The State of the State 2018-19
Northern Ireland
What next
#StateofStateNI
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Foreword

Welcome to The State of the State 2018-19 for Northern Ireland.

As reported in our UK report, ‘The State of the State 2018-2019’, the Northern Ireland (NI) administration faces huge challenges, the most pressing of which is the unsustainability of its current finances and patterns of spend.

Consequently, there are major issues about how to better manage the demand for public services, reduce the cost of services and enhance the available budget for public spending. The situation is exacerbated by the absence of Ministers who would be expected to take the necessary strategic policy decisions. There is also uncertainty about the decision-making role of civil servants in the interim although the Secretary of State intends to bring forward legislation in the autumn to enable NI departments to continue to take decisions in the public interest and to ensure the continued delivery of public services.

There are other significant issues absorbing the time and energy of senior civil servants including the impending UK exit from the European Union, the RHI Inquiry, planning and implementing, where possible, transformation programmes in health, education, justice and housing, and the need to improve outcomes by moving to an outcomes-based Programme for Government.

These substantial challenges need strong, decisive and courageous leadership from politicians and senior public and private sector leaders. Collaboration within the public sector and between the public, private and voluntary sectors will be essential if more sustainable public services are to be delivered.

This report looks at some of the major challenges that need to be addressed in the big spending areas. It draws on the work already carried out by the NI administration and case studies from around the world, using Deloitte’s global network. Some of the interventions that have been identified will be more publicly and/or politically acceptable than others.

The options are not intended to be comprehensive or prescriptive. The intention was to bring together a menu of possible options based on how other regions have successfully addressed similar challenges. The report also considers how other governments are responding to the fast-moving pace of emerging technologies and the opportunities that digital service provision and transformation creates.

The case studies show what is possible with strong leadership, an innovative approach and determination to materially improve the quality and sustainability of public services.

We would like to thank all those from the public, private, community and voluntary sector and Deloitte’s global network who contributed to this report and we trust you will find the report interesting, informative and thought provoking.

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Executive summary

The State of the State UK Report 2018-2019 identified the following themes:

- Local government cuts are having unintended consequences across the system;
- Thriving local economies are vital and need to be inclusive;
- The world has become more competitive and less predictable;
- The spending outlook means tough choices ahead;
- Analogue processes are increasingly called out as technology transformation continues; and
- Public sector talent needs to be better managed, developed and liberated.

A further theme on the UK’s impending exit from the EU has not been considered in this report because of the continued uncertainty surrounding the nature of the exit and the post-exit position.

The absence of a functioning government, an unsustainable pattern of spend and a difficult political and economic context have created a challenging environment within which the public sector is currently operating. Without cohesive political leadership and strategic direction the situation will continue to deteriorate.

This report, which is directed at the largest spending areas in NI, builds on The State of the State UK findings and draws on many examples of good practice worldwide (contained within the body of the report) to provide a menu of options for decision-makers to consider as a means of optimising the use of public finances in NI and improving the sustainability of public services.

Global Direction of Travel

This section examines how governments across the world have applied advanced and digital technologies to improve the delivery of government services, to change behaviour and interaction with citizens, and improve the government-business experience.

As citizens become increasingly ‘digitally literate’ government needs to keep pace with smart technological developments and close the huge gap between the services government offers and those provided by companies such as Amazon, eBay and Airbnb. The Northern Ireland Civil Service (NICS) has a digital first strategy and new digital, IT and cybersecurity strategies to facilitate digital transformation but there is still much to do.

Case studies from across the world show that working towards digital transformation depends on three key elements: an end-to-end seamless customer experience; unique and uniform digital ID; and data sharing capabilities.

Globally, the emergence of smart cities also illustrates how government can use technologies to reduce costs, reuse existing and legacy infrastructure in different ways, and unlock value and stimulate economic development. Through the use of mobile apps and real time data analytics, citizens can get connected and engage more effectively with government.

The introduction of new digital technologies can drive citizen behaviours. The most successful case studies are those which use behavioural science to understand how people best handle change and reflect this in the design of services – digital enablement by putting people first. Better design equates to better results.

Nudge thinking has been proven to be an effective, low-cost approach for government. Data analytics creates huge opportunities in applying the insights of behavioural economics such as reducing fraud, boosting compliance, improving efficiency of health services, and promoting better outcomes for citizens.

Sweeping technological advancements are also creating a sea change for regulators who are being challenged to keep up with emerging trends. Tools that use artificial technology (AI) to analyse, for example links in the regulatory landscape and support accelerated, data-driven decision-making could help deal with the huge regulatory workload associated with the UK exit from the European Union (EU).
Governments worldwide are working with business to develop regulation that is adaptive, outcome based, risk-weighted and collaborative. Positive results can be achieved by testing innovative products and services in a controlled environment and using taskforces to challenge outdated legislation and regulations. Using digital technologies and adopting a customer-centric approach can also drive the transformation of government processes and help the economy by simplifying and streamlining compliance and reducing cost to business. Treating businesses as valued customers can create better outcomes for all concerned.

Given the relatively small size of NI geographically and demographically it is feasible that many of the innovative technological and digital initiatives already employed elsewhere could be successfully introduced to manage or influence service demand, reduce costs and promote better outcomes.

**Options for Northern Ireland**

The Department of Finance’s Briefing on Northern Ireland Budgetary Outlook 2018-20 (Budgetary Outlook) states that the cost of delivering services in NI is increasing more rapidly than the budget available and the current pattern of spend is unsustainable. It also states that balancing the budget can be achieved in the longer-term by transforming public services, but more immediate solutions are necessary in the short-term.

This section focuses on health, education, infrastructure, policing and justice and finance in NI and, drawing on global experience, presents a range of options to help alleviate the major budgetary challenges and improve the sustainability of public services.
Health
The challenges facing the health and social care sector in NI are common to governments throughout the developed world and are putting significant pressure on already overstretched services. Faced with financial pressures of about £300 million per annum, unacceptable waiting lists and waiting times, shortage of beds, and difficulties with recruitment and retention of health professionals it is clear that urgent action is needed to stop the sector in NI from rapidly deteriorating. Options to address the current challenges and contribute to the sustainability of the future of the health and social care system could include:

01. Reconfiguring Health Services;
02. Optimising the use of electronic health;
03. Encouraging and supporting citizen responsibility; and
04. Generating income - as well as the options put forward by the Department of Finance consideration could be given to:
   - a wider roll-out of e-prescriptions;
   - charging for missed GP and hospital appointments, in certain circumstances;
   - collaborating with NHS24 in Scotland to introduce a ‘111’ type service as a way of reducing demand at GP practices and Emergency Departments; and
   - a renegotiation of costs (at UK level) with the major pharmaceutical companies.

Children and Education
The Department of Education is developing a transformational programme for the education system to help deliver positive outcomes for children and young people. It has been suggested that education needs a ‘Benga’ type review linked to skills’ development. Since 2010/11 there has been a 1% increase in cash terms but a £200 million reduction over the period to 2017/18 in real terms. Consequently, more schools are falling into deficit and as salaries account for 90% of the Resource DEL budget any reduction in funding has an impact on the numbers of teaching staff. The financial situation needs to be addressed urgently. There is also a fragmented multi-sectoral network of schools many of which are too small or are unsustainable. Furthermore, the system needs to be more flexible and responsive to the digital world, workplace and rapidly changing economy. Options to address these challenges could include:

01. Area planning and rationalisation of the schools’ estate;
02. Early intervention and breaking the cycle of inequality;
03. Strengthening teacher education and development;
04. Aligning pathways to work with a future-oriented, knowledge and technology driven economy; and
05. Creating sustainability in Higher and Further Education.

“The challenges facing the health and social care sector in NI are common to governments throughout the developed world and are putting significant pressure on already overstretched services.”
Infrastructure, Smart Regions and Social Housing

A wide range of supporting strategies will have to be implemented with the new Programme for Government including an infrastructure strategy and investment plan that prioritises investment for the next 30 years in the areas of water, waste, energy, transport and telecoms. It has been suggested that a panel of experts could be established to audit existing hard assets, determine the infrastructure deficit and prepare a prioritised long-term plan to help prevent NI losing its economic competitiveness. Options for tackling major infrastructural issues could include:

01. Divesting assets;
02. Developing a smart region;
03. Enhancing the budget with initiatives such as:
   - tolling to fund maintenance and road upgrades, spread demand and reduce congestion;
   - charging new developers a premium rate around the new Belfast Transport Hub;
   - charging for on-street car parking over 30 towns and cities and extending the current controlled parking zone in Belfast;
   - changing the policy relating to the 60-64 Smart Pass; and
   - charging non-vulnerable customers for water.
04. Transforming social housing.

Policing and Justice

A recent NI Audit Office report described the criminal justice system as “grossly inefficient” with costs significantly higher than in England and Wales and cases taking longer to complete. Reductions in the numbers of police officers and prison staff and the added pressure of legacy puts a significant strain on already stretched resources. The court estate and Criminal Legal Aid system also need to be addressed. A system wide review could set the framework for a more fit-for-purpose and affordable service delivery model. There also needs to be more emphasis on digital technologies, data analytics and AI and a focus on rehabilitation, resettlement and reintegration. There are many examples worldwide where digital technology and innovative measures are helping to create more sustainable policing, court and prison systems. Options for NI could include:

01. Optimising the use of advanced and digital technologies in policing and justice;
02. Optimising the use of advanced and digital technologies in prisons.

In addition to these options, it will be important to find a way forward and approach that will deal with the difficult issue of legacy.

Finances

Improving financial sustainability is a key issue given the increasing pressures on public services and the requirement to balance the budget in the short-term. Options to address this could include:

01. Addressing financial challenges through, for example fiscal consolidation initiatives, establishing an independent Fiscal Advisory Council and introducing tax-raising powers;
02. Addressing the implications of the cost of control of some arms’ length bodies;
03. Increasing the regional rate and reducing or removing levels of rates relief;
04. Integration of shared services.
The way forward

Although not mutually exclusive, The State of the State 2018-2019 report identified themes that provide a useful platform on which to build the basis of a practical way forward.

Thriving local economies are vital and need to be inclusive. A longer-term infrastructure strategy and investment plan will have an important role in helping NI improve its economic competitiveness. Government needs to be more business-orientated to help secure inward investment opportunities. The most successful initiatives are those which have broken down the barriers within government, between central and local government, with the private sector, business, the voluntary and community sectors and the citizen. Attracting inward investment is also contingent upon having a workforce with the appropriate skills to undertake higher value jobs hence the importance of aligning teacher education and development and pathways to work with a future-orientated, knowledge and technology driven economy. On the wider issue of inclusivity, governments elsewhere have adopted innovative approaches such as early intervention and focusing on vulnerable communities. Given that housing can be a significant factor in inequality, transforming social housing could also help tackle the problems in this sector.

“The spending outlook means tough choices ahead.”

The world has become more competitive and less predictable. Political stability and a strong economy are prerequisites when it comes to competing globally for business and attracting foreign investment. Such competition also applies to universities. Innovative approaches to improving the sustainability of the higher and further education sector will help create an environment whereby NI can keep pace, and compete with world class academic institutions.

Local government cuts are having unintended consequences across the system. In some key areas services are being adversely affected by the funding shortfall. The cost of service delivery is also rising faster than the budget available in many areas. Generating much-needed income to enhance the existing budget through new or additional charges which, although potentially challenging, could help to ensure that a balanced budget can be produced. Charging those who can afford to pay, whilst protecting the most vulnerable, could also be worth pursuing.

Public sector talent needs to be better managed, developed and liberated. Next-generation technologies and innovation require next-generation leaders who could take NI to a new level. Government and, indeed, the private sector need leaders who are prepared to disrupt traditional business models and do things differently. These next-generation leaders also need a positive, innovative, can do and courageous mindset with the vision and energy to make NI a desirable place to live, work, invest and visit. Developing the new generation of leaders will require significant emphasis on the importance of collaboration and partnership which is at the heart of the draft Programme for Government. Accelerating delivery will also be a key issue for the new generation of leaders who will need the determination, capability and tools to drive transformation at pace.

The spending outlook means tough choices ahead and analogue processes are increasingly called out as technology transformation continues. The adoption of emerging technologies and digital service provision could transform the delivery of public services. The geographic and demographic size of NI could be an advantage in trialling or piloting innovative programmes. Developing sustainable financing models also requires bold choices about funding and financing. Tough choices will be needed around potentially controversial options such as rationalising the schools’ estate, transforming the education and policing and justice systems, divesting assets, and mutualisation of NI Water.
Introduction

Purpose of this Report

With *The State of the State* report in its seventh year and the outlook for sustainable public finances in NI so uncertain, Deloitte commissioned this supplementary report to provide a greater depth of analysis of some of the opportunities that may exist to fundamentally rethink how public services are delivered. This report should be seen as a source of examples of how public service reform has been tackled elsewhere and therefore a useful list of options for consideration by decision-makers moving forward.

*The State of the State 2018-2019* report identified the following themes:

- local government cuts are having unintended consequences across the system;
- thriving local economies are vital and need to be inclusive;
- the world has become more competitive and less predictable;
- the spending outlook means tough choices ahead;
- analogue processes are increasingly called out as technology transformation continues; and
- public sector talent needs to be better managed, developed and liberated.

A further finding on the UK’s impending exit from the EU has not been addressed in this report because of the continued uncertainty surrounding the nature of the exit and the post-exit position.

The purpose of this report is to build on *The State of the State* findings and examine alternative financing and service delivery options that may create opportunities to optimise the use of public finances in NI whilst achieving better outcomes for citizens. What is recommended is not a quick fix but requires a longer-term vision for substantive reform in how public services are delivered and funded.

“The purpose of this report is to build on *The State of the State* findings and examine alternative financing and service delivery options that may create opportunities to optimise the use of public finances in NI whilst achieving better outcomes for citizens.”
Political Context
The Executive has not met in over 600 days (that is, almost two years) and Ministers are not in place to take strategic decisions or provide direction and control to the Civil Service. Furthermore, the Assembly has not met during this period. Consequently, there has been no opportunity to pass any local legislation with Westminster having to step in to set annual budgets nor has there been any debate on key issues such as the UK’s impending exit from the European Union, the draft Programme for Government, budgets, public sector reform, legacy issues and a range of social, economic and fiscal policies.

The ‘Confidence and Supply’ agreement between the Conservative Party and the Democratic Unionist Party provides much needed additional finance for NI but Ministers are needed to decide on how some elements of the financial package will be spent.

The overall political landscape has been unsettled by the uncertainty surrounding the economic, social and constitutional consequences of the UK’s impending exit from the EU.

Despite serious budgetary pressures public services in NI have remained surprisingly resilient. However, there has been a deterioration in a number of areas, and speculation about when the cliff edge will come for some key services. Major concerns have been raised about funding generally, the further impact of any increase in public sector pay, hospital waiting lists and educational attainment. The number of people in poverty in workless households and the fact that the proportion of life spent in good health in NI is reducing is also of great concern.

Decision-making in the void left by absent Ministers has been severely constrained by the result of legal challenges such as ARC 21 which has left Permanent Secretaries unsure of exactly what decisions they can take. To date it has been estimated that over £1 billion of investment and hundreds of jobs tied up with such planning decisions. There is also concern that the absence of key policy, financial and planning decisions will mean that economic growth will be slower than hoped for and that NI will fall further behind other regions. The NI economy is currently 6.3% smaller than in 2007 while the UK economy is 10.5% larger. However, the Secretary of State has indicated that she intends to bring forward legislation that would enable NI departments to take decisions in the public interest and ensure the continued delivery of public services.

The absence of a functioning government for such a long timescale is unprecedented and while the tasks facing a returning Assembly and Executive will not be easy the sooner government is restored the sooner key decisions can be taken and the overall outlook improved.
NI has experienced a mostly job-driven recovery. Employment growth and improving unemployment figures have provided the key highlights for the labour market in recent years. The unemployment rate has dropped significantly during 2018 to 3.5%, better than the UK average (4.2%), and the EU (7.1%) and the ROI (5.9%).

However, long term unemployment and economic inactivity continues to be a persistent structural problem for the NI economy with the number of long term unemployed at almost three fifths (59%) of the unemployed. On a comparative basis, NI also has the lowest working age employment rate of all 12 UK regions. Much of the increase in the working age employment rate has been driven by a rise in part-time employment. The number of part time workers has increased by around 21% since 2007, compared with a 0.6% per cent for full time workers. Economic inactivity also remains stubbornly high at 27.5% which is the highest of all UK regions.

There is much to do, therefore to address economic inequality and inactivity, to make NI more attractive for inward investment, to grow SMEs and ensure the NI workforce has the appropriate skills to undertake higher value jobs.

“Expenditure per head of population in NI is greater than in the rest of the UK with demand for services continuing to rise and budgets severely constrained. The current financial situation is deemed to be unsustainable.”

**Economic Context**

NI faces a difficult economic situation at a time when the global economy is in robust health. However, UK economic growth has slowed, and there is greater uncertainty in terms of the impact of the exit from the EU. The NI economy has not grown over the past four quarters compared with growth of 1.5% in the UK and 8% in the Republic of Ireland (ROI). The NI Composite Economic Index (NICEI) shows that economic activity has actually decreased by 1.0% over the year from Quarter 1 2017 to Quarter 1 2018. It also shows that the UK has had a shorter downturn and a faster recovery than NI. Productivity growth also remains significantly below the UK average (17%) and is the lowest in the regional rankings alongside Wales (Figure 1).

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**Figure 1: Labour productivity (gross value added per hour worked)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>London</td>
<td>120</td>
</tr>
<tr>
<td>South East</td>
<td>110</td>
</tr>
<tr>
<td>Scotland</td>
<td>100</td>
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<td>East of England</td>
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<tr>
<td>North East</td>
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<tr>
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<td>40</td>
</tr>
<tr>
<td>Yorkshire and The Humber</td>
<td>30</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>20</td>
</tr>
<tr>
<td>Wales</td>
<td>10</td>
</tr>
</tbody>
</table>

Uk = 100

1. NISRA, NI Composite Economic Index, July 2018
2. ONS: Regional and sub-regional productivity in the UK, February 2018
3. NISRA, Labour Force Survey, December 2017
Financial Context

The allocations for 2018/19 day-to-day expenditure and running costs has increased by 3.3% (£343.8 million) to £10.7 billion from £10.35 billion in 2017/18. However, this is a decline in real terms and not sufficient to meet demand as the cost of service delivery is rising more quickly than the budget available. £4 million has been set aside to enable departments to begin to transform how they deliver services. This is in addition to the £100 million secured for health transformation through the Confidence and Supply Agreement.

The greatest increases in individual Department Expenditure Limits are in Health and Education with policing also protected (Figure 2), but this is still substantially short of what is needed. The constrained financial position, reinforces the need for more collaborative working within government, as well as with the wider public sector and the private sector to deliver better outcomes more efficiently.

NI has the highest level of public spend per person (£13,954) in the UK (Annex 1, Figure 3) around 18% higher than the UK average of £11,742 per person. NI also has the largest per person deficit – the gap between what is raised in revenues and what is spent. Revenues were estimated at £8,940 per person in 2016/17, resulting in a deficit of £5,014 per person.5

It is important to note however, that the different levels of public spending illustrate different priorities, approaches, population concentrations and levels of demand for services. They are not indicative of public sector efficiency.

In conclusion, expenditure per head of population in NI is greater than in the rest of the UK with demand for services continuing to rise and budgets severely constrained. The current financial situation is deemed to be unsustainable. Indeed, serious concern has been expressed during the information gathering for this report that some services are approaching a cliff edge and that budgets could go into deficit. With the economic context of high employment but low productivity it is important that Government focuses meaningfully on performance indicators for the economy and public finances. However, there are currently no Ministers to make economic policy decisions and the immediate outlook is bleak as NI falls further behind the rest of the UK and the ROI.

4 Northern Ireland Budget Bill 2018-19, Northern Ireland Assembly
5 ONS, Country and Regional Public Sector Finances for year ending 2017, August 2018
Approach
This report has been informed primarily by, and compiled from the views and information gathered from a range of sources in NI such as political parties, senior officials from central and local government, and representative of the business, voluntary and community sectors. It also draws on Deloitte’s global research and insights into how other administrations have responded to similar challenges and identifies examples of good practice from across the world. In particular, based on The State of the State findings, it has considered how the demand for public services could be better managed; how the cost of services could be reduced; how the available budget for public spending could be enhanced; and how to focus more on successfully delivering desired outcomes.

“There is much to do to address economic inequality and inactivity.”

Summary
The absence of a functioning government, an unsustainable pattern of spend and a difficult political and economic context have created a challenging environment within which the public sector is currently operating. Without cohesive leadership and strategic direction the situation will continue to deteriorate. The following sections are intended, therefore to provide decision-makers with “food for thought” when considering how to address the challenge of improving the sustainability of public services and increasing the likelihood of achieving the outcomes they believe society needs. The report is not intended to be all-encompassing. The focus is directed at the largest spending areas in NI.

Section 2 examines how governments across the world have applied advanced and digital technologies and the opportunities this presents in three key areas: improving the delivery of government services, changing behaviours and the interaction between government and the citizen, and improving the government-business experience.

Section 3 focuses more specifically on the big spending areas in NI (that is, health, education, infrastructure, and policing and justice) and finance. It acknowledges the progress that has been made in some key areas and draws on experience elsewhere to develop a range of options that could help to address the major challenges in the short, medium and longer-term.

Section 4 sets out a way forward aligned with The State of the State themes. It also contends that accelerated delivery is a key issue and draws on good practice that could help to expedite those options, or permutation of options which decision-makers choose to adopt.

“The absence of a functioning government, an unsustainable pattern of spend and a difficult political and economic context have created a challenging environment within which the public sector is currently operating.”
Governments setting the global transformation agenda
Global direction of travel

Introduction

Across the world the demand for better public services is increasing as people live longer and have more complex needs. Expectations have also grown as the digital world continues to evolve and public services are expected to keep pace. Continued investment in infrastructure is needed to provide essential services and support economic activity if this challenge is to be met, yet Governments are constrained by limited finances which inhibit progress.

The key issues surround how the demand for public services can be better managed; how the cost of services can be reduced; how the available budget for public spending can be enhanced; and how to focus more on successfully delivering desired outcomes. In particular, there are major concerns worldwide around health and social care and how best to upskill citizens and get them to accept more responsibility for their own wellbeing and that of their families and communities. Governments are also under pressure to keep up with the fast-moving pace of emerging technologies that provide new ways for government, consumers and businesses to interact.

This section looks at how some other administrations are responding to the challenges they face particularly through the application of advanced and digital technologies. It draws on Deloitte’s global research and insights and identifies case studies and examples of good practice on how the digital state is being delivered. These are intended to identify a direction of travel which, if adapted and implemented for NI, could help create more sustainable public services as well as improving government interactions with others and how services are delivered.

Improving the way government delivers services

What if government services worked like Amazon? At a time when citizens are increasingly ‘digitally literate’ it is clear that government needs to keep pace with smart technological developments. The decline of retail activity on the high street, for example, is directly attributable to changing habits as more and more people turn to online shopping because it makes their lives easier. Citizens want outstanding government digital services for the same reason they want it from an online retailer, bank or travel booking site. In many instances failing to meet that expectation is perceived as poor service.

There is a huge gap between the services offered by government and those provided by companies such as Amazon, eBay and Airbnb. To provide the same seamless experience requires a robust digital platform offering the equivalent of one-stop shopping, making a range of functions available in a few clicks. Government would ‘know you’ based on past transactions and anticipate citizen needs. In NI there is now a single electronic platform for accessing services via ‘NI Direct’. The NICs has also adopted a digital first strategy rather than digital by default. New digital, IT and cybersecurity strategies have been launched to facilitate digital transformation but there is still much to do.

Well-designed digital services can enhance engagement with the public sector. Working towards digital transformation, however, depends on three key areas: end-to-end seamless customer experience; unique and uniform digital ID and data sharing capabilities.

Estonia: Advanced digital government

Estonia probably has the world’s most advanced digital government. It regained its independence in 1991 and built many of its IT systems from scratch. Because of this, Estonia was able to tailor nearly every aspect of its government to the online world. It is all linked by a data exchange system called X-Road, which provides a highly robust model for digital identity. The cornerstone of X-Road is the Estonian ID card which serves as a physical document, incorporating a photo and biometric data, and as a digital identifier. It features an onboard chip that verifies identity and provides a digital signature protected by a four-digit personal identification number (PIN). Citizens can easily prove who they are and conduct business with government or the private sector more efficiently. Transactions that, in other countries, might require a trip to the bank or tax office can be conducted securely online. Using only their ID cards and PINs as credentials, Estonians can register a corporation, vote in national elections, and sign legally binding documents from their computers. It is seamless and efficient, and citizens are never asked for the same information twice.
Northern Ireland: Geospatial aid application/ single application online

In 2017 99.9% of farmers in NI processing Common Agriculture Policy (CAP) fund applications used the online system built by the Department of Agriculture, Environment and Rural Affairs (DAERA), resulting in a record 93% advance payment rate.

Designed and delivered over the past four years, the system was built to increase the accuracy, efficiency and transparency of CAP payments, whilst remaining simple for farmers to use.

DAERA’s objective was to create a payment application process that would best deliver efficient results for NI farmers. In the past, paper-based systems did not accurately determine field usage and, crucially, were open to payment duplication.

This was detrimental to both DAERA and farmers who, pre-2014, may have suffered from penalties for inaccurate applications and the knock-on effect of delayed payments. Rather than overhaul the entire existing system, the objective was to set about transforming it into a digital solution; building an online application, validation, inspection and payment process.

The system uses geospatial technology to ensure all agricultural land is assigned to a single farm business, paid only once. The system can determine when a piece of land has been claimed for by more than one farmer, ensuring any issues are resolved before a final submission is made.

The number of farmers using DAERA’s online application system has increased steadily from 48% in 2015 to almost 100% in 2017. For so many farmers to make the switch to online applications with no major complications shows how digital transformation positively impacts upon businesses and organisations. NI was the first UK region to make early advanced payments to farm businesses.

Queensland: Tell us once

For people in the Australian state of Queensland, the service ‘mall’ is One-Stop Shop, a programme developed to satisfy citizens who expect government transactions to resemble their other online transactions. The service began in 2014 with 40 digital services; today it offers more than 400. Queensland has made a point of asking citizens what digital services they want and how they should work. For example, in response to customer requests, Queensland added a ‘tell us once’ change of address service, employing a single form to update records across multiple services. Customers also can use a single tool to send complaints or feedback to any agency, without needing to know how to reach the relevant government employees.

Other comparable examples include British Columbia’s BC Services card to identify and authenticate citizens for access to all digital government services. In Ireland thousands of users can access a range of services through MyGovID, a secure online identity system. The US state of Michigan is also taking steps to create an integrated, citizen-centric service platform.
Globally, several smart cities have emerged where local governments have made enormous strides using technologies to reduce costs, to reuse existing and legacy infrastructure in different ways, unlock value and stimulate economic development. Through the use of mobile apps and real time data analytics citizens can also get connected and engage more effectively with government.

**Changing behaviours and the interaction between government and the citizen**

The way in which government can interact with its citizens is not confined to the use of mobile apps. The introduction of new digital technologies such as data analytics opens up opportunities for more effective engagement with the users of government services and can drive better citizen behaviours.

Many projects aiming to digitise operations and services struggle with user adoption because they often fail to consider how people think and act. Consider the example of computers in the classroom. A study from the Organisation for Economic Co-operation and Development in 2015 showed that classroom computers had made no difference in improving students’ mastery of reading, mathematics or science. Another UK study revealed that £450 million a year is spent on educational technology that goes virtually unused. Unlocking technology is not enough unless teachers know how to integrate these tools into changing the way they teach. It is imperative, therefore to put the end user first when designing programmes.

The most successful case studies are those which use behavioural science as the foundation for understanding how people best handle change and reflecting this in their design – digital enablement by putting people first. Better design equates to better results. This may be of particular interest given that only 9% of people in NI believe that organisations that deliver public services listen to their preferences. This is similar to the UK average of 10% based on the IPSOS/MORI survey results.

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**Buenos Aires: A smart city using technology for more responsive service delivery**

Buenos Aires has a population of more than three million and over one million pieces of public infrastructure. Maintaining such a vast portfolio can be a challenge and while citizens could log complaints or service requests through a call centre (for example, potholes or graffiti) the city was averaging 600 days to resolve a complaint.

In 2010, the city launched a mobile app that citizens could use to register complaints, or they could report issues via social media. For instance, when a resident sees a problem like a manhole missing or a broken pavement, they can tweet a picture with a short description.

The app, using an integrated geographic information system (GIS) technology, sends the location of the complaint to the ministry and work is assigned to the nearest vendor to resolve the issue. To close the loop, a city street inspector - using a mobile device - validates the work done by the vendor and uploads a picture through the app showing the issue was resolved.

The system has created a tremendous impact on the city’s quality of life parameters. The average time to resolve a complaint plunged 93% without additional budget, allowing the city to fix more problems in less time. Satisfaction indices have also improved (for example, green spaces from 49 to 76, streets works from 3 to 45, public lighting from 19 to 51, and storm water drains from 19 to 56).
Governments have also been working to alter the behaviours of their citizens. In many cases, ‘behaviour modification’ is synonymous with charges and fines. For example, in NI, people visit their GP practice seven to eight times a year. In the ROI, the average, where those without a medical card pay, is about half (that is, three to four times). Furthermore, the number of visits by those with a medical card is about half again which supports the belief that charging has a material impact on behaviour. It is important, however, to consider possible unintended consequences (for example, increased demand at Emergency Departments which are free or where people do not meet their GP and they present to the health system much later with more serious, complex and costly illnesses as a result).

Nudge thinking has been proven to be an effective, low-cost approach for government that addresses many of the issues facing public services. The idea is simple. It is better for government to help citizens ‘do the right thing’ in the first place than to go through the painful and, often, expensive process of enforcement and penalties. There are many areas where nudge thinking may prove more effective - and potentially much more cost-effective - than the carrot-and-stick approach.

Data analytics increasingly allows targeting of critical population groups and an understanding of how to influence behaviour becomes especially important. There are huge opportunities in applying the insights of behavioural economics such as reducing fraud, boosting compliance, improving the efficiency of health services, and promoting better outcomes for citizens.

“...The introduction of new digital technologies such as data analytics opens up opportunities for more effective engagement with the users of government services and can drive citizen behaviours.”

New Mexico: unemployment benefit nudge theory

In the US more than $4 billion was distributed in 2014 under the unemployment insurance programme to someone who was ineligible (that is, almost one dollar in eight). These overpayments may be due to a poor understanding of the rules, or to “small rule breakers,” when money earned while looking for work is under-reported. Recovering these overpayments was difficult. In New Mexico, for example the Department of Workforce Solutions (DWS) was only able to investigate 25% of the potential 45,000 cases of unemployment fraud.

To reduce overpayments, the DWS applied the principles of behavioural insights. Simple, low-cost nudges were introduced to the claims process with promising results. Behavioural concept priming was introduced to induce higher rates of honesty and greater disclosure. When people are exposed to a stimulus that reminds them of the value of honesty, they are more likely to behave honestly. In this case, claimants were primed with a personal attestation asking them to certify that they would fill out their weekly earnings accurately and honestly before completing the form. By using this technique, and several other forms of priming, the DWS doubled the number of claimants who reported earnings and saw dramatic drops in its overpayment rates and fraud rates.
USA: Barcode screening

For medical professionals, electronic health records offer comprehensive and accurate details of a patient’s history – a vital part of which is vaccinations. Until recently these were recorded manually. This is both time consuming and prone to error and so 2D barcoding technologies were developed as a means of ensuring more accurate data. In this particular pilot exercise, practitioners were trained on how to use the new scanners and told why scanning was important. They also completed a commitment card at the end of their training. Reports of scanning rates were produced, and attention was given to the location of the scanners and usage protocols which would make it easier for practitioners and encourage behavioural change. The pilot produced compelling results (that is, 94% of nearly 64,000 vaccines were scanned resulting in improved accuracy of vaccine records, time savings and practitioner safety and satisfaction).

Another example is the implementation of Healthcare.gov in Connecticut - Access Health CT which was credited with putting user design ahead of the technology resulting in Connecticut having one of the highest per capita sign-up rates of citizens purchasing health care insurance within the first six months of ‘go-live’.

Improving the government-to-business experience

For virtually every business, government regulation is a painful fact of life and while most businesses would welcome fewer regulations, what they really want is to spend less time and effort on compliance. Sweeping technological advancements are creating a sea change for regulators as emerging technologies such as artificial intelligence (AI) and data analytics create new ways for consumers to interact and disrupt traditional business models.

Regulators are being challenged to reform their existing regulatory stock while also keeping up with emerging trends. RegXplorer, a tool currently being trialled by Deloitte, uses AI technology to digest, analyse and understand links in the regulatory landscape. This capability can support accelerated, data-driven decision-making for all organisations that interact with regulations. Its core features enable regulatory research and discovery and the technology can ingest any regulatory text (for example, legal decisions and internal policies). Tools such as this could be very helpful when dealing with the huge regulatory workload associated with the UK exit from the EU.

Governments across the world are adopting new and innovative ways of addressing these significant challenges and working with business to develop regulation that is adaptive, outcome based, risk-weighted and collaborative. Taskforces that challenge outdated legislation and regulations and creating regulatory sandboxes are also showing positive results.

“We have a legal, regulatory framework built on the basis of mail, paper, words, versus a new world order which is digital, continuous, 24/7 and built on bits and bytes. Somehow, we need to square these two worlds.”

Aaron Klein, Brookings Institution
USA and UK: Adopting a sandbox approach to regulation

An accelerating trend for regulatory agencies is the creation of “sandboxes”, in which agencies partner with private companies, academic institutions and entrepreneurs to experiment with new technologies in controlled environments. This allows innovators to test products, services or new business models without having to follow all the standard regulations and allows regulators to develop appropriate rules and regulations for those new products, services and business models emerging.

In the USA, a sandbox approach for unmanned aerial systems is currently being piloted which involves testing the safe operation of drones in a variety of conditions currently forbidden such as operations beyond the line of sight and at night.

In the UK, the Financial Conduct Authority launched the first fintech regulatory sandbox in June 2016, allowing businesses to test innovative products and services in a safe, live environment, exempt from certain safeguards. After the first year of operation, 90% of firms that completed testing in its first cohort were continuing to a wider market launch with more than 49% receiving investment during or following their sandbox test. The sandbox approach also reduced time to market, improved customer safeguarding and reduced challenges in data sharing.

The Danish Ministry of Environment and Food is one of the more ambitious regulatory modernisation efforts and Finland is creating a new integrated transportation code that supports their vision of mobility-as-a-service.

Using digital technologies and adopting a customer-centric approach can also drive the transformation of government processes and help the economy by simplifying and streamlining compliance and reducing cost to business. Treating businesses as valued customers can create better outcomes for all concerned.

“The State of the State 2018-19 Northern Ireland | What next

"Using digital technologies and adopting a customer-centric approach can also drive the transformation of government processes and help the economy by simplifying and streamlining compliance and reducing cost to business.”
New Zealand: Better for business

In New Zealand, the Better for Business initiative involves a group of ten agencies working together to improve their policies and service design to make it easier for businesses to engage with government. Principles of the programme include collaboration, simplification and prioritising digital. For example, three large federal agencies all now allow a business to register with the same identification number. Soon, data from one agency database may update across government. When a business changes its name, for example, it need only inform one agency. The aim of the initiative is to reduce the business cost of dealing with government by 25% by 2020 and achieve key performance ratings comparable to leading private companies.

Other examples include Business USA joining up siloed government digitally; Boston streamlining and digitising permitting; and New York City Business Atlas helping start-ups to research the economic conditions of neighbourhoods where they might set up shop.

“Emerging technologies and digitisation create unique opportunities for governments at central and local level to re-engineer the way services are delivered and to engage much more effectively with citizens and business.”

Conclusions

Emerging technologies and digitisation create unique opportunities for governments at central and local level to re-engineer the way services are delivered and to engage much more effectively with citizens and business. This clearly has relevance to NI and given the region’s relatively small size geographically and demographically it is feasible that many of the innovative initiatives already employed elsewhere could be introduced as a way of managing or influencing service demand, reducing costs and promoting better outcomes. This is explored further in the next section which focuses more specifically on how some of the challenges faced by the big spending areas in NI might be addressed.
Case-study locations and options for Northern Ireland
Options for Northern Ireland

Introduction

The Department of Finance’s Budgetary Outlook states that the cost of delivering services is increasing more rapidly than the budget available and to continue with the same pattern of spend is unsustainable. To balance the budget the Department believes this can be achieved in the longer-term by transforming public services to improve outcomes but that, in the short-term more immediate solutions are necessary.

“This section draws on good practice from around the world in the key areas of health, education, infrastructure, policing and justice, and finances. Based on experience elsewhere it puts forward a range of options to help alleviate the major budgetary and financial challenges in the immediate and longer-term. It will be for decision-makers to consider which permutation would be best suited for NI.”
The challenges facing the health and social care sector in NI are common to governments throughout the developed world.

Ageing demographics, interventions that prolong life, and living with health conditions including dementia, diabetes, mental health problems and obesity are putting significant pressure on already overstretched services. The impact locally is already well-known. Issues such as unacceptable waiting lists for diagnosis and treatment, long waiting times in emergency departments, shortage of beds in acute hospitals, and recruitment and retention of health professionals have been the subject of a number of strategic reviews the most recent of which is ‘Health and Wellbeing 2026: Delivering Together’. This is a programme of transformation that is to be welcomed along with initiatives such as pathway centres for elective care (such as vascular problems and cataracts). It is also noteworthy that NI is leading the way in the UK on electronic health. However, faced with financial pressures of about £300 million per annum and reports that doctors could leave because of the pressures they are under, it is clear that urgent action is needed to stop the sector from rapidly deteriorating.

Option 1: Reconfiguring Health Services

The reconfiguration of the healthcare system is addressed in ‘Health and Wellbeing 2026: Delivering Together’ which, if implemented would see specialist services being planned and delivered on a regional-wide basis as well as greater investment in community and local primary care. This has the potential to improve the quality of care and significantly reduce costs as has been proven in some excellent case studies in other countries. However, if it is to succeed a major communication initiative could help persuade the public of the benefits of Health Service reform.

South Australia: Health restructuring

In 2016 the state of South Australia had 12 hospitals and three local health networks serving a population of 1.7 million people. It also had the highest spending Health Authority in Australia, the poorest quality of care and the longest waiting times. The Health Authority undertook an ambitious transformation programme aimed at ensuring equitable access to the best and most reliable healthcare possible and ensuring sustainability for future generations.

Deloitte improved the allocation of services across the hospitals and supported the delivery of better healthcare by focusing on the emergency departments, operating theatres, and mental health and outpatient services. To date, the programme has delivered financial benefits totalling $397 million over half of which ($200 million) related to length of stay improvements.

To remove variation in clinical practice and improve health outcomes three hospitals were closed. Data analytics also helped in this area. Reconfiguration of services, redesign of the operating model and implementation of a cost reduction strategy saw the closure of a number of emergency departments and the creation of new areas of speciality care.
Greater Manchester: Tackling health inequalities and supporting older people

In April 2016, Greater Manchester became the first region in England to be given the freedom and responsibility to look after the health and social care of its 2.8 million population which had a significantly lower life expectancy than most of the UK.

A £6 billion-plus budget called for radical, fresh ideas to help shape a strategy to increase life expectancy including reducing the 15-year variation between the most and least deprived, cutting the authority’s funding gap to zero, and simplifying the patient experience. With a strong emphasis on prevention and the individual taking responsibility for their own wellbeing, the new regime will integrate healthcare with mental health, social care and the voluntary sector. Acute and specialist care providers will also operate in a more standardised way to reduce variation in care standards. Greater Manchester will transform community-based care through schemes that put GPs at the heart of the new model.

This has evolved further when in March 2018, Greater Manchester became the UK’s first age-friendly city region as recognised by the World Health Organisation whose global network of age-friendly cities and communities has identified eight domains of liveability that influence the quality of life of older adults: housing, social participation, respect and social inclusion, civic participation and employment, communication and information, community support and health services, outdoor spaces and buildings, and transportation. The Age-Friendly Strategy aims for Greater Manchester to be a global centre of excellence for ageing, pioneering new research, technology and solutions across the whole range of ageing issues as well as increasing economic participation amongst the over-50s.

Option 2: Optimising the use of electronic health

Technology-enabled care involves the convergence of health technology, digital media and mobile devices allowing patients, carers and healthcare professionals to access data and information more easily leading to better quality services and improved outcomes. It is worth noting that NI is already leading the way in the UK in the area of electronic health and this should be further exploited. The widespread adoption of technology-enabled care could be essential for sustaining the future health and social care system and the use of robotics could also deliver significant back office savings.

Clinical intelligence needs to be improved so that healthcare professionals can understand and utilise data analytics and AI to improve patient care. AI is getting increasingly sophisticated at doing what humans do, but doing it more efficiently, more quickly and at a lower cost covering wellness to diagnostics and disease management. One of its biggest potential benefits is to help people stay healthy so they do not need a doctor, or at least not as often.

Health organisations can also use AI to power diagnosis and improve clinical decision-making. AI increases the ability for healthcare professionals to better understand the day-to-day patterns and needs of the people they care for. Aligning such data with appropriate and timely decisions can support the co-ordination of care plans and help patients to better manage and comply with their long-term treatment programmes.
Ontario: Health records system

eHealth Ontario was created to provide a connected IT system that consolidated billions of individual pieces of healthcare information to form a common Electronic Health Record (EHR) and ultimately improve the delivery of healthcare to the 13.6 million people of Ontario. In 2016 the foundational elements of the EHR programme were completed and it now serves as the core platform for electronic health information exchange in Ontario. Clinical benefits are being realised by both patients and health service providers from the interoperable EHR which continues to improve as more patient data flows through the entire continuum of care. All hospitals, independent health facility hubs, community sector organisations, public health units and primary care / secondary care practices have all been part of the programme, enabling over 80,000 clinicians to be able to access the EHR.

This has resulted in:

• better care in long-term care homes where residents’ care plans are updated more effectively due to access to patient hospital visit information;
• lab test duplication has been avoided using data from the EHR;
• the number of readmissions has reduced and the time to treatment has improved;
• clinicians reported increased confidence in clinical decision-making; and
• patients reported that they had greater ability for self-care management and to have more informed discussions with their care providers about their health.

The success of the programme has been attributed to the importance of user engagement and clinical input into the planning and development of the EHR to ensure that usage and adoption levels reached the critical volume where benefits to the health care system, in terms of cost, quality and patient / provider experience, were realised. The EHR is now the backbone of the Ministry of Health and Long-Term Care’s Patients First action plan which puts the needs of patients at the centre of the province’s health care system.

“Clinical intelligence needs to be improved so that healthcare professionals can understand and utilise data analytics and AI to improve patient care.”

Digital solutions have been credited with improving hospital productivity in Odense University Hospital in Denmark where the average hospital stay has been reduced to 2.9 days for patients suffering from chronic diseases compared to the European average of 9 days. Denia Hospital in Valencia is one of the few hospitals in the world that is truly paperless and has achieved significant, sustainable improvement in patient outcomes and return on financial investment (for example, one-third drop in hospitalisation rates, 35% reduction in readmission rates for patients with congestive heart failure, 42% reduction for cervical and breast cancer patients in the time between identification of cancer risk and initiation of treatment).
The potential for using mobile technology has improved with the growing use of smartphone and tablet users and the proliferation of health apps. There have been developments in the availability of ‘bio-sensing’ wearables such as digital blood pressure monitors and glucose sensors. Smartphones are also incorporating a growing range of sensors which monitor changes in physiology all of which could be essential for sustaining the future health and social care systems.

“Healthcare needs to change from one that treats illness to one that supports wellness. There is some evidence that clinical care can only improve overall population health outcomes by 20.”

Oklahoma: Medical adherence

75% of all health care costs are associated with the treatment of preventable diseases. For this reason, public health services are continually looking for new ways to pre-emptively serve people before they need to be rushed to the emergency room.

Not surprisingly, medication adherence (that is, taking medications as prescribed, in terms of dosage, timing, and frequency) is one of the best defences against future medical problems. Research suggests that the additional amount spent on medications due to stricter adherence is easily offset by the reductions in emergency room visits and hospitalisations.

However, people still frequently skip their medications due to a lack of motivation, perceived ineffectiveness, or simple forgetfulness. Technology can play a key role in helping people adhere to their medication schedules. For example, the Oklahoma Health Care Authority’s Medicaid programme tested several interventions, including connecting sensors to the pill dispensers of patients taking warfarin. This would indicate whether they had taken their medication or not. To motivate better statin adherence the programme also tested several behavioural interventions which proved highly successful. Statin adherence improved by 78% and incorrect Warfarin dosages per day dropped from 22% to 3%.
Option 3: Encouraging and supporting citizen responsibility
3.2.8 Attention is increasingly being focused on wellbeing (that is, quality of life) as a way of determining a country’s economic success. The New Zealand Government, for example, is introducing a wellbeing budget in 2019 believing that the country’s prosperity is more than just the ability to grow financial and physical capital.

“We want New Zealand to be the first place in the world where our Budget is not presented simply under the umbrella of pure economic measures, and often inadequate ones at that, but one that demonstrates the overall wellbeing of our country and its people.” Jacinda Ardern, PM.

Healthcare needs to change from one that treats illness to one that supports wellness. There is some evidence that clinical care can only improve overall population health outcomes by 20%. A study by the University of Wisconsin Population Health Institute, for example shows that 30% is down to health behaviours (for example, smoking, alcohol, diet, exercise and so on), 40% as a result of social and economic factors and 10% as a result of the physical environment. This would suggest that citizens need to take more responsibility for their own health and wellbeing and that of their families as in other aspects of their lives. There needs to be a new ‘contract’ between the citizen and the state.

Through the use of digital technology and mobile apps citizens already have opportunities to better manage their own health and wellbeing via their smartphone and tablets. Technology applications and apps can encourage healthier behaviour in individuals and help with the proactive management of a healthy lifestyle (for example, Fitbits). It gives consumers the opportunity to be more in control of their health and well-being. However, simply telling people that they need to change their lifestyle and ‘look after their own backyard’ is guaranteed to fail. Citizens need help and support to make the transition and there are some good examples of how proactive outreach and appropriate support can make a difference.

To achieve long-term health improvements, there has to be greater emphasis on education and prevention. The healthcare system needs to manage upstream demand and move to a system that prevents illness rather than simply treating it. It also needs to better understand lifestyles and associated risk patterns to reduce the chances of disease occurring. Population modelling and understanding potential risk factors can help identify those most at risk of developing, for example, type 2 diabetes.

Saskatchewan Canada: Connecting to care programme

This programme was launched in the cities of Regina and Saskatoon in 2015 with initial government funding of $1.5 million and focused on a subset of patients who accounted for a disproportionate level of healthcare utilisation and costs (that is, 1% of Saskatchewan’s patients accounted for about 21% of hospital costs).

Connecting to Care uses proactive outreach to prevent hospitalisations and emergency department visits by focusing on community-based services, including support for medical, mental health and addiction treatments, as well as assistance with social needs. A team of providers, including a nurse, counsellors and wellness advocates oversee personalised plans for patients who are selected on the basis of their prior healthcare use and identified needs, as well as healthcare provider referrals.

While formal evaluations of the two pilot programmes are not yet publicly available, the Regina pilot has reportedly seen reductions in both emergency visits and hospitalisations. Reductions in hospitalisation is significant and an average of $1,400 was saved for each avoided day of hospital care.
England: The Deal: Encouraging greater citizen responsibility

The Deal is an informal contract between Wigan Council and the Borough residents to work together to make the Borough a better place to live and work. There are separate deals for Communities, Adult Social Care, Business, Children and Young People, Health and Wellness and for the Future.

The Council has committed to a series of pledges and in return asks residents and businesses to play their part too. In 2018, by working together, the Council has saved £115m. This has been achieved by doing things like recycling more, community volunteering and using online services.

Some of the health related asks of residents include:

- keep active at whatever stage of life;
- register with a GP and go for regular check-ups: take charge of your own health and wellbeing;
- quit smoking, drink and eat sensibly and encourage your children to do the same;
- take time to be supportive parents or guardians, encouraging children to be the best they can be;
- take advantage of training and job opportunities, setting high aspirations for yourself and your family;
- support older relatives, friends and neighbours to be independent for as long as possible; and
- get involved in your local communities.

The aim is to encourage behavioural change, provide an opportunity for services to be delivered in different ways, to communicate consistent messages, encourage volunteering and communities to support each other (building self-reliance), increase engagement and consultation from 300 voices to 3,000 which will utilise local knowledge.

“The aim is to encourage behavioural change, provide an opportunity for services to be delivered in different ways, to communicate consistent messages, encourage volunteering and communities to support each other.”
**Option 4: Generating income**

It is anticipated that £200 million will be invested in transformation of health services in NI over the next two years and a further £50 million over five years in mental health. However, given the unsustainable budgetary pressures decision-makers may also wish to consider whether citizens should be contributing to increasing costs in areas such as health. The Department of Finance’s Budgetary Outlook sets out five health-related options for generating income.

- **Increasing patient charging for dental services** from 80% to 90% could generate £3.7 million over two years.

- **Charging on larger Health and Social Care car park sites for staff and visitors** could generate over £1 million per year.

- **Reintroducing prescription charges**, depending on the model adopted and possible exemptions, could generate up to £20 million per year.

- **Charging for domiciliary care and day care (and transport costs)** through means testing could generate income of £11.3 million based on a rate of 5%, and £22.5 million based on a rate of 10%. An increased charge of £2.00 per community meal to £3.50 could generate £1.3 million per annum.

- **Non-emergency patient transport - the eligibility criteria covering the use of free transport for patients to and from hospital could be changed.**

Consideration could also be given to a wider roll-out of e-prescriptions on the basis that 30% of calls to out-of-hours GPs are for repeat prescriptions. At UK level it may also be worth pursuing a renegotiation of costs with the major pharmaceutical companies as was undertaken in New Zealand.

Data released by NHS England shows that in 2016/17 almost 8 million hospital outpatient appointments were missed due to non-attendance. At a cost of £120 per appointment this means that £1 billion worth of appointments in England were missed. In Scotland the number of missed appointments is one in five (that is, 20%). There is no comparable data for NI available. However, on a pro rata basis the Scottish experience equates to about 360,000 in NI at an estimated cost of over £40 million per annum. Consideration could be given, therefore to taking powers to permit charging for missed GP and hospital appointments. This could have the added advantage of changing citizen behaviour in terms of GP and hospital attendance. It is worth noting that people in NI, based on the IPSOS/MORI survey, believe it is more acceptable for those on higher incomes (over £45,000 per annum) to be charged for some Health Service services and emergency GP appointments.

More than 9 million people in England were sent home from Emergency Departments in 2016/17 with guidance and advice that could have been obtained more conveniently from a pharmacist or by calling 111. NI is the only region in the UK which does not have this service. In Scotland it is NHS24 and in Wales it is NHS Direct. The introduction of a ‘111’ service could be considered in NI as a way of reducing demand at GPs and Emergency Departments and while there would be an initial cost, this could be reduced if, for example NI were to collaborate with NHS 24 in Scotland. Furthermore, it is likely to become cheaper and more sophisticated with the evolution of AI in this area.

In summary, best practice insights would suggest that delivering a more sustainable healthcare system requires a radical reconfiguration of services, a strategy for optimising emerging and digital technologies, and encouraging citizens to take more responsibility for their own health and wellbeing.

“Delivering a more sustainable healthcare system requires a radical reconfiguration of services, a strategy for optimising emerging and digital technologies, and encouraging citizens to take more responsibility for their own health and wellbeing.”
“We give our children and young people the best start in life” is one of the desired outcomes in the draft Programme for Government Framework 2016-21. To support this the Department of Education is developing a transformational programme for the education system to help deliver positive outcomes for children and young people.

It will build on areas of success and address areas where improvement is needed. As things stand education outcomes in NI are improving. Primary schools benchmark strongly and at GSCE and A-level the region performs better than the UK but less favourably when compared to the ROI (for example, 40% of school leavers in NI attain A-levels A-C whereas the ROI has a completion rate at Leaving Certificate of 92% for girls and 90% for boys). However, the question for decision-makers is how outcomes can be achieved at a time when the sector is facing unprecedented financial challenges.

Since 2010/11 there has been a 1% increase in cash terms but a £200 million reduction over the period to 2017/18 in real terms. Consequently, as recently reported by the NI Audit Office more schools are falling into deficit, the statistics indicate that of the 1,100 schools in NI there are currently 400 in deficit. As salaries account for 90% of the Resource DEL budget any reduction in funding has an impact on the numbers of teaching staff. A joint letter on 19 June 2018 agreed by every post-primary principal in NI states that: “In some of our schools’ principals are being required to make excellent teachers redundant during a time of ongoing and increasing industrial action.”

“Parents should be aware that the quality of education provided by the post-primary sector will inevitably be impacted by the reduction in teacher numbers and the associated unacceptable levels of pressure on serving teachers and leadership teams in schools.”
Option 1: Optimising area planning and rationalisation of the schools’ estate
“The diversity of school types coupled with the relatively high proportion of small schools, inevitably results in a less than optimum use of the finance available for education” (NI Audit Office). NI currently has a significant number of schools below the sustainable school's threshold in both the primary (that is, 233 schools or 33.8%) and post-primary sectors (that is, 77 schools or 38.7%). The NI school census shows that in 2017/18 there were 63,063 ‘empty seats’. Cost pressures are also increasing in responding to Special Educational Needs where there has been a 17% increase in the last five years. There is a risk, therefore, of sub-optimal educational outcomes for too many children and young people. In addition to the numbers of schools the sector is also faced with structural inefficiency with four sectors - Controlled, Catholic Maintained, Integrated and Irish Medium Education – overlaid by selection and choice. It is worth noting that area planning (that is, school rationalisation) is having some success as a development process (for example, the proposed merger and merger of a number of schools in some areas) but much more needs to be done. Indeed, it has been suggested that education needs a ‘Bengoia’ type review linked to the skills’ development responsibilities of the Department for the Economy. It could also consider governance and budget responsibility issues between the Department of Education, the Education Authority and schools.

Transformation, which requires the approval of decision-makers, could result, as suggested by the Department of Finance’s Budgetary Outlook in better outcomes for pupils and the economy, for example by using resources more efficiently, better aligning accessibility and the curriculum, the needs of the economy and maximising impact in the early years and at age 14-19. It could also benefit from the use of predictive analytics to help plot patterns of growth in the future.

South Africa: Infrastructure delivery initiative rationalisation support for schools
The South African Department of Basic Education noted that there were a large number of small unviable schools across the country. In an effort to reduce the drain on limited resources, a decision was taken to consolidate schools where possible through a process of either merging schools into larger viable schools or closing the small unviable schools forcing the learners to enrol at a larger viable school in the area.

Unviable schools were identified through an assessment against defined criteria, such as number of learners, number of educators, number of subjects offered, feeder schools in the area, the positioning of the schools in relation to other viable schools, and affordability. Predictive analytics were also used to establish possible patterns in the growth of learner enrolments over the next five years. Using these patterns, around 2,000 schools were identified to be closed/merged over the next five years (profiling districts) and a plan developed for the systematic merging/closing of schools (rationalisation plan).
Home to School transport is currently provided free of charge to around 90,000 pupils at an average cost excluding Special School pupils of £700 per annum. Given the pressures on the education budget the Department of Finance in its Budgetary Outlook has set out options that could enable cost reduction.

There may also be an opportunity to draw on the positive results of the Education Authority’s recent Smart School Transport pilot. Using digital technology and data analytics phase 1 has piloted real-time analysis of the usage of free school transport covering bus movements. It has also tested the provision of real-time information on a pupil’s whereabouts including the time and location of boarding and alighting the bus and the duration of the journey. By combining pupil usage information with the location of the buses in real-time there is the capability to determine fleet load and bus route optimisation. If adopted, it could help improve the efficiency of the school transport system with potential to extend to other areas such as health and social care, smart cities and tourism.

Another option would be to consider the overall policy of eligibility for home to school transport as part of a transformation/rationalisation programme. This could include charging based on the model currently used in the Republic of Ireland, means testing or integrated transport options with other sectors. The extent of the income generated, as suggested by the Department of Finance would depend on the approach adopted and the charging model used but could reduce expenditure by up to £25-30 million annually.

Option 2: Early intervention and breaking the cycle of inequality

In terms of academic achievement in NI there remains significant disparities for boys, non-Grammar, and protestant children. Breaking the cycle of inequality should be a key priority for decision-makers through, for example early intervention to help address educational underachievement. The draft Children and Young People’s Strategy, which is awaiting Ministerial/Executive approval is aimed at improving the wellbeing of children and young people in a number of key areas including learning and achievement. The Digital South initiative in Belfast is a good example of the voluntary sector helping to improve the digital skills of young people.

Part of Finland’s success in improving education outcomes is due to measures that help prevent failure and support students from a holistic perspective. Importance is placed on early intervention by providing individual support as early as possible. Health and social services and educators work closely together at school level. Across Western Europe there is also a growing concern about ‘vulnerable’ or ‘troubled’ families. Living in vulnerable families accentuates the risks of poor life outcomes generally for those most dependent on family structures especially children and adolescents. A life cycle approach to such families can improve targeting, prioritisation and impact of services including education at all stages of life. In childhood and adolescence this means establishing healthy behaviours and building resilience.

“Breaking the cycle of inequality should be a key priority for decision-makers through, for example early intervention to help address educational underachievement.”

Denmark: An integrated approach to support vulnerable families

Danish population data shows that children and young people who are known to the social services system from childhood are overrepresented in the benefit system later in life. A new integrated approach to address the needs of vulnerable families is being developed and tested. A systematic screening of residents’ needs is used to provide local case managers with structured knowledge of a resident’s challenges, resources and desires. The frequency of reporting enables continuous monitoring for signs of progress in terms of wellbeing, employment, school attendance, leisure activities and other indicators. Around 400 families are monitored every three months. An economic evaluation of the intervention indicates annual savings of $88,100 when a family with moderate problems is pulled out of vulnerability and $117,500 when a family with extensive problems improves to having light remaining problems.
Option 3: Strengthening teacher education and development

Salaries account for 90% of the education budget in NI reflecting the fact that teaching staff are the system’s most important resource. From a financial perspective the Department of Finance’s Budgetary Outlook puts forward a proposal to reduce the annual intake of teachers to teacher training colleges based on the current intake of 580. The evidence suggests that this is about 200 higher than the estimated need and would make modest savings of less than £1 million per year. Arguably, based on these figures too many schools could equate to too many teachers. Rationalisation of the estate could create better opportunities in larger schools to improve the quality of teaching and the allocation of teaching resources.

Globally there are major generational changes that will affect what is taught in the classroom and how it is delivered (for example geopolitical shifts, changing economic realities, next generation technologies and industries, and increasing influence of social media). It is vital, therefore, that teachers are equipped to deal with this seismic shift in education and learning. Increasingly, behavioural science is being adopted as a way of understanding, in this case, teachers’ behaviour and needs and getting them involved in programme design. However, unlocking technology is not enough unless teachers know how to integrate these tools into changing the way they teach. Early engagement could help ensure the success of new technologies and digital programmes and improve teaching capability and impact. There may also be an opportunity to strengthen teacher education and development along the lines of the successful Finnish model as reflected by OECD.

Finland: Remodelling teacher education and development

Finland has been, and continues to be, ranked one of the top performers in education since 2000, with students performing in the top ranks in reading, science and mathematics. Adults in Finland have also ranked among the top skilled across participating countries.

One of the factors used to explain the country’s success in education is the quality of its teachers. An Education Policy Outlook report by OECD states that Finnish society and its education system place great importance on their schools and trust the proficiency of their school leaders, teachers and educational staff. A reform at the end of the 1970s strengthened teacher education and made it highly selective (for example only about 10% of candidates who apply to primary teacher studies are accepted and applicants for teacher education must have passed a Finnish matriculation examination or completed a three-year vocational education programme).

Teaching is a highly appreciated profession and teachers are required to have a master’s degree that includes research and practice-based studies. Continuing professional development is obligatory for most teachers and local education authorities are required to fund three days of mandatory professional development per year for all teachers.

New Zealand: Redesigning the child welfare system

Indigenous children and youth in New Zealand often face challenges in their ability to transition into prosperous adulthood. They struggle with educational attainment and all too often end up in the care system. Recognising the gaps in the current child welfare model, and the potential for certain communities to be left behind given inter-generational issues, especially with respect to the indigenous Maori population, urgent action was taken by the Government to rectify the situation through its Investing in Children Programme.

A detailed end state blueprint was designed to deliver changes in the way services are provided to children and young people. This involves engagement with citizens including Maori and other vulnerable communities. The Government has also developed partnerships and established new services for caregiver support and a governance model that ensured all aspects of the system are governed in a way that is equitable, culturally appropriate, fiscally responsible as well as open and transparent.
Option 4: Aligning pathways to work with a future-oriented, knowledge and technology driven economy

“Adults who have completed second-level are more likely to be in employment, achieve better pay, and are at a lower risk for depression than those with less education.” OECD Education at a Glance 2017

CBI Skills research in 2017 shows that 96% of its members believed that NI faces a growing skills shortage and that 71% of firms expect to struggle to fill high-skilled roles in the future. With the emergence of the fourth industrial revolution there is an unprecedented opportunity with technological advances to unlock £445 billion in UK industry in the next decade. This could generate a huge productivity boost and could create 175,000 highly skilled, better paid jobs. However, a number of manual low-skilled jobs are under threat of being replaced by machines. Young people need to be prepared for this future. It is important, therefore that career pathways, apprenticeships and training are joined up and facilities are geared to ensure skills are fit for future economic needs. Capital investment of £140 million per year will help future-proofing. Business also wants to help with 80% of CBI members willing to support careers advice in schools and colleges.

Canada: Pathways to work and skills development

Whilst Canada’s highly educated workforce has long been one of its sources of growth, competitiveness and prosperity, its knowledge advantage is eroding at a time when it is needed most to support innovation and economic growth (for example, with the rise of automation, artificial intelligence, and the ‘Internet of Things’). Increasing globalisation has also displaced many traditional forms of employment.

To equip Canadians with the skills needed for a future-oriented, knowledge and technology driven economy, the Canadian Government outlined a number of changes in its 2018-19 Federal Budget as to how it will educate, train and retrain the Canadian workforce. The Canada Summer Jobs Programme is a commitment to the early-career skills development of Canada’s youth, which will be critical to equipping them for the future of work. During their years of formal education, exposing them to the workforce will begin the development of an understanding of the skills that are in demand by employers. The Government will also launch a Future Skills Initiative to provide thoughtful consideration about the skills of the future. It will conduct a horizontal review of skill building programming to align efforts with emerging needs, ultimately developing a better understanding of the skills of the future and striving to embed their development through educational institutions and training programmes.

“CBI members believe that’ before NI faces a growing skills shortage and that 71% of firms expect to struggle to fill high-skilled roles in the future.”
Option 5: Sustainability in the Higher and Further Education Sector

In 2016/17 43.3% of school leavers opted for higher education and 34% for further education. A significant proportion of A-level students (36%) leave NI for third-level education elsewhere contributing to the long-held view that the ‘brain drain’ is divesting the region of the brightest and best talent and resulting in long-term adverse economic consequences for NI.

In 2017 only one third of students who graduated in England, Scotland or Wales returned home to work. On the other hand, nine in ten of those who graduated in NI got a job and remained in NI.

For those attending NI universities, student fees are capped significantly below the level in England. The knock-on effect is that funding available to local universities is lower and could potentially impact on the quality and range of courses on offer, and the resources available for research and development. The Department of Finance’s Budgetary Outlook suggests that increasing fee levels would increase the amount of income received by the universities from students themselves and could provide much-needed additional resources for the higher education sector. This will be for decision-makers to consider as a way of reducing pressures on funding provided by the Executive. Consideration to allowing an increase in student places could also help the universities.

Dublin: Trinity College

As a result of the recession Trinity College in Dublin had to make radical changes to its funding model as government funding reduced. In 2008 70% of its funding was from the State and in 2017 it was only 41%. To survive it had to work much more closely with industry, internationalise the College and attract more foreign students. It also had to take a much more commercial approach to its assets, encourage philanthropy and make its cost base management more effective. It borrowed money from the European Investment Bank to invest in world class IT and infrastructure facilities. Importantly, it made innovation and entrepreneurship key themes which the business sector valued. The campus has brought together world class research, enterprise, programming and public space and acts as a cultural connector. It has a 10-year €1 billion programme. It looks back and states “We had a unique generational opportunity that we had to take, and we did.”

Other examples include the school of Business and Technology in Nova School in Portugal which has partnered with the municipality and become much more integrated into the community. It also has very strong links with business and there are a lot of work placements with local and international businesses which have the opportunity to test new services (for example, banking) with future customers. This has helped attract FDI. The school involves its students who are technologically knowledgeable in the forward planning of the University and helping companies improve their vision for the future.

In Saudi Arabia there is a 2030 vision which includes 13 programmes and 135 initiatives in higher education and universities have been given more flexibility to run their own business.
The draft Programme for Government Framework 2016-21 includes a desired outcome to ‘connect people and opportunities through our infrastructure’. This is to be welcomed but, as things stand there are some high-profile infrastructural projects constrained by planning problems such as ARC21, the Belfast Transport Hub, the North-South Interconnector, Casement Park and Strule Education Campus that are all awaiting approvals.

The belief that major planning decisions cannot be taken in the absence of Ministers could impact adversely on business and investor confidence as it is estimated that £1 billion of investment and hundreds of jobs are tied up with such planning decisions. Furthermore, there are serious budgetary issues. With some 77% of the Department for Infrastructure’s total Capital funding tied up until 2021 the amount available for safety related maintenance and new asset purchases (for example, buses and trains) is severely restricted. One of the consequences of this is that asset values decline.

Option 1: Divesting assets

One way that governments are tackling the issue of infrastructural deficit is by divesting unused land assets and directing the revenues raised to fund new transportation and infrastructure projects. In NI there are many examples of successful regeneration of old military sites and urban areas. However, the sale of unused land or other significant capital assets as a way of raising significant revenue is an option to which decision-makers may wish to give serious consideration.

People do not live in silos. Their lives overlap nearly all departments and services, so it makes sense to think about citizens and how services are delivered in a more holistic way.”
Option 2: Developing a smart region

A number of City Deals have been agreed across England, Scotland and Wales. The key aim of the City Deal agenda is to deliver accelerated investment in local areas to boost jobs and productivity. NI is awaiting its first City Deal. The UK Government has committed to negotiate a City Deal for the Belfast Region and has invited a bid for a proposal from Derry City and Strabane District Council. A City Deal is a big opportunity and with it there is an opportunity for the smart city/region and big data agenda to be addressed.

The concept of smart cities is not new with major smart city investment ongoing in Asia, the Middle East and India much of it focused on infrastructure investment in new cities. In Europe it is more about retrofitting and introducing new tools to make cities smarter. Having access to data is key to making cities and indeed regions smarter. People do not live in silos. Their lives overlap nearly all departments and services, so it makes sense to think about citizens and how services are delivered in a more holistic way. Citizens need to be engaged and see the benefits of new technology.

Other variants of this model have also been used around the world from asset disposal to fund joint development partnerships which has been leveraged in other cities. The model used will depend on the level of risk the city wishes to retain on the ultimate value generated for the recycled asset.

Another example is the state of Victoria in Australia which leased the Port of Melbourne in 2016 to investors on a 50-year lease generating billions of dollars for infrastructural investment in the area. The port is now doing well with accelerated growth and the investment has brought economic benefits. This is part of a wider investment programme by state and federal governments in Australia trying to cut debt and finance capital works by selling a range of ‘mature’ infrastructural assets including utilities.

There have been promising developments in NI in the area of street lighting. Instead of using scheduled inspections, there is now more reliance on the public to report outages through, for example NI Direct. 70% of outages are now reported by the public saving about £350,000 per annum. The Department for Infrastructure is also implementing an invest to save project converting street lights to LED light bulbs. It expects to have changed about 50,000 of the 300,000 lights by the end of 2018. The payback period is about seven years. However, there are some excellent examples of more innovative approaches elsewhere.

In 2016, the Government of Ontario sold a portion of state owned lands along the Toronto waterfront that it considered surplus on Queen’s Quay to a consortium of private developers. Working with the developers, the city was able to create new affordable housing, public spaces, heritage conservation sites, and office tower blocks. The $260 million of revenue raised through the land sale was used to fund a number of transit and transportation infrastructure projects across the city of Toronto.

Toronto: Waterfront asset disposal

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Copenhagen: Smart lighting
With increasing outages, rising costs and a growing number of complaints from citizens, authorities in Copenhagen decided to install a growing network of wireless streetlamps and sensors. The sensory streetlamps brighten when vehicles approach but dim after they pass. The sensors can also sense a bicyclist coming and shed extra light for safety as the cyclist transverses the road. In addition, the sensor-enabled light fixtures can also serve as a means of capturing data and coordinating services. For instance, authorities are notified in the event of an outage and the same sensors can be applied to communal waste bins, alerting the City’s sanitation department to when they need emptied.

Spain: Sensors and effective governance make Santander a smart city
The SmartSantander project in Santander, Spain, provides an insight into how data and citizens can together transform a city in a more environmentally sustainable, economically attractive, and responsive environment that provides a better quality of life to its residents. In addition to the 20,000 sensors the city has installed, residents can turn their smartphones into sensors by downloading the “Pulse of the City” app. Becoming, in essence, mobile intelligent sensors for the city, citizens play the role of “prosumers” in the SmartSantander project. City officials can analyse data in real time to adjust energy use, the number of trash pickups needed in a given week, and even how much water to sprinkle on the lawns of city parks. Critically, citizens can also tap into that data via the app and use it for their daily needs. Commuters can access real-time traffic information to plan commutes and know when the next bus is due. An asthma patient can plan their day to avoid areas of high pollution, while a driver can use the app to track the progress on requests filed for road maintenance. This two-way flow of information allows the city to unleash tremendous value, creating an information ecosystem that benefits all participants.
**Option 3: Enhancing the budget**

Investing in infrastructure inevitably has long lead-in times. Given the unsustainability of the current financial situation there is a need to implement shorter-term solutions that would enhance the available budget and improve services. Decision-makers may wish, therefore to consider the following options some of which are contained in the Department of Finance’s Budgetary Outlook.

- Tolling has been adopted in many countries as a means of funding maintenance and road upgrades and spreading demand and reducing congestion. Potential routes for tolling and road user charging in NI include the proposed York Street Interchange, the strategic Road Network and A2. An option would be to combine exchequer spending and tolling as in the ROI’s National Development Plan.

- Charging new developers a premium rate around the new Belfast Transport Hub (for example radius of 1 – 2 kilometres) similar to the land value capture model being utilised in England to recognise the impact of HS2 regenerating the city centres of Birmingham, Manchester and Leeds.

- Charging for on-street car parking over 30 towns and cities and extending the current controlled parking zone in Belfast. The Department of Finance has reported that an estimated £3 million could be generated in year 1 and £5 million every year thereafter.

- Ceasing new applications for the 60-64 Smart Pass and linking the age of eligibility to the State Pension Age. This would bring the scheme into line with the English National Concessionary Travel Scheme and proposals for changes in Scotland and Wales. This would alleviate pressures on the scheme by £1.5 - £4 million rising to £8 million per year over time. Alternatively removing the use of the Smart Pass from all 60-64 holders and raising eligibility to the State Pension Age for all current pass holders would reduce costs below the baseline budget of £40.5 million. A further option would be to prohibit use of such Smart Passes at morning and evening peak traffic times.

- Charging non-vulnerable customers for water usage. Currently only about 18% of the NI Water budget is raised by charges from non-domestic properties. The remainder, about £300 million is provided by direct government funding. As the average household bill is very significantly lower than in England, Scotland and Wales there may be an opportunity to introduce some form of additional charging (for example, through increased rates thus raising revenue for example, NI Water).

**Option 4: Transforming social housing**

There are over 37,000 households in NI on the social housing waiting list. Of these almost 65% are in urgent need or living in accommodation that has been described as seriously unsuitable. There is currently a growing shortfall in available social housing in NI which impacts on house prices, labour mobility and community tensions. There is also a shortfall in investment in housing stock and new build across all tenure types. The Housing Executive provides 86,000 social homes which is two-thirds of all NI’s social housing supply. These properties have experienced a prolonged period of underinvestment with consequential deterioration in the quality of the housing stock. There is an urgent need, therefore for sustained investment of about £2 billion over the next seven to ten years. If this were to happen under the current administrative, corporate and legal structures it could only be funded by the NI Block at the expense of other public sector capital and maintenance programmes.

A further issue has arisen with the re-designation of NI’s Housing Associations as public bodies by the Office of National Statistics in September 2016. Previously, in addition to core funding from government, the Housing Associations were able to leverage money from private investment to build social homes. They now have to borrow money (£948 million in 2017) which means that the resulting debt will be on balance sheet unless the associations can be reclassified back to the private sector as has happened in England or the current derogation is extended beyond March 2019.

A transformative approach to housing could tackle all of these issues by delivering new models of housing and removing institutional and structural barriers to new financial investment in social housing to facilitate long term investment. An alternative approach would be to create a new statutory framework converting the Housing Executive from a Non-Departmental Public Body to an entity outside the public sector (for example, a social enterprise such as a community interest company). This is a cost of control issue; other similar issues are highlighted later in the report. It is imperative therefore that decision-makers consider the reclassification of NI’s registered Housing Associations as quickly as possible.

“There are over 37,000 households in NI on the social housing waiting list. Of these almost 65% are in urgent need.”
Glasgow: Housing association delivering improved housing and much more

The decision by tenants in Glasgow in 2002 to transfer their homes from the public sector to what would become Glasgow Housing Association (GHA) has delivered unquestionably the biggest positive transformation in affordable housing in any city in the UK. It has also served as a catalyst for the most significant change in capacity and capability the housing association sector in Scotland has ever seen. The transformation in affordable housing in Glasgow began with the transfer of Glasgow City Council’s housing stock to GHA in 2003. At the point of transfer, the UK and Scottish Governments supported GHA through £1.6 billion in debt write-off and grant. In addition, GHA successfully raised £725 million in private finance. Over the years that followed the transfer, GHA used this financial capacity to great effect:

- Investing over £1.5 billion in improving over 70,000 homes, making them safer, warmer and drier;
- demolishing thousands of homes, many multi-storey flats, which had become unpopular and too expensive to maintain; and
- developing over 2,000 new homes.

However, the transformation delivered by GHA following stock transfer is about much more than improving housing stock. Recent work by Strathclyde University’s Fraser of Alexander Institute notes that ‘over the 15 years of GHA’s capital expenditure programme – from its inception in 2003/04 – around £2 billion will have been added to Scotland’s GDP helping to support an additional 36,500 years of full-time equivalent employment in Scotland’.

Furthermore, it has clearly:

- Transformed lives - GHA has improved the lives of thousands of people creating jobs, apprenticeships and training opportunities as part of its better homes, better lives mission. 13,000 such opportunities have been create in the last ten years or so.
- Transformed perceptions of social housing – GHA has received an unprecedented level of external recognition, including the prestigious Europe Foundation for Quality Management Global Excellence Award in 2017, the highest possible level of achievement. The same year, Chief Executive Martin Armstrong was named Director of the Year by the Institute of Directors, against competition from across the private and public sectors.

GHA has been pivotal to the wider transformation of the housing sector in Scotland through its central role in the creation of Wheatley Group. GHA was the founder member and catalyst for the creation of Wheatley Group and is now its powerhouse. Since it was established, Wheatley Group has grown to provide affordable and market housing and care services across central Scotland and is now one of the largest and most successful organisations of its type in the UK. It is the UK’s largest builder of social rented housing and has raised close to £1 billion in private finance in recent years, accessing new sources of funding from the capital markets and international investors. This money is being used to improve the homes and lives of its customers, thereby providing an enduring legacy from the stock transfer from the public sector in 2003.

The Department of Finance’s Budgetary Outlook also puts forward the option of increasing Housing Executive rents (for example, annual rent increases of CPI+3% could generate around £8 million per annum which could be re-invested in the housing stock). This would need to be part of a longer term multi-annual programme of rent increases that would achieve parity with Housing Association rental charges. However, increases in social rents would mean any corresponding increase in Housing Benefit above the current forecast level having to be met by the Executive budget. This would require negotiations with the Treasury.
The overall volume of crime in NI is falling. According to the Local Policing Review 2018 recorded crime is down by 33%. However, recorded crime relating to sexual, drug and violence against the person offences is increasing alongside the growing issue of cyber-crime and cyber security.

Furthermore, in a recent report on Speeding Up Justice the NI Audit Office described the criminal justice system as “grossly inefficient”. It also concluded that costs are significantly higher than in England and Wales and cases typically take twice as long to complete. The NI Audit Office Report states that from the date an offence is reported until the completion of a trial takes, on average 515 days and there are currently high reoffending rates - in 2014/15 almost 40% of those released from prison committed a further crime within 12 months of release. This is taking place against a backdrop of a major reduction in the number of police officers (that is, from a full-time equivalent peak of 13,500 to 6,546 on 1 August 2018) and a 20% reduction in prison staff. This creates material resource issues that impact on how the PSNI discharges the full range of policing functions.

The nature of policing and justice means that costs are essentially demand led with limited options to reduce the levels of service provided. For example, 70% of the justice budget goes on policing and, as for education, the bulk of the costs relate to staffing. There is the added pressure of legacy which puts a significant strain on already stretched resources as the model proposed in the Fresh Start agreement has yet to be agreed and implemented.

The sustainability of the court estate is a key issue which requires decisions about estate rationalisation and increased efficiency through digital technology and paperless courts. Reform of the Criminal Legal Aid system also needs to be addressed. Significant reform in recent years has resulted in a 20% reduction in costs. A second phase, extending the same reforms to Civil Legal Aid and introducing a Registration Scheme for legal aid supplies, requires legislation to be passed. A broader piece of work is also underway to develop policy interventions that would resolve legal problems without the current delay and expense. A report of the Review of Civil and Family Justice and an earlier Access to Justice Review point to alternative forms of dispute resolution at lower cost and with reportedly more predictable outcomes than adversarial court-based outcomes.

Transformation could allow for a more fit-for-purpose and affordable service delivery model across the areas of policing, courts, reducing reoffending, and access to justice. This would start with the definition of an agreed blueprint for transformation and any such review could be informed by the Local Policing Review 2018 through which the PSNI and Policing Board are seeking views on how community and key stakeholders would prioritise the allocation of resources across local policing.

However, there also needs to be more emphasis on realising the benefits of digital technologies, data analytics and AI as well as developing more preventative measures (for example, problem-solving justice for addicts) that would help rather than punish with a focus on rehabilitation, resettlement and reintegration into society. A number of pilots around alcohol, drugs and domestic violence are already up and running in NI that will, in the longer-term have an impact on avoiding court and reducing legal aid and prison numbers while facilitating the realignment of resources.

The Ards Magistrates Court Indictable Cases Pilot has produced promising results stemming from changes to how cases were investigated and prepared and more effective collaboration between police and prosecutors.
With the exception of legacy and potential future implications arising from the UK’s exit from the EU, the pressures on the justice system in NI are no different to other jurisdictions worldwide faced with increasing public expectations, public scrutiny and changes in crime profile. In response there are numerous examples of harnessing digital technology and introducing more innovative measures to help create more sustainable policing, court and prison systems.

**Option 1: Optimising the use of advanced and digital technologies in policing and justice**

Across the UK there is a significant shift from a policing delivery model reliant on ‘old school’ infrastructure and processes: extensive networks of police stations, manual processing of intelligence, face-to-face briefings, paper-based case files and forensic capabilities based on physical evidence to the use of advances and digital technologies. While physical evidence is, and will continue to be, vital digital technology has the potential to significantly improve efficiency. In New Zealand, for example policing uses data, crime-science and problem-solving approaches to ensure that the force has a deeper understanding of crime. The new operating model is a key mechanism used to emphasise prevention and early intervention and supports data-driven practices.

Cognitive AI can also be used to reduce the number of police responses through the more efficient deployment of resources, (that is, 60% of police calls do not require an immediate response or indeed a police response at all). There is also a need to look for opportunities for automation in policing (including fire arms licensing) and to challenge common beliefs that 999 is the default number, that a person needs to answer the phone and that citizens should always get a physical response.

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**Sussex: Demand handling**

Whether in protecting vulnerable people, delivering more armed officers to address national threats or policing an international airport with over 40 million passengers a year, Sussex Police faces unprecedented demand for its services. Sussex had to address these challenges while finding around £60 million in savings. The force felt that simply cutting existing services would not work; meeting this goal would require a bold transformation to deliver better services for less money.

The approach to local policing was redesigned. This included looking at how 2,500 staff and officers patrol neighbourhoods, respond to 50,000 calls per month and begin investigating the 100,000 reported crimes per year. The new approach improved services and, crucially, allowed officers to focus their attention on where it is more urgently needed. The development of a new public-facing team known as the Resolution Centre enabled demand reduction on front-line teams by handling jobs remotely and empowering call handlers to make more robust decisions.

When responding to calls, the emphasis was changed from primary to priority whereby police officers are sent to emergencies and those situations requiring the expertise and authority of the police. Investigative support units follow up on the police response to, for example, collect evidence and take the report. Non-policing calls are diverted by the Resolution Centre to other departments and service providers where they can be safely and appropriately handled by other means. No resident is left without a service option, but it may not be a service provided by the police.

Demand analysis identified that the Resolution Centre could result in 49,000 fewer deployments, tasking and scheduled appointments, which is equivalent to approximately 21% of all current deployments.
Other jurisdictions have also made inroads into the use of digital technology. In 2011, for example British Columbia became the first province in Canada to institute ‘paperless trials’. In the US writs can be filed online and the filing of small claims online has been implemented in British Columbia and Ontario.

“NI has high reoffending rates – over a third of those released from prison reoffend within a year.”

Quebec: Modernising the justice system

An additional $500 million is being invested to modernise justice over the next five years by introducing innovative practices; bringing the system into line with the latest technology; and enabling principal justice stakeholders to exchange information electronically.

The technological solution includes a portal offering different online services such as remote filing of documents such as writs and exhibits, digital management of court records and courthouse hearings, as well as modernising the required technological infrastructure such as telecommunications and records and storage management.

The innovative practices include:

- allowing offenders to take responsibility for their actions by, for example, community service, compensation or mediation;
- changing some police practices to accelerate and standardise the way cases are processed;
- encouraging negotiation prior to a penal hearing to optimise court time;
- extending the use of videoconferencing;
- offering those accused of certain infractions the possibility of receiving an offer to settle as soon as they appear before the court; and
- introducing a technological platform that will provide citizens with better access to a centralised source of legal information.
Option 2: Optimising the use of advanced and digital technologies in prisons

Multiple reports have flagged that the cost of incarceration in NI is significantly higher than elsewhere in the UK. In 2016/17 the average direct annual cost per prisoner was £53,408 compared with £22,933 in England and Wales and £35,325 in Scotland. In addition, NI has high reoffending rates – over a third of those released from prison reoffend within a year. The Department of Justice recently published ‘Prisons 2020 The Way Forward’ aimed at making the community safer by supporting and challenging people to change. It sets out strategies for prison personnel and infrastructure and, importantly how best to address the rehabilitation, resettlement and reintegration of offenders into society and the difficult issues of addiction and mental health. The Director General has stated his ambition for the NI Prison Service as an exemplar of good practice and believes that digital technology is an area which could contribute to improving prison standards and the effectiveness of prison services.

Digital prisons can help curb prison crime and help rehabilitation as can be seen in some other jurisdictions.

England and Wales: Digital prisons

In England and Wales the Ministry of Justice has developed a transformation programme to examine ways in which digital technology can help improve safety in prisons, provide self-service to prisoners and create a better overall environment providing better outcomes.

The programme will introduce prisoner self-service, using a system that includes biometrics, so that prisoners become more responsible for their day-to-day life through the technology. For example, they can order meals in advance, small items from prison shops and manage their own account information. This can help avoid a flashpoint where a prisoner may change their mind and take a meal meant for another - recording the order on a digital system, rather than in a mound of paper that no-one can check, can make it easier to manage and diffuse any tensions.

Prison officers will benefit by the removal of application forms from many processes, reducing the likelihood of errors. This is another potential flashpoint, and it also gives officers more time to improve relationships with prisoners.

A cyber operations service will monitor and allow access to the relevant web pages, without allowing users to stray into other areas and communicate with the outside world. Other technology is being trialed to detect and block mobile phones in prisons alongside an initiative to roll out in-cell telephony. This means that prisoners can keep in contact with their families with greater privacy and without having to wait on an available phone in a communal area (that is, another flashpoint). In-cell telephony has been highly effective in Germany resulting in improved prisoner behaviour.

“Digital technology is an area which could contribute to improving prison standards and the effectiveness of prison services.”
USA: Prisoner rehabilitation

Technology can boost prisoner education and also assist with mental health issues. In the US there are ten times the number of people with mental illnesses in prison than in all of the country’s mental health hospitals combined.

Educational technologies have been developed on tablet-based systems, which can provide a wide range of educational resources from college accredited courses to anger management to financial literacy. They can include assessment tests and provide small rewards for achieving goals, such as unlocking a song to listen to. Such a system is being trialled in Alabama, helping prisoners improve themselves and also reducing inmate violence by addressing isolation and boredom.

Virtual Reality (VR) is being trialled in Colorado to help prepare inmates for life outside prison. VR enables a prisoner to be transported anywhere such as a family living room, grocery store or workplace, where they can practise simple tasks (for example, doing laundry) to more difficult social skills (for example, dealing with family or job conflicts). It is too early to appraise the success of the programme as the juveniles involved have not yet been released. However, this 360-degree immersive experience is seen as being more powerful than other education or training platforms. 32 lessons have been created so far that cover basic activities in the outside world. VR headsets provide the lessons which are then reinforced through class practice with social workers providing support.

In addition the Stormont House Agreement published in 2014 contained proposals for dealing with the legacy of the past including the establishment of four new legacy institutions. A Historical Investigations Unit would take forward outstanding investigations into Troubles-related deaths including deaths that were being examined by the PSNI Historical Enquiries Team and required further investigation. Addressing the Legacy of Northern Ireland’s Past was issued for consultation from May – October 2018. The way forward will depend on consultation feedback. However, it is important that this very difficult issue is resolved as the current approach is not working effectively and the PSNI and the criminal justice bodies are not resourced or set up to address the past.

“In the US there are ten times the number of people with mental illnesses in prison than in all of the country’s mental health hospitals combined.”
The budgetary resources available to decision-makers are likely to remain relatively flat for the foreseeable future. Improving financial sustainability is therefore a key issue given the increasing pressures on public services and the requirement to balance the budget in the short-term.

**Option 1: Addressing financial challenges**

NI is not the only place facing significant challenges regarding the sustainability of public services and the balancing of its budget.

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**Republic of Ireland: Fiscal consolidation**

The Republic of Ireland faced a much bigger challenge when they suffered a severe economic and financial crash in 2008. The table at Annex 2 provides a summary of the fiscal consolidation initiatives which the Irish Government implemented during the period 2008-2014. During this period there were nine budgetary events which resulted in €30 billion of consolidation measures. Two thirds of the adjustment fell on expenditure with the remainder being tax measures. The table highlights the difficult decisions the Irish Government had to take over a number of years. It is worth remembering that the Irish Government had tax-raising powers and the magnitude of the problem was much greater than that facing NI, but it is informative to see the quite structured approach that was adopted.

As well as the required EU surveillance the Irish Government established an independent Fiscal Advisory Council, and this was placed on a statutory footing in December 2012 by way of the Fiscal Responsibility Act. The Council’s primary purpose was to provide an independent assessment of official budgetary forecasts and proposed fiscal objectives.

By 2016 the economic and fiscal landscape had improved dramatically with real GDP growth of 5.2% and the government debt was reduced to 75.4% of GDP.
The 2015 Fresh Start agreement in NI also recognised the merits of seeking expert financial and budgetary advice. It reported the Executive’s plans to establish an advisory Independent Fiscal Council that would:

- prepare an annual assessment of the Executive’s revenue streams and spending proposals and how these allow the Executive to balance its budget; and
- prepare a further annual report on the sustainability of the Executives public finances, including the implications of spending policy and the effectiveness of long term efficiency measures.

This Council has yet to be established.

The other devolved regions of the UK are also facing budgetary challenges as indeed are most local authorities. Observations indicate that there is no consistent or standard approach to alleviate the pressures to improve the sustainability of public services as each region has adopted an approach that reflects its own priorities and powers. Scotland has taken the most proactive approach with a Budget Process Review Group reporting its findings last year, recommending that the Scottish Parliament should have a greater influence on the formulation of the Scottish Government’s budget proposals; improve transparency and raise public understanding and awareness of the budget; respond effectively to new fiscal and wider policy challenges; and lead to better outputs and outcomes as measured against benchmarks and stated objectives. Specifically the Group has recommended an outcomes-based budget scrutiny approach which will have a long-term outlook and focus more on prioritisation, addressing fiscal constraints and the impact of increasing demand for public services.

**Option 2: Addressing the implications of the cost of control of some arms’ length bodies**

Decision-makers may wish to consider the ‘cost of control’ around some arms’ length bodies. Arguably there are currently hundreds of millions of pounds that cannot be accessed because borrowing by the relevant body would be on balance sheet. There is, for example a huge maintenance and investment backlog in NI Water. If some control were to be relinquished it could allow any borrowing to be off balance sheet and let NI Water have access to the bond markets. However, an income stream would be required. Another option would be mutualisation which was introduced in 2001 in Wales. The same cost of control consideration could be applied to Belfast Port and the Housing Executive.

“**The other devolved regions of the UK are also facing budgetary challenges as indeed are most local authorities.”**

**Wales: Model of mutualisation**

Welsh Water is owned by Glas Cymru, a single purpose company with no shareholders which is run solely for the benefit of customers. The business model aims to reduce Welsh Water’s asset financing cost, the water industry’s single biggest cost, and improve service delivery by employing the best control partners for each distinct activity of the business. It was set up in 2001 and financed via a bond issue of £1.9 billion – one of the largest ever in the UK. Under Glas Cymru, it assets and capital investment are financed by bonds and retained financial surpluses.

Efficiency savings to date have largely been used to build up reserves to insulate Welsh Water and its customers from any unexpected costs and to improve credit quality so that the cost of finance can be kept as low as possible in the years ahead.

Wales is no longer the home of the most expensive water in the UK and there have been big improvements in sewage treatment and the quality of beaches. There has been huge investment in new plants and in real terms water charges are coming down.
Option 3: Increasing the regional rate and reducing or removing rates relief

The Department of Finance’s Budgetary Outlook sets out a range of options aimed at addressing the major budgetary issues. These have, for the most part, been reflected in the paragraphs above. The remainder which relate to rating as a means of generating income are set out below.

- Increasing the Regional Rate above inflation (for example every 1% increase applied to both the domestic and non-domestic Regional Rate would provide approximately £7 million, which for a domestic increase only, could equate to approximately 19 pence per week for the average household). It would be for decision-makers to consider whether any increases should apply to both sectors and to what extent.

- Removing the Rates Support Grant which provides support to less well-off councils in NI providing key services would save, based on 2017-18 levels, £17.6 million per annum.

- The business rates system provides 70% industrial de-rating to 4,400 manufacturing properties at a cost of about £58 million per annum. The level of relief could be reduced or removed entirely.

- The small business rate relief scheme costs about £17.5 million per annum. The level of relief could be reduced or removed entirely.

The UK High Streets Minister, Jake Berry MP announced the appointment of a panel of experts on 16 July 2018 to diagnose issues affecting the health of high streets and advise on the best practical measures to help them thrive now and in the future. The panel is looking at what consumers and local communities want from the high street, considering the current challenges and coming up with options to ensure that town centres remain vibrant. Decision-makers may wish to consider the panel’s findings when it reports.

Option 4: Integration of shared services

Globally governments continue to face significant, sustained budget constraints due to escalating costs in areas such as health and education. It is no longer enough therefore to make one-off cuts or tweak the budget around the edges. A transformational shift in the approach to cost management will be necessary in the years ahead. The most impactful is likely to be next-generation cost management including digital cost solutions, analytics and cognitive solutions and digitising government which has been discussed throughout this report. One other such approach is the integration of support services within and across agencies to achieve maximum economies of scale.

The public sector shared services agenda is being driven forward in NI through the Public Sector Shared Services Programme and involves 5,500 people across the NICS, the Health and Education Authorities and Further Education sectors and expenditure is in the region of £500 million per annum. There is a clear appetite for greater collaboration and considering new ways of delivering services. Benchmarking has identified a numbers of areas where costs and the quality of service delivery can be improved through extending the footprint of shared services and improving, year on year, the efficiency of existing shared services in areas such as HR, payroll, finance, procurement and IT. Specific plans have been developed and goals set for each of these four sectors which will help drive improvements in shared services delivery and promote a more joined up approach to delivery.

“The public sector shared services agenda is being driven forward in NI through the Public Sector Shared Services Programme and involves 5,500 people across the NICS, the Health and Education Authorities and Further Education sectors.”
Conclusion

It is clear from the case studies presented in this section that governments all over the world – in Australia, Canada, Europe, South Africa and the United States – have had to make bold decisions to address their budgetary deficits and improve the quality and sustainability of their public services. In doing so, these governments have succeeded in transforming the way they do their own business and demonstrated to others what can be achieved with positive leadership and innovative thinking. Drawing on this success Section 4 considers the way forward for NI.

“These governments have succeeded in transforming the way they do their own business and demonstrated to others what can be achieved with positive leadership and innovative thinking.”
Way forward

Introduction

This report presents a menu of options that could help address NI’s unsustainable finances and public services based on how other regions across the world have successfully tackled similar challenges. Some of the options will be challenging and some will be more publicly and/or politically acceptable than others. It will be important for decision-makers, therefore to consider each option on its merits and success elsewhere and prioritise those that are deemed to be worthwhile pursuing in the short, medium and long-term. The report is not a quick fix but rather an insight into what is possible as a means of alleviating the major budgetary and service delivery issues in the immediate and longer-term.

The State of the State 2018-2019 report identified a number of themes which, although not mutually exclusive, provide a useful platform on which to build the basis of a practical way forward.

Local government cuts are having unintended consequences across the system.

In many areas services are being adversely impacted by the funding shortfall. The cost of service delivery is also rising more rapidly than the budget available. Interestingly however, based on the IPSOS/MORI survey results over three-quarters (78%) of people in NI say they are not affected by spending cuts so far and only 17% believe there is a real need to cut spending on public services to pay off the national debt. In addition, people in NI believe, more than any other region in the UK, that health and education spending should be protected but the percentage who think that policing should be protected is the lowest. This may be reflective of the different views on policing in some communities. Nevertheless, there is an immediate need to establish how best to enhance the available budget as well as better managing demand for public services and reducing costs.

“There are numerous examples throughout this report of ways in which decision-makers can ease the short and long term pressures by generating much-needed income to enhance the existing budget through the introduction of new or additional charges and these would help to ensure that a balanced budget can be produced.”

There are numerous examples throughout this report of ways in which decision-makers can ease the short and long term pressures by generating much-needed income to enhance the existing budget through the introduction of new or additional charges and these would help to ensure that a balanced budget can be produced. These include some potentially controversial proposals such as tolling, increasing household charges, seeking new tax raising powers, and a plethora of ‘austerity’ type measures. It is interesting to note that 61% of those surveyed by IPSOS/MORI believe that government services should be extended even if it means some increase in taxes. However, the idea of charging for some services is less acceptable in NI than elsewhere in the UK.
The Department of Finance’s Briefing on Northern Ireland Budgetary Outlook 2018-2020 also sets out challenging proposals. In health and social care, for example this would include charging for some services and prescriptions. Options in the education sector include increasing student fees, reducing annual teacher training intake and removing the Educational Maintenance Allowance. Other services could also be affected such as changes to concessionary fares, extension of controlled parking zones, charging for home to school transport and increasing Housing Executive rents. Inherent in all of this is the need for more efficient service delivery and the use of new technologies by government bodies. Difficult as it may be decision-makers would wish to consider whether charging those who can afford to pay, whilst protecting the most vulnerable, is worth pursuing. If so the benefits need to be clearly articulated and communicated to the public and decisions made quickly to ensure there is no unnecessary delay created by long lead-in times and the legislative process.

**Thriving local economies are vital and need to be inclusive**

“We prosper through a strong, competitive, regionally balanced economy” is one of the outcomes contained in NI’s draft Programme for Government Framework 2016-21 which has already attracted widespread support as a way of targeting those initiatives that will make real improvements to people’s quality of life and societal wellbeing. This is particularly pertinent given that the NI economy has not grown over the last four quarters and is 6.3% smaller than in 2007. Decision-makers may wish to consider a range of options that, if combined, could contribute to addressing this challenging issue. For example, the importance of infrastructure in boosting local economies cannot be underestimated. It will be essential, therefore, to ensure that the implementation of the draft Programme for Government is supported by a wide range of strategies including an industrial strategy and a longer-term infrastructure strategy and investment plan that prioritises investment moving forward. This could help improve NI’s economic competitiveness.

Government also has to be more entrepreneurial and business-orientated to help secure inward investment opportunities. The interface between government and business is vital therefore and reform of regulation and testing innovative products and services in a controlled environment could help in this regard. Across the world the most successful initiatives (for example, smart cities) are those which have effectively broken down the barriers within government, between central and local government, with the private sector, business, the voluntary and community sectors and the citizen. New Zealand’s Better for Business programme has enhanced economic development and reduced the cost to business through collaborative working and joined-up services. It is also worth noting that people in NI, based on the IPSOS/MORI survey results, are more positive about the benefits of businesses delivering public services and the outcomes that would be achieved. More than 60% also think that the public sector, businesses and charities working together would lead to better quality services, improved cost effectiveness and accountability to the public.

Attracting inward investment is contingent upon having a workforce with the appropriate skills to undertake higher value jobs. Remodelling teacher education and development could help in this regard as well as aligning pathways to work with a future-orientated, knowledge and technology driven economy. On the wider issue of inclusivity, pathways to work can help break down inequalities by creating an effective education and employment system whereby children and young people can move successfully into the world of work. There are also many case studies where governments elsewhere have adopted innovative approaches to tackling inequality. Initiatives such as early intervention and focusing on vulnerable communities have been very successful such as the Connecting to Care programme in Canada and supporting vulnerable families in Denmark. Furthermore, transforming social housing could help tackle the problems in the sector given that housing can be a significant factor in inequality.

“**Attracting inward investment is contingent upon having a workforce with the appropriate skills to undertake higher value jobs.”**
The world has become more competitive and less predictable. Political stability and a strong economy are prerequisites when it comes to competing globally for business and attracting foreign investment. Such competition also applies to universities in terms of their students, academic talent and research funding. Innovative approaches to improving the sustainability of the higher and further education sector will therefore be key in, not only retaining local talent, but creating an environment whereby NI can keep pace, and compete with, world class academic institutions in attracting talent and funding.

The spending outlook means tough choices ahead and analogue processes are increasingly called out as technology transformation continues. Generating income is a short-term ‘fix’ to address the current budgetary crisis. However, on the basis that future spending reviews will be characterised by tough decisions on spending priorities there is a need to look for innovative longer-term solutions to ensure longer-term sustainability. In doing so, decision-makers could be pushing at an open door as feedback from public sector leaders in The State of the State suggests that analogue processes are increasingly being called out as the potential of technologies and the fourth industrial revolution are recognised as a means of reducing costs and delivering better services for citizens.

Section 2 of this report looked at the opportunities presented by emerging technologies and digital service provision that, if adopted could transform the delivery of public services in NI, change behaviours and the interaction between government and the citizen, and the interface between government and business. Furthermore, the geographic and demographic size of NI could work to government’s advantage in trialling or piloting innovative programmes.

Delivering the digital state would help create a smart region and transform big spending areas like health, education, infrastructure and policing and justice. However, it would also mean developing sustainable financing models that would require private and non-profit sector participation. Again decision-makers would have to make bold choices about funding and financing on the basis that government would be unable to advance such an agenda without the necessary upfront investment and funding.

Tough choices will be needed around potentially controversial options such as rationalising the schools’ estate, transforming the education and policing and justice systems, divesting assets, and potential mutualisation of NI Water. These are challenging issues but the fact they have been successfully implemented in other countries should give decision-makers confidence. It is also worth noting the hard choices that others such as the ROI had to make and the resulting positive outcomes.

“This report looks at the use of behavioural science and, through the use of effective digital tools, the impact of ‘nudging’ as a way of changing citizen behaviour. There is also a growing demand for citizens to take more responsibility.”
Public sector talent needs to be better managed, developed and liberated.

Much of what is being proposed in this report is underpinned by next-generation technologies and innovation. If adopted, the big agenda options will require next-generation leaders who can take NI to a new level (that is, people who understand the new world order which is digital, continuous and 24/7). Government and, indeed, the private sector need leaders who are prepared to disrupt traditional business models, to do things differently; leaders with a positive, innovative, can do and courageous mindset; and leaders with the vision and energy to make NI a desirable place to live, work, invest and visit.

Developing the new generation of leaders will also require significant emphasis on the importance of collaboration and partnership which is at the heart of the draft Programme for Government. This is reinforced by the IPSOS/MORI survey results which show that, in NI about two thirds of people think that different public services working together would improve the quality of public services, their cost effectiveness and accountability to the public. However, collaboration requires a major behavioural shift and working in new ways that cut across traditional boundaries. This is challenging but achievable where those charged with delivering services are focused on the desired outcomes. There is also an opportunity to draw on the considerable success of the collaborative approach elsewhere.

Accelerating delivery will also be a key issue for the new generation of leaders who will need the determination, capability and tools to drive transformation at pace. In this context the Phakisa approach in South Africa provides a useful framework that decision-makers may wish to consider.

“Developing the new generation of leaders will also require significant emphasis on the importance of collaboration and partnership which is at the heart of the draft Programme for Government.”
South Africa: Operation Phakisa

The South African Government, upon acknowledging the challenges facing the country, including widespread inequality, societal division and an economy that was overly unsustainable and resource intensive, sought a mechanism to redress these challenges. A National Development Plan (NDP) was developed in response and it identified the catalysts for the much-needed change. Whilst the NDP would enable the state to make a significant impact, the pace at which it was being rolled out warranted an innovative solution to speed up implementation. The South African Government adopted the Malaysian Big Fast Result methodology which emphasised the achievement of impactful results with quick implementation. The methodology was first applied very successfully in the delivery of Malaysia’s Government and Economic Transformation Programmes. It was renamed ‘Phakisa’ in the South Africa context which means to ‘hurry up’ and launched in 2014.

The Phakisa approach is premised on leveraging expertise and interactions from government, business, academia, trade unions and the community to come up with solutions and share best practice as to how to fast track the delivery of NDP priorities. These interactions were critical in that they helped foster the much-needed buy-in, collaboration and the cross-sector partnerships needed to drive implementation.

A number of Phakisa labs were organised covering areas such as agriculture, health and education. The labs focused on detailed planning, setting clear targets, tracking progress and making results public. This methodology has helped transform delivery in South Africa. It represents an agenda of change which delivers tangible results, whilst the labs act as a platform on which different stakeholders can come together and develop fast track solutions. 109 initiatives were identified through the labs as a means to achieving the goals set out within the NDP.

One priority area – Ocean Economy – resulted in 36 catalyst projects being established with £37 million of funding committed (of which £13 million was from Government). 1,806 new jobs were created in 2016 in this one sector.

A £750 million ‘business-led’ fund to support high potential SMMEs and a ‘budget tips’ competition involving engagement with young people to suggest ways of improving the economy is also referenced in the 2018 South African budget.

Conclusion

The growing demand for better public services, the constraints of limited finances and the fast-moving pace of emerging technologies are creating huge challenges and opportunities for governments worldwide. The menu of options in this report have drawn on the innovative approaches adopted by other administrations and are presented as a framework for improving the long-term sustainability and funding of public services. It is commended to decision-makers for further consideration.
Annex 1: Economic and financial context

Figure 3: UK Spending per head Country Comparisons

Figure 4: UK Spending per head by Function

ONS, Country and Regional Public Sector Finances for year ending 2017, August 2018
HM Treasury, Public Expenditure Statistical Analyses, July 2018
Annex 2: Republic of Ireland’s fiscal consolidation initiatives

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<td>Unemployment Benefits (various rate cuts)</td>
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<td>Reduced non-core pay in areas such as overtime, agency &amp; allowances</td>
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<td>Estimated payroll saving from voluntary exit package in HSE</td>
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<td>Reduced Maternity &amp; Adoptive Benefit</td>
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<td>Third Level funding reduction Staffing</td>
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Total €18.8bn | €11bn | €29.8bn
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