about if the values of the organization are owned by and have buy-in from staff and the community. They cannot be imposed from 'on high'.

It is therefore proposed that staff and citizens are invited to form a 'guiding coalition', one of the tasks of which will be to identify and prioritize a suitable set of organizational values and propose mechanisms by which these can be operationalized and maintained. The values in these recommendations can form an initial set for consideration.

Participation in the guiding coalition should be open to any staff member at any level in the organization and their should be sufficient publicity and incentives to attract an approximately equal number of citizens to take part. Each participant should have an equal voice and vote (if this is the adopted decision-making process).   The management of the coalition should be self-organized but the council should fund at least one administrative post to take care of meeting arrangements, publicity, co-ordination, and dissemination of coalition recommendations.

The council needs to be prepared to release staff from their normal duties for at least half a day a month for up to one year to take part in work of the coalition. Participation by staff and citizens is expected to gradually turn over as individual interest in the coalition activities grows and wanes but there should be a two-year limit on participation. Output from the coalition would be in the form of recommendations but the onus would then be on staff within the organization to either adopt the recommendations or provide a clear statement of why that could or would not adopt them. It should be an aim of the coalition and CCC as a whole to establish a social norm whereby recommendations of the coalition are both realistic and adopted.

Flexible workspaces (e.g.hot-desking, mobile working) are recommended as a mechanism of encouraging staff to work in different and multiple locations, including spending a good deal of time co-working with the community.

Best Practices on New Models in Transformation-Culture

Place	Initiative	Type	Reported or planned achievements	Main Approach
Surrey[i]	Family Support Programme	• Focus on combining services provided by local public agencies to structure them around the customer 'journey' in order to better address individual needs. • Local response to the national Troubled Families Programme. • Rather than individuals dealing with multiple organizations (17 in case of Surrey), services come together in a Team Around the Family • Objective is to help turn around the lives of identified families through an integrated multi-agency approach to service delivery and commissioning; and to achieve productivity improvements and cashable savings in line with efficiency requirements.	• Focus on outcomes as the programme combines services to focus them around the 'user journey', with services brought together in a 'Team Around the Family' approach • However, for the implementation to be successful what was required was a change in leadership culture where senior officials have had to work closer in partnership and be increasingly willing to pool resources and services over time. • Staff expected to engage in collaborative working, using new protocols to manage relationships across agencies without introducing new hierarchies. • This has helped to bring staff on board and enabled them to understand the changes, while simultaneously acknowledging their individual professional and statutory roles	• Organisation restructuring to meet community needs • Integrated system approach to services • Changes in culture and ways of working
Monmouthshire[ii]	Your County, Your Way	• Implementation of a cultural transformation within the council to listen and respond more creatively to the needs of its communities • Central to this approach is an internal training programme, the Intrapreneurship School, which	• Selected as one of six innovative councils by NESTA • focus on output and outcomes rather than measuring time spent in the office as part of agile work space strategy • Hot desking with overall person to workstation ratio as 2:1, as staff use mobile communication technology to access the	• Agile and flexible working • Role focus on outcomes rather than activities • Community needs driven role values and objectives • Change in organisational culture • Co-creating and co-

Place	Initiative	Type	Reported or planned achievements	Main Approach
		seeks to introduce council employees to the concept of innovation and what it means for service delivery. • Agile and flexible working – breaking down physical and cultural walls • Meaningful community engagement – co-creating and co-delivering	information for them to do their jobs anytime, anyplace, anywhere. • Whole Place and Community Co-ordination planning and engagement recognising the distinctive needs of local places and unlocking people power to help deliver it; • Monmouthshire Engages events, discussions and roadshows focused on finding out what matters to local communities, staffed and facilitated by 120+ employees who give freely of their own time • Staff volunteering thousands of hours of their time, skills and expertise to their communities, special projects and programmes either as part of Town Teams, community forums, civic societies, service-user networks, community interest companies and local trusts for engaging with the local community • Radical changes to services through new technology, custom software development, eliminating waste and duplication, generating new income streams, developing new community ownership options and focusing on place-based needs and priorities	delivering services with communities

List of Cultural Recommendations

Ref.	Recommendation	Rationale and backing
CR1	Focus on outcomes	Increased quality and integration of services. More focused and efficient services and delivery.
CR2	Loosen up	Enables responsiveness to a changing, uncertain, complex and ambiguous world. Applies the philosophy of AGILE methodology to operation of the whole organisation.
CR3	Open Up	Less duplication of effort. More collaboration and sharing to achieve efficiencies. Facilitation of third party developments and empowerment / engagement of citizens. More and higher quality data on which to base decisions. Greater transparency and accountability.
CR4	Engage	Better exchange of information to facilitate and inform policy and decision-making. Improved anticipation of unintended consequences.
CR5	Devolve, decentralise, empower	Better use of local knowledge in decision-making. More focus on local need and greater personalization and customization of services. Enhances wellbeing directly through enabling local control. Reduces costs through self-management.
CR6	Think systemically and strategically	Greater understanding of where and when costs and benefits of (proposed and actual) projects and services will impact. Better understanding of how to effect and maintain change. Better understanding of the viability of particular changes. Greater flexibility to re-interpret and re-frame problems and solutions.

CR7	Shift to measuring outcomes in terms set by communities and individuals rather than terms set by the council (e.g. process based KPIs).	Supports and reinforces a focus on outcomes and a user-centred approach. Grounds decision making in citizen's preferences and priorities (as facilitated and informed by council expertise).
CR8	Set up a 'guiding coalition of innovation' within the council tasked with identifying and implementing mechanisms that engender a 'culture of innovation' that any staff member or citizen can join.	Makes clear the values that the council promotes and involves staff and citizens who are motivated to take this forward.
CR9	Promote flexible workspaces (e.g.hot-desking, mobile working, home working)	Facilitates flexible working in both time and place, facilitates staggering working hours reducing congestion and enabling coordination with client schedules, facilitates improvements to work infrastructure, facilitates working more closely with clients and citizens (at their locations),

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[i] Lonsdale,J., Schweppenstedde, D., Stolk, C.V., Guerin, B, and Hafner, M. (2015), "One Place, One Budget?**:** Approaches to pooling resources for public service transformation", Rand Europe, Prepared for Local Government Association, https://www.rand.org/pubs/research_reports/RR1017.html
[ii] http://www.monmouthshire.gov.uk/app/uploads/2014/09/People-and-Organisational-Development-Strategy-2014-17.pdf

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The council is facing significant pressures due to the need to meet challenging budget reductions whilst delivering services to a growing population in Cambridgeshire. Furthermore, as devolution of power gains traction in the UK, including the establishment of the Cambridgeshire and Peterborough Combined Authority, and digital technology plays a growing role in society, there are opportunities to change how services are delivered.

Within the context of the council's transformation process, through meeting different members of the council and examining the literature, a series of recommendations have been made that span the areas of Governance, Organisation, System Methodologies, Leadership, Culture and Technology. These recommendations can be drawn together into a vision for the potential next step of transformation, involving more radical change across the whole organization and to its approach and culture, making it more collaborative, citizen focused, agile and responsive, involving greater delegation of delivery, flexibility and improved infrastructure.

This report on technology sets out the many technology related issues that arose, the many different models of technology use, and samples a range of technologies to watch. Technology is seen as offering great opportunities but can also disenfranchise those left behind. A central theme is that of open data and open architectures to provide a platform for faster exploitation of opportunities and cost saving.

Current Situation

Main Issues

The following technology issues emerged from interviews:

- The need to track fast-moving technologies and exploit them appropriately. The pace of technological change affords opportunities and has implications for user expectations, system life-span and development methodologies.

- The opportunity to use technology to promote digital democracy and greater citizen participation and engagement. This potentially facilitates collaborative working (co-design and co-development) between the council and citizens and across organizational boundaries. Technology may be used to capture opportunities, constraints and skills from a wide range of sources, to better exploit knowledge and skills, and assess social costs and benefits.

- The need to guard against inequality and disenfranchisement of citizens and staff that lag with access to technology and technology skills

- The need to shift to more agile and user-centred approaches to the recruitment and development of technology

- The need for a strategic approach, roadmap and overall architecture for guiding technological developments

- The need, for reasons of efficiency, to make data as open and accessible to many categories of users including staff (across departments, projects, the combined authority etc.), citizens, external developers, and external organizations while still preserving security and confidentiality as appropriate

- The need to assess the role, cost and rigidity/flexibility of being tied into external suppliers and proprietary systems

- The need to design the organization of technology delivery in terms of staff skill development, flexibility of creating and disbanding project teams, and the use of cross cutting skill centres to supply frequently used functionality (e.g. identify verification, payments)

- Use of technology to support project staffing, project management and the tracking of projects by the project itself and others (e.g. open access to information about projects and their progress).

- The need to support more decentralized decision making

- The need to understand how to use technology to support systemic and outcome focused approaches and solutions that cut across traditional departmental and legislative boundaries

- The need to develop technology skills to enable faster development of technology solutions (e.g. Digital Leadership Programme).

- The need to provide a wide range of notification services (to staff, citizens, other organizations etc.) for reminders and information.

- The need to keep the council better informed (e.g. potholes, traffic, parking, building usage, events, alarms, emergencies) when making real time and longer term decisions and scheduling (e.g. the use of sensor and other (citizen) reporting technologies).

Many of these issues cross-over with organization, methodology governance, culture, and leadership issues that are reported on elsewhere.

Overall, interviews with staff and other research (e.g. LGA, Digital Leadership Programme, consultants reports, other authorities) gave the impression that technology offered huge possibilities for greater efficiencies, greater engagement, and greater flexibility but that these opportunities were not being exploited in a particularly systematic or scalable way.

The transformation team, and the move towards providing cross cutting technological functionality such as identity validation and payments, goes some way but, if there is a more comprehensive technology vision (as

opposed to a methodology vision to use agile approaches), we only got hints of it when looking at Cambridge Insights. Furthermore, attempts to promote open data did not seem particularly well supported at an organizational level.

There were a number of stand-alone initiatives – such as blue badge but no feeling of a cross organizational overarching strategy. This may be because of organizational structures, the silo mentality, the way budgets are organized, the impact of legacy systems, difficulties with the use of diverse systems and system integration, the pace of technological change, data protection issues, loss of the best technology staff to the private sector or other factors.

Open Data at CCC

Making data more open to use across the council, by citizens and third party developers is a key platform for the development of other technology progress such as open architectures and open application development. CCC already have an open data platform (built on the open source platform DRUPAL from the Open Data Foundation), the details of which can be found at:

http://opendata.cambridgeshireinsight.org.uk/about

This project has 11 partners and 22 organizations are able to publish to the platform. The development was funded by the LGA and the Cabinet Office and is largely maintained by the Cambridgeshire Joint Strategic Planning Unit.

http://cambridgeshireinsight.org.uk/planning/joint-strategic-planning-unit

As at the time of writing, there are approximately 150 datasets available at:

http://opendata.cambridgeshireinsight.org.uk/dataset

The primary users of this data are currently CCC services and other public bodies in the region. The data has potential applications in several areas including supporting applications to the CCC Innovation Fund. An article describing approaches and how to publish open data - 'I want to publish some open data: what do I do?' is available at: https://medium.com/@HendrikG/i-want-to-publish-some-open-data-what-do-i-do-d56d16f7d982#.m9yt1nq69

Future Vision

This section reviews some of the main technology initiatives in digital government, digital services, digital transformation, digital democracy, open architectures and open data in order to identify trends in thinking about the use of technology in local government. References are made to recent work where possible, but some older references are included where up-to-date references have not been found or the older ones are still relevant.

Technology is changing rapidly and it is difficult to make precise predications. Any future vision is more to do with the enabling and other social effects of technology than in the technology itself. And it's not just in computing that's changing. It seems likely that in 3 to 5 years time we will have made substantial progress towards electric and autonomous vehicles; the capture, local distribution and cost of renewable energy; smart roads and buildings; the routine use of big data sets to drive strategic decision-making and the use of artificial intelligence to perform a wide range of tasks from approving applications of all sorts (jobs, permits, planning etc.) through to data collection / interpretation and customer service (e.g. chatbots).

Technology can be used to provide more personalized services and can potentially be used to gear council tax and business rates more precisely to the level of service usage. However, if the past is anything to go by, technology can also disenfranchise those that cannot or do not choose to keep up with it and can lead to unacceptable standardization, depersonalization and cost cutting that shifts workload from organizations onto the user.

LGA Recommendations

Last year the Local Government Association were pushing hard on digital transformation but this is less apparent at the time of writing. Also, at the time of writing there appear to be problems with access to some government web-sites so some links may be problematic.

Examples and support to the public sector for digital transformation is available at:

http://www.smarterdigital.info

Technology Models

Appendix 1 contains the details of several technology related models including: Government as a Platform, Digital Government and Digital Services, The Gubbins of Government and New Roles for Key Players, Digital Transformation Roadmaps, Open Architectures, Open Data, Technology for Citizen Participation.

Examples of Future Vision in CCC

To illustrate how technology might impact developments in the council two examples are given – highways and social care.

Highways

Information technology can be used to squeeze far greater efficiencies out of the roads and many other systems than at present. Charges (e.g. congestion and parking charges) can be levied 'on account' without the need for explicit payment mechanisms (e.g using number plate recognition).   Real-time signposting and signaling can be used to for the minute by minute control of traffic in response to congestion, road works, events, emergency situations and dangers. Smart signing and road markings can enable the real-time reallocation of road-space for bus-lanes, cyclists, pedestrians and parking. Public transport can run at various capacities (mini-buses etc.) on demand and well as scheduled services with publicly available real-time information as to location.

Social Care

Social care, especially in relation to children at risk, is one of the biggest costs to the council. Even so not all families needing support access it, either because they choose not to or because the capacity of the system is insufficient. Downstream costs to society of lack of provision are large in terms of anti-social and criminal behaviour, imprisonment, and drug use. Social care issues are systemic, often resulting from behavioural patterns

going back generations, poverty, prejudice, ill-health, lack of education and a range of factors putting particular individuals and families at a disadvantage.

How will technology be recruited to address these complex issues? First, technology can assist in the analysis of accumulated data sets and provide a better picture of which families and which localities should receive priority attention. Gains can be made by facilitating better communication and exchange of information between the disparate range of organizations that become involved with the most intractable cases, pushing well beyond the integration of health and social care. Organizations include educational institutions, employers and employment agencies (public and commercial), the courts, the police, health services, youth groups, central government departments, charities, self-help groups and other family members etc. Technology can help these organizations and individuals focus on outcomes for families by holding a coordinated but flexible plan of action and support, and allowing actual and proposed updates in a coordinated and structured way, informed by best practice, keeping information secure and allowing access to data on a controlled, traceable, need-to-know basis.

Technology can allow access to information held by the council and, facilitated by skilled social workers and practitioners, allow families to reflect on this information, compare it with norms, set new objectives and help families re-interpret their own histories and create intentions and plans to change.

Technology can keep everybody, including the family and extended family reminded of appointments and objectives, and provide feedback on progress. It can facilitate continuity of support by enabling small groups of staff to coordinate care and support such that if any one of them is unavailable, somebody else with a good knowledge of the case can deal with issues as they arise.

Machine learning may be able to identify recurring patterns in complex datasets and identify which interventions might be tried in relation to particular cases.   Multivariate   statistical   approaches   can   help   identify   which

interventions are most effective in which situations and focus resources on these. Artificial intelligence systems may, in time, be able to capture the skills and expertise of specialist practitioners and help improve the effectiveness and productivity of social workers and clinicians.

Notifications and Reminders

A simple application of technology, that cuts across many different services, is 'notifications and reminders'. In an increasingly busy world both citizens and staff can benefit by being notified of information that is relevant to them and reminded of things they must do. However, notifications and reminders can be a considerable irritation if they are not designed well.

Article, The Fragmentation of Experience, www.wellbeingandcontrol.com, October 2015

http://www.wellbeingandcontrol.com/?p=556

Citizens might benefit from notifications and reminders in relation to many different tasks and services including: what day to put which bin out, when payments are due (council tax, rents, rates), when permits expire (parking, planning, taxi driving), application deadlines (schools, jobs with the council), meetings (public meetings, planning meetings, committee meetings, social worker visits), traffic situations (road closures, pothole repairs completed), voting opportunities.

Similarly, council staff can be kept better informed about meetings (times, who attended, relevant agenda items), developments (new open data or application availability, new legislation coming into force), project deadlines and much more.

The key to designing notifications and reminders such that they are not irritating distractions is 'just in time, just enough' and making the source of the communication easily identifiable. Also users should easily be able to control what, when, how and in some cases where, they receive notifications.

Implementation Ideas

There is no doubt that the pace of technological change creates an environment in which it is difficult to exploit the latest technology unless the organization is very agile and responsive. Propriety legacy systems, the need to constantly refresh technology skills, re-work procedures and engender new habits, all create an inertia holding back change.   Also, the fear of disenfranchising citizens (and staff) often means that there is a need to provide services in multiple ways – e.g. a smartphone app, a desktop web-based interface and by phone and hardcopy information / form filling.

Many of the solutions to better exploiting technology are organizational rather than technological.   To fully exploit technology there is a need to bring specialist skills to particular problems and projects on a 'just in time, just enough' basis.   This means that any project, wherever located in the organization needs to be able to access skills quickly and easily. See our future organizational vision for more information on how skill based pools of staff operating in a flatter, less departmental, more open and flexible project based structure may go some way to facilitating more effective exploitation of technology.

Youtube Video, Flexible working: The way of the future? | Dr Heejung Chung, University of Kent, December 2015, 9:56 minutes

https://www.youtube.com/watch?v=xWTBCsLmsOg

Open Systems

Barriers to Open Systems

Open Data is seen as a 'nice to have'

As budgets get increasingly squeezed, pursuing the concept of open data is often seen as secondary to the primary role the council has in fulfilling its statutory duties. Consequently the development of open data architectures and open data repositories is often not part of the 'day job' but must be done by enthusiasts and fitted it as best it can, or done in employees own time.

To some extent this can be countered by finding and making available datasets that are of particularly high value to many different users. For example, NHS data is particularly rich with respect to locating those localities and families with the greatest need for services, although in this particular case data privacy issues act as a barrier, and the NHS would have to incur costs to release data in such a way that data protection would not be compromised.

However, the business case for open data is strong in terms of medium to long term returns on investment, reducing costs across several services at once, transparency and accountability, citizen participation, citizen self management and reducing errors and inaccuracies in the data. It is also a pre-requisite for a more science based approach to policy and service design based on big data analysis and the operation of machine learning algorithms. These offer the promise of much improved understanding, using data visualization techniques and causal modeling, of need and effective interventions based on more robust epidemiological data.

A possible approach, where the returns are clear but longer term, is to allow private enterprise to do the work that the council is unable to fund in the short term and then for the council to 'buy back' the benefits at a later stage. However, this has risks that would need careful evaluation and mitigation.

Open Data Recommendations

It is recommended that a review of the utility and usability of these datasets amongst third party stakeholder (other public bodies, citizens, companies, application developers) is carried out with a view to (1) making these datasets better documented and more usable (2) giving the datasets publicity amongst potential users.

It is recommended that a review is carried out as to which data sets would offer most value to services, citizens and apps developers if they were open and a methodology established for routinely identifying, cleaning and re-

formatting and anonymizing as necessary, and making openly available these datasets with appropriate access controls for different categories of user.

It is not clear whether open architectures or open data are currently included (either as explicitly identified or as parts of projects) in the current transformation strategy.   It is recommended that it becomes an explicit part of the strategy and that new transformation projects are required to assess the potential for data sets they involve to become open.

Technologies to Watch

Appendix 2 lists a number of technologies to watch including Internet of Things, Big Data and Machine Learning, Blockchain, and Data Visualization. These technologies are already starting to have impact in commercial systems and CCC might implement a specialist function to both track these technologies and identify areas within the council they might be recruited.

The Disenfranchising Effect of Technology

Although technology has benefitted society in many ways and is a key enabler for local authorities to implement more efficient and citizen-centred services, there is a significant downside in terms of democracy.

As systems become more automated and people based services become replaced with online services, telephone Interactive Voice Response (IVR) systems, call-centres and other depersonalizing technologies people who are less able to deal with these systems (the old, the unwilling, the disabled, the unemployed, the housebound, the unwell, the poor, rural communities, and the mentally ill etc.) become progressively disadvantaged and disenfranchised.

While we can count on most people now having a phone and probably a mobile phone, if you have neither a computer nor a smart-phone there is a good chance that the way in which you had previously interacted with the council has become so degraded that your have become disempowered. If you have to pay and wait on hold for an uncertain time, even the phone can disadvantage those on tight budgets. This widens the divide between those

that can keep up with technological change and those that cannot and is fundamentally undemocratic, unfair and lacking in equal treatment.

For example, take the impact of IVR systems: There are many problems with their use, including:

- The frustration of not dealing with a human being in a warm and personal way

- Not being able to explain a problem or issue from the user point of view

- Being forced to deal with the supplier's organisational structure which is of no interest to the user

- Not being able to identify ones own issue, problem or request from the menu choices available

- Menus items that are too long and difficult to remember

- Voice prompts that are hard to hear or understand

- Too much information being presented at any one time

- Having to navigate deeply into a menu hierarchy before getting to a required option

- Not being able to see the whole menu hierarchy at once so effectively navigating blind through an already incomprehensible structure

- The feeling that the organisation does not care about the user

- Having to listen to patently ingenuous statements like 'your call is important to us'

- Being placed on hold for interminable lengths of time with no indication of how long one has to wait and being afraid to hang up because it means starting all over again

- Not knowing how much the call is costing having dialled a number with an obscure non-geographical code (and fearing that it might be very expensive).

- Having to listen to music that one does not like over a poor quality speaker

- Having to go through this whole process repeatedly because it is so difficult to get it right the first time or because the call is suddenly cut off three quarters of the way through the process.

The above says nothing of the problems once you get through to a member of call-centre staff.

Shifting Workload and the Displacement of Jobs

Replacing people with technology carries with it some significant dangers that:

- the technology illiterate become disempowered

- citizens actually receive a degraded service and are expected to carry more of the workload themselves

- citizens start to receive a standardized and depersonalized service with no opportunity to work through non-standard queries and issues with a person

- staff are made redundant, depriving them of purposeful activity and buying power

The use of technology often means that in order to cut costs, the burden of responsibility for many tasks is shifted from the organization onto the user. Displaced staff also suffer to the benefit of the organization. For the disadvantaged this compounds the difficulties that they already have. It may make the organization seem more efficient when the reality is that the effectiveness of the whole society is reduced. For public services, it is unacceptable to make the organization seem more efficient by degrading the wellbeing of the citizens they serve.

In a democratic and civilized society it is important to recognize and address these risks.

Are there any models that can address this problem?

Social costs and benefits need to be taken into account when introducing new technology. Care must be taken that the user experience in enhanced and more personalized, and not degraded, standardized and require extra workload on the part of the user. The possibility of using displaced staff to enhance the previous service (e.g. by providing more people-based support) should be considered in preference to redundancy. Ways in which the costs of provision of people-based value added services can be recovered should always be considered in order to provide the opportunity for new job creation.

Maintain at least two systems – one based on technology and one based on people services and hardcopy. Use people based services for the front-end functions and technology for the backend. The backend can be accessed either directly by the technology savvy citizen or via a person intermediary by those that are less able. This has implications for the way services are designed so that they are widely accessible, even for the technologically disadvantaged.

Appendix 1 – Technology Models

Government as a Platform

The computer weekly article below describes what government as a platform is and how we might move towards it. It cites NHS Jobs as an example that is estimated to have saved over £1b since 2003. A 'platform' is a mechanism of brokering between users and suppliers. Recruiters (i.e. NHS trusts and organizations throughout the UK) post jobs onto it and users search for them. It is not recruitment software for a particular part of the NHS, rather it is a general utility providing a standardized method of posting and applying for jobs that any NHS organization can use. This approach:

- Moves away from bespoke service development

- Moves away from development within silos

- Uses the Government Digital Service to help develop applications that can be customer focused, operate across organizational silos and use common shared components.

- Uses 'Verify' as the mechanism of assuring identity (https://www.gov.uk/service-manual/identity-assurance)

The rest of the article outlines a methodology for identifying and developing common components across silos.

http://www.computerweekly.com/opinion/What-is-government-as-a-platform-and-how-do-we-achieve-it

Digital Government and Digital Services

It has been proposed that the model used by Amazon, TripAdvisor, Airbnb and other Silicon Valley companies, could be used for government digital services. These systems model the individual user, present a variety of competing suppliers that the customer can choose from and use customer reviews as the basis for helping later customers select suppliers and services. It is customer, rather than supplier, focused and provides user engagement

and empowerment. It has been argued that as soon as you think 'digital' as the primary mode of interaction, much else falls into place as to how to empower citizens, achieve efficiencies, reduce costs, eliminate bureaucracy, and become user focused.

The Gubbins of Government

This YouTube video explains simply and clearly the benefits of moving IT out of departmental silos and into a common framework that can capitalize on all manner of shared, standardized and replaceable components.

YouTube Video, The Gubbins of Government, Mark Foden, June 2013, 3:17 minutes

https://youtu.be/02__3UTqXmU

This second video, also from Mark Foden, conveys much the same message except that it puts more emphasis on the potential to personalize / customize services around the needs of the individual:

YouTube Video, The future of local government services, Mark Foden, November 2013, 3:53 minutes

https://youtu.be/BbbdHJS2t8I

New Roles for the Key Players

The time has passed for large-scale system developments, particularly when they tie the council into long-term supply contracts. In the future the council will rely on entrepreneurial staff, third parties and citizens to develop applications using open data. Applications will be built within days or weeks out of more or less standard components including some common components provided by the council. The council will provide facilitation,

open data and component services, a security infrastructure, quality control (system, integration and usability testing), marketing and monitoring functions. Applications will be published, potential users notified and developers rewarded in line with successful usage and outcomes.

A key element of the council's responsibility will be in the storage, management and secure access to data sources and system components. This will require a system of permissions and access controls so that the development community can be as large as possible whilst ensuring their trustworthiness.

This requires the anticipation and development of new services and a knowledge about the maturity of particular technologies and when they can be realistically used to provide robust services. Whilst it makes little sense for every local authority or other organization to develop these technologies (or even applications), it will be necessary to closely track developments so that as soon as they are proven they can be put to routine use. Any time-consuming and laborious business case development and approval process may cause delays and itself jeopardize return on investment.   Much development will take place speculatively at the developers risk and so long as it meets appropriate quality standards, will take its chance in the market along-side other offerings.

https://www.localgov.co.uk/Digital-services

Digital Transformation Roadmap

It is argued that 2017 will be the year of digital transformation and that the greatest cost saving will be achived by a complete re-design of organizations around a digital transformation programme:

Article, 'Why you need a digital transformation roadmap in 2017', Techtarget Netwrork, February 2017. (To avoid having to signup to Computer Weekly press 'continue to site' on top right)

http://searchsoftwarequality.techtarget.com/tip/Why-you-need-a-digital-transformation-roadmap-in-2017

Interviewees in CCC were asked if CCC had a technology roadmap but none we spoke to were aware of it. If, this is the case, we recommend that work is done to at least draft a high level roadmap of both technology overall and digital transformation roadmap as soon as possible.

Open Architectures

Build Infrastructure not Solutions

This Computer Weekly article puts the case for not focusing on specific user needs as the driver for digital government, but instead to design open architectures and standards that citizens and a wide variety of organizations can then use to construct solutions for specific user needs. This argues that the government role is to provide appropriate shared infrastructure rather than build point solutions using the old model of engaging high cost custom solutions from traditional IT suppliers.

http://www.computerweekly.com/opinion/Digital-government-isnt-about-user-needs-its-more-fundamental-than-that

Open Data

This is the first of three Computer Weekly articles that argues that government functions are essentially blind to each other and that a common language and open digital data will confer great benefits and cost savings.

http://www.computerweekly.com/opinion/Time-to-get-mapping-how-a-blind-government-can-develop-sight

This article from Eddie Copeland (lives in Cambridge), Nesta's Director of Government Innovation, argues that in order to take on devolved powers, cities and local authorities need to have access to the whole picture. This is currently stored in the silos of different public bodies.

http://www.nesta.org.uk/blog/why-data-is-key-to-the-success-of-city-devolution

This article from Eddie Copeland sets out principles on which data can most effectively be recruited in order to reform the way in which local public services operate.

http://www.nesta.org.uk/blog/9-principles-reforming-public-services-data

This article from Eddie Copeland provides an example of how the concept of an 'Office for Data Analytics' can provide a model for the way in which data can be utilized across a city's public services.

http://www.nesta.org.uk/blog/offices-data-analytics-next-steps-london-and-north-east

This article from Boston, US describes how citizens can use smart-phones to capture and report data to local government and how third parties can use this data to create a ide variety of apps.

http://www.forbes.com/sites/hpeenterprisenxt/2016/11/01/citizen-disruptors-harness-smartphones-and-data-to-get-things-done/#532277bf3686

Technology offers a way to have more accurate and open models of the needs, life events, and preferences of citizens and other interest groups, and making more explicit the way in which these models are used to drive policy and services. This is a long-term project, but moving towards this objective would provide better accountability, better justification for setting priorities, better evidence, more focused and personalized service solutions and more efficient, cheaper solutions. An example of this is the work being done by Greater Manchester connect (see reference). The work on Digital democracy, open architectures and open standards is also relevant to this.

https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwjo27zfhIXWAhVMLMAKHdKLAcgQFggtMAE&url=https%3A%2F%

[2Fwww.greatermanchester-](#)
[ca.gov.uk%2Fdownload%2Fmeetings%2Fid%2F590%2Fitem_8_gm_connect](#)
[&usg=AFQjCNGrCRMO2UDctm7cttK97VUJHOWUDg](#)

Technology for Citizen Participation

How can we re-engage the citizen in the political process such they can have a real say in the future, while at the same time ensuring that their contribution is not just one of disenchantment and protest, but can have some real impact on improving life for everybody?

Direct and Digital Democracy

Many changes in citizen participation and direct democracy involve the enabling effect of technology.

This TED talk explains how the rise of the internet has provided the mechanism for digital democracy but has hardly changed the political process or our democratic systems. While the internet has transformed many aspects of our lives it has been used by the political system as just another marketing channel. It also question parliamentary democracy as failing to reflect the characteristics of the people and that the internet enables direct democracy as a real alternative. The concept of 'fluid democracy' is described, where voting rights can be transferred from person to person, hopefully ending up in the hands of trusted experts on specific issues. Carl Miller predicts that direct democracy technologies will eventually obviate the need for administrative structure and middlemen (such as local councils) putting power back in the hands of the citizen.

YouTube Video, Digital Democracy | Carl Miller | TEDxAthen, TEDx Talks, May 2016, 17:10 minutes

https://youtu.be/FNL22RvFwn0

NESTA are supporting the development of a range of tools to support citizen participation and digital democracy: See

http://www.nesta.org.uk/project/d-cent

However, there have been reservations about direct democracy since the time of Socrates:

YouTube Video, Why Socrates Hated Democracy, School of Life, November 2016, 4:21 minutes

https://www.youtube.com/watch?v=fLJBzhcSWTk

The main objection is that citizens generally do not have the knowledge to make good decisions, especially in specialized areas. The following blog article from NESTA considers 'When is the crowd wise or can the people ever be trusted?'

http://www.nesta.org.uk/blog/when-crowd-wise-or-can-people-ever-be-trusted#sthash.ZJkJhm4M.dpuf

A NESTA report on Collective Intelligence (September 2016) in a healthcare setting, provides a rationale for using expert user groups to broker data from end users and save time and effort making sense of the raw data.

http://www.nesta.org.uk/publications/governing-collective-intelligence

Another approach is to empower a random sample of citizen by providing structure and support during the process of policy making. See 'Can citizens collaboratively formulate coherent policy with appropriate types and levels of support and structure?' halfway down the page at:

http://www.wellbeingandcontrol.com/?p=701

Smartcitipate

The idea of the smarticipate project is to give every citizen access to the same information as their local government. They are using open data to make this a reality, giving communities and citizens the resources needed to help shape the future of their cities. This e-participation project is designed to empower citizens to have a voice on public services and solutions to local urban problems.

The three pilot partner areas that are involved in this project are London (Royal Borough of Kensington and Chelsea), Hamburg (Free and Hanseatic City of Hamburg) and Rome (the City of Rome) with a goal of leading towards a more participatory form of governance.

https://www.smarticipate.eu

Digital Democracy at The House of Commons

In January 2015 the Speaker's Commission on Digital Democracy published a report that outlined five key targets and recommendations that provide a route map for the House of Commons to meet these targets.

1. By 2020, the House of Commons should ensure that everyone can understand what it does.

2. By 2020, Parliament should be fully interactive and digital.

3. The 2015 newly elected House of Commons should create immediately a new forum for public participation in the debating function of the House of Commons.

4. By 2020, secure online voting should be an option for all voters.

5. By 2016, all published information and broadcast footage produced by Parliament should be freely available online in formats suitable for re-use. Hansard should be available as open data by the end of 2015.

http://www.digitaldemocracy.parliament.uk/chapter/summary#main-content

Views on Digital Democracy at UEA

This video looks at how young people at University of East Anglia feel disengaged from the political process and points to the need for systemic changes supported by technology. Young people give their views and create applications for issue based discussion and politics.

YouTube Video, What is digital democracy?, James Galley, October 2014, 11:00 minutes

https://youtu.be/33Qbs4pCUhQ

Supporting Citizens to Engage in Politics

There are organizations developing platforms for digital democracy (although this site has not been updated in at least a year):

http://www.digitaldemocracy.org.uk/index.php

A NESTA blog provides some good advice on when citizen participation is useful and points to tools to enable digital democracy in different situations:

http://www.nesta.org.uk/blog/designing-digital-democracy-short-guide?gclid=Cj0KEQiA6_TBBRDInaPjhcelt5oBEiQApPeTF1M04le1uDQTF9DYM5gBgXZjz0EkNRqP8J7rHF58siMaAnWz8P8HAQ

Democracy tools that enable decentralization are described by a European project called D-CENT :

http://www.nesta.org.uk/project/d-cent

Other tools include:

Your Priorities

https://www.yrpri.org

DemocracyOS

http://democracyos.org

Loomio is an example of a tool for small group decision-making:

https://www.loomio.org

Vocaleyes for student situations

http://about.vocaleyes.org

Also, there are tolls like Surveymonkey where anybody can create and analyze an online survey

https://www.surveymonkey.com

Appendix 2 – Technologies to Watch

Internet of Things

The Internet of Things (IoT) is already with us with many devices already being able to sense aspects of their environment and communicate this over the internet. This offers great potential in applications like traffic management and building control, but as with all technology, there are dangers.

This video summarizes the internet of things, identifies the state and size of the market and looks at the security risks.

YouTube Video, Top 5 Facts about the Internet of Things, WatchMojo.com, May 2016, 5:31 minutes

https://www.youtube.com/watch?v=c-Ekz2kK7J4

Security issues are discussed in more detail at:

http://www.bitpipe.com/data/loadAsset.action?resId=1475510302_802

Big Data and Machine Learning

The collection, analysis, visualization and usage of big data provides a set of powerful tools for understanding citizen's behaviours and constructing services that are useful and usable. It is important that the public sector does not lag behind commercial use of big data sets to help ensure that big data is used in the public interest for healthcare, social care, traffic control and many other applications. However there are dangers.

This US video described how almost every activity now leaves a digital footprint that can be used to analyse behavioural patterns.

YouTube Video, "Big Data Revolution" - PBS Documentary, November 2016, 52:22 minutes

https://www.youtube.com/watch?v=bIY3LUZ7i8Y

Google

This is Google's recent take on AI and machine learning:

The first video provides a fast-track route into using current machine learning technology, including modules that have already been developed by Google.

YouTube Video, Machine Learning APIs by Example (Google I/O '17), March 2017, 37:05 minutes

https://www.youtube.com/watch?v=ETeeSYMGZn0

This second video introduces some of the leading players in machine learning and AI at Google. It touches on 'deep learning', 'speech recognition', 'data visualization' and many other topics.

Youtube Video, Past, Present and Future of AI / Machine Learning (Google I/O '17), May 2017, 44:32 minutes

https://www.youtube.com/watch?v=0ueamFGdOpA

Risks in the Use of Big Data and Machine Learning

Amongst the risks in the use of big data are the infringement of privacy and the perpetuation of biased decision-making.

Who owns the data being collected on individuals and what are the dangers that it may be misused?

YouTube Video, The Dangers of Big Data, THNKR, April 2013, 4:03 minutes

https://www.youtube.com/watch?v=y8yMlMBCQiQ

Machine leaning algorithms capture past decision-making from large data sets. But what if there decisions have historically been biased – i.e. favouring one gender over another or discriminating on the basis of race, religion, age

or a whole host of other factors that cannot be identified because of the opaque nature of the way in which machine learning works?

Youtube Video, Cathy O'Neil: Weapons of math destruction, TED, April 2017, 13:18 minutes

https://www.ted.com/talks/cathy_o_neil_the_era_of_blind_faith_in_big_data_must_end

Blockchain

Blockchain is a decentralised technology for recording and validating transactions. It relies on computer networks to widely duplicate and cross validate records.   Records are visible to everybody providing total transparency. Like the internet it is highly distributed and resilient. It is a disrupted technology that has the potential to de-centralised almost every transactional aspect of everyday life and replace third parties and central authorities.

YouTube Video, Block chain technology, GO-Science, January 2016, 5:14 minutes

https://youtu.be/4sm5LNqL5j0

The Blockchain record is an electronic substitute for trust.   Because Blockchain records are transparent and provide a permanent and uncorruptable record of all transactions.

Because of the guaranteed accountability it has been suggested that Blockchian can form the basis of new models of governance:

http://www.coindesk.com/consensus-algorithm-and-a-new-model-of-governance/

Blockchain is the technology underlying the cyber currency Bitcoin. Anybody can open or close an account at any time. Although you can set up and transact using an identity, this can remain anonymous with only the user having access to their own account.

Blockchain can be used to maintain any relationship involving identity and transactions. It can be used to set in place contractual relations including social relationships such as 'marriage' and life events such as birth and death – traditionally the remit of the local authority. . It can be used to maintain any ledger that can be used for example to track ownership of land or other assets.

In principle, Blockchain can remove the need for a central authority to manage ownership, transactions and relationships. For example, using Bitcoin, money can be transferred across the world without regard for any central banking system or the taxation system of any nation state. In the Blockchain world the role of government becomes one of the facilitation of self-management with many of its current functions de-centralized into Blockchain transactional records. Peer to peer governance may replace central authorities. There is a Blockchain concept of 'State in a Box' that claims to manage all the activities of a nation state at negligible cost.

It is questionable whether it is not necessary to have an arbiter of last resort to act as an enforcer of Blockchain contracts or, at least to validate the computer code that runs the Blockchain system.

BBC Radio 4, FutureProofing – The Blockchain, August 2015, 43 minutes.

http://www.bbc.co.uk/programmes/b066wfp4

http://www.forbes.com/sites/hpeenterprisenxt/2016/11/01/all-about-blockchain-and-why-its-a-bigger-deal-than-bitcoin/#5bb6fb566bc3

Notes how Blockchain is developing and barriers to its implementation.

http://searchitchannel.techtarget.com/feature/Blockchain-technology-applications-spark-channel-opportunities?utm_medium=EM&asrc=EM_NLN_69699966&utm_campaign=20161215_Blockchain:%20What's%20the%20channel%20play?&utm_source=NLN&track=NL-1813&ad=911682&src=911682

Data Visualisation

A good example of the power of data visualisation from a few years ago (but probably still not realistically achievable on local authority budgets) is at:

Hans Rosling's 200 Countries, 200 Years, 4 Minutes - The Joy of Stats - BBC Four, BBC, November 2010, 4:47 minutes

https://www.youtube.com/watch?v=jbkSRLYSojo

Best Practices on New Models in Transformation-Technology

Place	Initiative	Type	Reported or planned achievements	Main Approach
Adur and Worthing Councils[i]	Government as a platform	• Working with the consultancy Methods Digital, the digital team mapped capabilities that all services across the councils need (from taking payments to maintaining customer records) and then bolted together software components to meet these needs from inexpensive, cloud-based providers. • Software tools used to perform processes such as online payments or CRM, which are common across council services. • All the data is stored in Salesforce, which will create considerable business intelligence and opportunities for predictive analytics.	• Economies of scale (aggregating back office functions) and scope (combining multiple functions). The new waste management service saved £20K per year, and the equivalent of 1.5 FTE. • The software components would be used by any start up for standard capabilities such as payments or events management, so they are cheap. They are also interoperable through APIs, enabling data to flow between different systems. • By using the software Matssoft, the digital team created a 'low code platform', which enables council employees with minimal coding skills to make improvements and accelerate digitisation. This is the epitome of an 'agile' system. • This approach can have significant spillover effects for local economic growth since it allows councils to support an ecosystem of innovative, third-party suppliers of services – including local SMEs.	• Buy or build digital components that can be reused across different departments within the council • Use of modular, flexible type of digital infrastructure that allows for an iterative approach to IT procurement rather than using proprietary software systems from large companies • Enabling digitisation of the council

Place	Initiative	Type	Reported or planned achievements	Main Approach
Various such as {Manchester Digital Strategy (2012), Digital Glasgow Roadmap (2014), Rotherham Digital Strategy (2014), Tower Hamlets Digital Inclusion Strategy and Action Plan 2015–2020 (2015), Wigan Digital Strategy 2015–20 (2015). Tewkesbury Going Digital (2016)**}**	Digital strategy	• Incorporating digital thinking into their core business/corporate plans which set overall outcomes (e.g. in Bournemouth) • Improving online transactions • Digital inclusion / assisted digital • Better public, residential and business connectivity through better wifi and broadband provision		• Digital strategy as a key element of council's transformation

Place	Initiative	Type	Reported or planned achievements	Main Approach
The London Borough of Barnet[ii]	Casserole Club	• Helps in reducing the demand for existing services • Local volunteer scheme supported by a web platform that helps people share extra portions of home-cooked food with others in their area who might not always be able to cook for themselves. The specially designed online platform allows residents in selected postcode areas to register as a cook. • Volunteer cooks are able to create a basic profile on the site with information about what they might like to cook and how often. Once they are registered and have gone through a Disclosure and Barring Service check and have completed the food hygiene quiz online, they can search for diners they would like to cook for.	• On average, it would cost a council £4.90 to provide a meal. Over the eight-month period since it was set up by the London Borough of Barnet, 100 diners have received an average two meals a week from a neighbour, which equates to savings of at least £50,960. • Help in spotting problems a gas leak at the house of one of club's older diners. • By matching people in need of meals with cooks in their area, not only does the Club provide a home-cooked meal, but by sharing food, club members are also beginning to strengthen neighbourhoods.	• Use technology to provide an approved and well-publicised platform where other public bodies, private and third sector organisations or even local volunteers, can offer their services on a paid or unpaid basis to people requiring them
Leeds City Council[iii]	Data Mill North	• Enable people and organisations to explore the different complex relationships between the city's services and businesses, by collecting Open Data from multiple sources in a single website, offering a greater insight into the workings of the city	• By March 2016, had 201 datasets, published by organisations as diverse as National Rail, Yorkshire Water, Care Quality Commission and Leeds United Football Club. • 2016 ODI Open Data Publisher Award and finalist at the inaugural Digital Agenda Impact Awards, 2017	• Opening up local council data which can be used to build local networks and provide opportunities for local actors to come together, use the data, and develop innovative approaches to particular problems.

Place	Initiative	Type	Reported or planned achievements	Main Approach
London Borough of Harrow[iv]	MyHarrow	• A mobile-friendly personal account which shows all council services in a single view. People can access their personal data. • A web chat 'pop up' supports citizens having difficulty using online services.	• Harrow Council has virtually eliminated 'failure demand', with 92 per cent of queries resolved at the first point of contact, 30 per cent of transactions are through mobiles, and it has saved £1.55 million in four years by moving people from face-to-face or phone to online transactions	• One stop for navigating local services seamlessly through mobile technology
Lewisham[v]	Lovelewisham	• Web application and set of mobile apps for reporting and managing a range of environmental issues, such as graffiti and fly-tipping. • Integrated in Council's back-office systems and involved a cultural shift in frontline staff embracing mobile technology as a transformational tool • Required operational services taking ownership of the technology and app specification	• 73 per cent reduction in graffiti (since 2006) and improved graffiti removal times from 2.78 days • in 2003 to less than 0.5 days now • a 53 per cent reduction in fly-tipping • a 22 per cent reduction in casework in related services • a 33 per cent reduction in call-centre activity, saving £500,000 over the past five years. • Improved operational efficiency and has eliminated the use of overtime to collect missed bins (refuse workers now post reports showing collection problems), saving an additional £300,000.	• Organisation restructuring according to community needs • Use of digital technology to improve efficiency of services
Bristol City Council[vi]	MyCouncil	• Sixty mobile officers were identified to receive iPhone and Android tablet devices, pre-loaded with Looking Local's MyCouncil app and a range of other standard software solutions enabling each officer to complete their daily tasks without having to visit an office.	• Between June 2013 and May 2014, 565 reports were submitted, resulting in a cost saving of £2,356 and an increased level of reporting from staff. • Office hours were reduced for a quarter of the staff, part of a larger programme of facilities reduction which is due to save the council an estimated £10 million over three years.	• Use of mobile technology to increase the efficiency of its mobile neighbourhood based staff, reducing office-based hours and increasing reporting of local issues.

Place	Initiative	Type	Reported or planned achievements	Main Approach
		• Local champions were identified by neighbourhood-based staff, and training was given to these champions to enhance digital take-up in the community.	• Local champions led to increase in targeted online transactions of 22,000 over the same time period – an estimated saving of £91,700 compared to telephone reporting • Use of app outside office hours indicates a saving from self-service as opposed to telephone reporting in the region of £0.8 million	

List of Technology Recommendations

Ref.	Recommendation	Rationale	Backing Also see the links embedded in the main body of this document.
TR1	Commission a technology and digital roadmap for the combined authority looking 5 years into the future with updates and revisions every four months.	Facilitate efficiencies through the sharing of resources, standardization of devices, architectures, standards and protocols.	http://searchsoftwarequality.techtarget.com/tip/Why-you-need-a-digital-transformation-roadmap-in-2017
TR2	Specify, investigate, select and implement an off-the-shelf (configurable) software technology that would facilitate maintaining and deploying a skill-based pool of staff across the combined authority.	Enables more flexible and efficient matching and mobilization of staff to projects. Provides staff with more flexibility and choice of work and opportunity to master specific skills.	An example of a cloud-based employee scheduling system: https://www.youtube.com/watch?v=0Dn5a4woSCA
TR3	Specify an open architecture, set of standards and protocols that would facilitate access to a distributed database of council records. This could be accessed by council staff across the combined authority, citizens and third party developers - each having appropriate controls over	Makes data more easily and openly available for a wide variety of uses within and outside the authorities, while strictly controlling access rights to preserve privacy and security.	See slides 12, 13 and 14 starting at about timecode 18:34 in the Youtube video at: https://youtu.be/r7YvfvgFGYM

	access at the fined-grained level of individual records. This would be based on principles of appropriate open access, ease of use, ease of visualization / comparison and testing hypotheses in relation to datasets. Identify technologies that could be easily and flexibly integrated to populate the architecture.		
TR4	Track promising technologies such as cloud computing, internet of things, blockchain, big data, machine learning, artificial intelligence, high value manufacturing and 3D printing, and digital democracy. Commission a six-monthly report on progress in these technologies and where / when they might be used with the authorities.	Maintains an awareness of when and where these technologies might be exploited within the authorities. Facilitates planning the introduction of technologies as they become viable. Helps avoid introducing technology that quickly becomes redundant or costly to maintain. Increases the efficiency of staff and citizens to deliver improved outcomes.	See the links embedded in the main body of this document.
TR5	Set up a small project/team that can develop and deliver a standard approach to sending citizens and staff notifications (e.g. SMS text, email etc.)	Keeping citizens informed (if they choose) on a regular basis from everything from consultations, elections to bin collection days, parking permit expiry etc. is a	See research on designing successful notification and reminder systems: https://www.youtube.com/watch?v=QhebyS5OXw4

	manually or automatically as triggered by events, such that it is easy for departments and projects to set up comprehensive notifications to keep people informed. This team should also set up standard mechanism for citizen and staff reporting of situations, incidents or events and routing these to appropriate staff in the council. The tracking of these communications to a point of closure is an important element to address. Some information may be suitable for collation and making accessible to citizens in real time (as already done with some traffic and transport information).	quick and easy way of adding value to services. Enabling citizens (and staff) to easily report situations (e.g. pothole locations, faults in facilities), incidents (e.g. accidents), and events in an easy and standard way (e.g. text, email on mobile phones) is a quick and easy way of citizens adding value and keeping information current and accurate.	
TR6	Review the utility and usability of current open datasets amongst third party stakeholder (other public bodies, citizens, companies, application developers) with a view to (1) making these datasets better documented and more usable (2)	Achieve greater efficiencies through the wider usage of current open data sources and help engender a culture of open data publication.	http://www.nesta.org.uk/blog/why-data-is-key-to-the-success-of-city-devolution

	giving the datasets publicity amongst potential users.		
	Review which data sets would offer most value to services, citizens and apps developers if they were open and establish a methodology for routinely identifying, cleaning, re-formatting and anonomizing data as necessary, then making these datasets openly available with appropriate access controls for different categories of user.		
	Require all new transformation projects to assess the potential for datasets they involve to become open		

[i] Benton, M. & Simon, J. (2016), "Connected Councils: A digital vision of local government in 2025", Nesta, March
[ii] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"
[iii] https://datamillnorth.org/background/ and Benton, M. & Simon, J. (2016), "Connected Councils: A digital vision of local government in 2025", Nesta, March

[iv] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"
[v] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"
[vi] Local Government Association (2015), "Transforming local public services using technology and digital tools and approaches"