States of Jersey

Draft Digital Policy Framework

Contents

The Vision for Jersey's Digital Future

Technology is evolving at lightning speed, opening up new opportunities and driving human progress. This isn't just a theory, it's happening right now: In primary school classrooms, children are writing code and using advanced technology to learn new skills. Industries that didn't exist just months ago are now thriving and performing global business at the click of a button. Exciting new innovations, from the Internet of Things to Virtual Reality, are creating previously unimagined opportunities for government, businesses and society.

So where will Jersey be in another ten years?

With the pace of change, this is a difficult question to answer – in the same way ten years ago we could not have imagined that a majority of people would be using smart phones on a daily basis, or that there would be an app 'for everything'. However, what we can – and must – do is prepare to take advantage of the exciting, shifting technology landscape and to embrace future change.

If our government, our businesses and our people are 'digital', we will have the flexibility to do whatever is needed to thrive in the next era of the technology revolution.

Digital Government

Whether you're making a planning application, accessing and controlling your own health records, or applying for a school place for your child, the process will be simple, intuitive, and fast.

Secure online identities will give Islanders the option to vote online. Islanders will maintain full ownership of their data, and will only have to supply information once to government through a single customer portal.

Government will use technology internally far more effectively to ensure it is joined up and efficient. We will manage data much more effectively to improve government services, promote transparency and allow regular anonymised datasets to be released to the private sector to fuel innovation. Government will also be maintaining its registries on distributed ledgers, decentralising the data to improve efficiency.

Public services will be user-centric and efficient for the taxpayer. Government and eGovernment will be one and the same.

Digital Economy

Digital technology will be the backbone of Jersey's economic activity, underpinning a thriving and competitive professional and financial services sector. We will have also seen strong growth in the digital sector, diversifying Jersey's economy – and this will continue.

Jersey will be a world-leading jurisdiction for internet connectivity, providing future-proof fibre connections with minimum Gigabit speeds to every single Islander, and adopting 5G mobile technology.

Digital innovation will be a central part of our entrepreneurial private sector, giving Jersey an international reputation for expertise in digital identity, cryptocurrencies, cyber security, data protection and distributed ledger technology.

Digital will be the default format of all economic activity on the Island, giving Islanders the power to pay for products and services through online platforms. As a testbed Island, we will have welcomed cutting-edge technologies, supporting some of the big names of the future to develop in Jersey.

Digital Society

Islanders will be given the skills and confidence to benefit from new technologies. Our schools, library and charities will capitalise on strong digital infrastructure to use the latest technology to teach digital skills to Islanders of all ages, giving them the education they need to prosper in the job market of the future.

Through MedTech development, Islanders will be more empowered to manage their own health and lifestyle.

Homes will be smart and connected, allowing us to control everything from our central heating to our energy usage through our phones and other devices.

'Smart Jersey' will become a reality, with real-time information helping us to manage waste disposal, traffic congestion and energy usage in the most efficient way possible.

By focussing on the objectives outlined in this framework, and by evolving and adapting these in a flexible and responsive way, we can achieve this vision – but we need your help to achieve it.
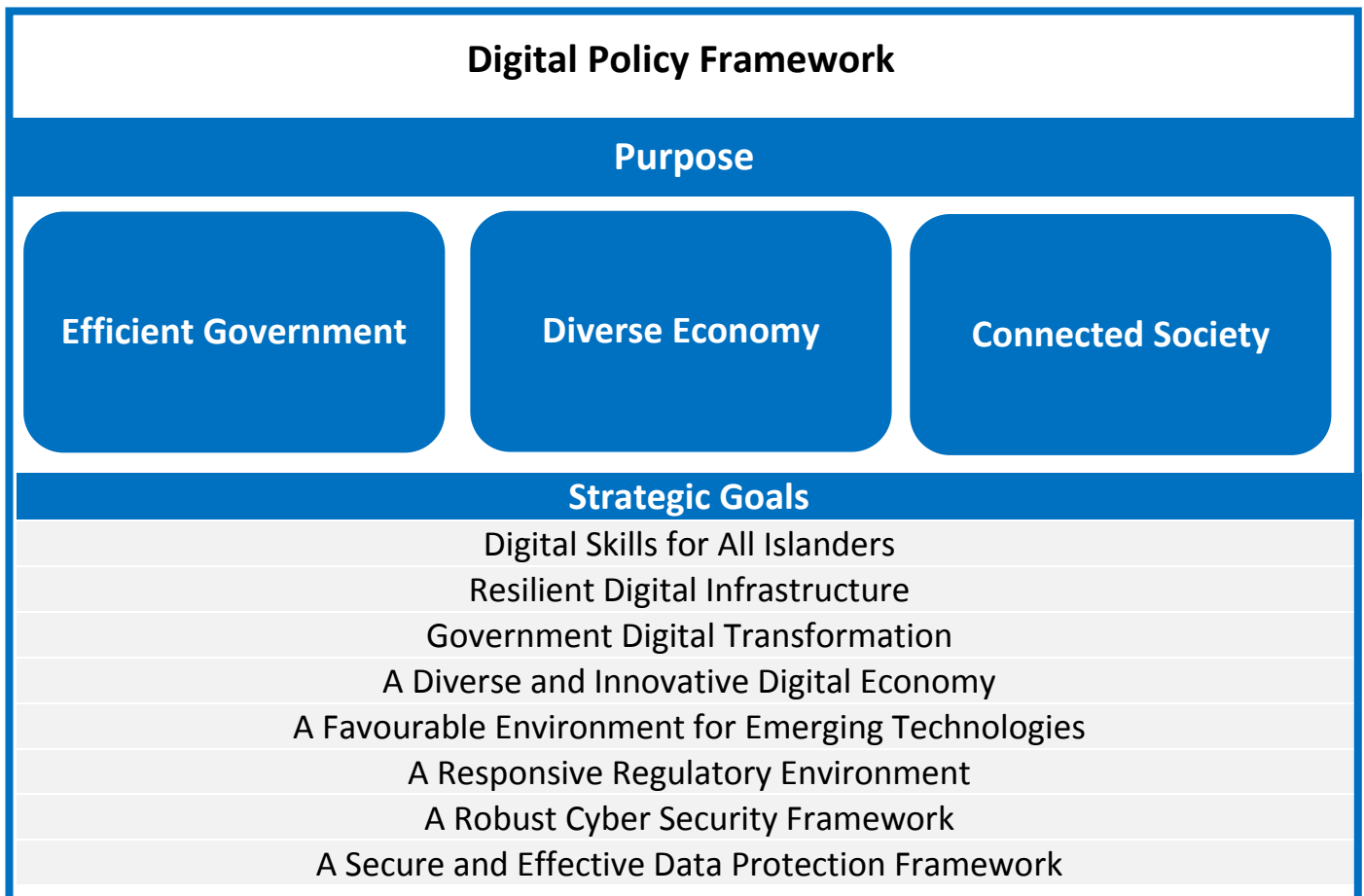
Introduction

The States of Jersey Strategic Plan for 2015-18[1], produced by the Council of Ministers, outlines objectives that will deliver better lives for Islanders and a better future for Jersey. These include:

- Increase the performance of the local economy, encourage economic diversification and improve job opportunities for local people

- Provide a first class education service, supporting the development of skills, creativity and life-long learning

- Improved, more productive, and sustainable public services

What is the Digital Policy Framework?

This first draft of the Digital Policy Framework is designed to support these objectives, and create a conversation about government strategy for all things 'digital', in order to develop and publish a clear Digital Policy Framework for Jersey in autumn 2016. It is the first time that government has brought all of its digital ambitions together in one place, and it impacts on all parts of our government, economy and society.

Digital Policy Framework

Purpose

Efficient Government	Diverse Economy	Connected Society

Strategic Goals

Digital Skills for All Islanders

Resilient Digital Infrastructure

Government Digital Transformation

A Diverse and Innovative Digital Economy

A Favourable Environment for Emerging Technologies

A Responsive Regulatory Environment

A Robust Cyber Security Framework

A Secure and Effective Data Protection Framework

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[1] States of Jersey Strategic Plan 2015-18, https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=1424

The **purpose** of the Digital Policy Framework is to ensure Jersey can capitalise on the opportunities offered by digital technology to grow an efficient government, an innovative economy and a connected society:

Efficient Government – Create an efficient government, where high-quality public services are simply and effectively delivered through digital channels.

Diverse Economy – Support a diverse and innovative economy that develops and uses digital technology to drive economic growth and employment.

Connected Society – Foster a digitally connected society in which all people can access and benefit from the latest technology, and that provides a digitally skilled pool of employees.

The Digital Policy Framework will meet its purpose through **eight strategic goals**.

For each of these strategic goals, we lay out what Jersey's advantages and challenges are and present a series of **objectives** that will help Jersey grow on its advantages and overcome its challenges.

Each section also contains a number of specific consultation questions, and these questions are collated at Annex 1. This framework is for everyone, and as such government wants everyone to have the opportunity to comment before the final interactive version is published in autumn 2016.

To find out how to submit a response to this consultation, go to
http://www.gov.je/Government/Consultations/Pages/DigitalPolicyFramework.aspx

Clearly not all of these things can be achieved by government alone – and none of them through just this framework. The strategic direction set in this framework will be led and developed by teams from across government, in alignment with other key government strategies. Importantly, the success of many of the objectives set out in the Digital Policy Framework will be reliant on the activities and efforts of non-government partners: Digital Jersey, regulators and, crucially, the private sector in Jersey.

Why is it important?

Efficient Government

We have entered an age in which delivering services digitally is the norm. However, a number of Jersey's key government services are still delivered 'over the counter' or by post.

The eGovernment (eGov) programme will transform the way Islanders interact with government, improve the quality of services and achieve greater public sector efficiency. This is necessary to bring government into the digital age, and will not only see more services coming online, but it will place a greater emphasis on user-centred service design, openness and transparency, enhanced use of data and a more joined-up government.

Innovative Economy

As digital technologies evolve, countries around the world are adapting to secure the future of their economies. As a world-leading International Finance Centre, Jersey needs to capitalise on finance technology to remain competitive in this field.

In addition to building on our strengths, government has a responsibility to ensure our economy is robust and protected through increased diversification. Jersey's Digital Sector currently employs over 2,250 people – 4% of employment in Jersey.[2] This places Jersey close to the UK's 4.4% rate.[3] It is a good start – but government recognises the need to act quickly. The advantages that make Jersey's finance sector so competitive – low and simple tax rates, a strong independent legal system, a business-friendly government and expert professional services – all apply to the digital sector too. However, there is more to be done to ensure the Island's skills base, digital infrastructure and regulation is the best it can be to boost the Digital Sector as an additional pillar of Jersey's economy.

Connected Society

Government has a responsibility to ensure every Islander has the skills they need to thrive in a digital society. We must stop thinking about digital as a separate agenda. It underpins every part of society, and will soon be the main – and sometimes only – way to interact with businesses and government.

Initiatives such as the Education Department's 'Thinking Differently' strategy are crucial in ensuring Jersey's young people will be confident users and creators of digital technology.[4] In addition, Jersey Library and Digital Jersey provide important digital learning opportunities for all Islanders to ensure nobody in Jersey is left behind.

What will success look like?

A detailed Action Plan will be developed following the consultation that will set out a series of more concrete and measurable actions underneath each objective.

The success of the Digital Policy Framework and subsequent Action Plan will be measured by benchmarking and tracking progress against a number of criteria, covering digital skills, the size, strength and diversity of the digital economy, telecommunications figures and more.

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[2] Population Office Statistics, Standard Industrial Classification (SIC) codes analysis of Digital Sector. Digital industry categories in Annex 4 below

[3] UK Department for Culture Media & Sport, Digital Sector Economic Estimates (2016) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/503666/Digital_Sector_Economic_Estimates_-_January_2016_Revised.pdf

[4] Education Department, Vision for IT in Education 2013-2015 – 'Thinking Differently', https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=985

Over the consultation period, government will be collating existing data and identifying where there is a need to commission new research. This will provide us with the raw material to create a 'digital dashboard', which will allow us to track progress and compare Jersey's digital development to other jurisdictions.

'Success' will be the Digital Policy Framework in action, being applied across every area of government, every industry and in the lives of every Islander.

Strategic Goals

1. Digital skills for all Islanders

2. Resilient digital infrastructure

3. Government digital transformation

4. A diverse and innovative digital economy

5. A favourable environment for emerging technologies

6. A responsive regulatory environment

7. A robust cyber security framework

8. A secure and effective data protection framework

Digital Skills for All Islanders

People have always been at the heart of the Digital Revolution. As new disruptive technology emerges, some jobs will inevitably be at risk, but new opportunities will emerge. Jersey needs a workforce fit for tomorrow's economy, with enough highly skilled workers to fill those new jobs.

We must continue to develop our home-grown talent: ensuring that technology skills are fundamental to the school curriculum, using digital technology to improve the quality of education, and providing ongoing accessible digital training opportunities for all Islanders as the job market evolves.

We must also provide a short term boost to Jersey's digital capability by attracting the brightest and best to the Island. A population with digital skills will be a more connected society, and one that has access to the wealth of societal benefits that come from digital technology.

Advantages and Achievements

- Core computing curriculum in place for all children up to Key Stage 3

- Community digital skills learning through Digital Jersey and Jersey Library

- Renowned skills base in professional services to support the growth of digital businesses

Challenges to Overcome

- Short term deficit of Islanders with advanced digital skills

- A perceived lack of graduate opportunities in the Digital Sector, when compared with the Finance Industry

- A concern about the availability of licences for digitally skilled workers

Objectives

1. **Ensure all Islanders have the ability and confidence to use digital technology**: Everyone in Jersey needs to have the skills to reap the benefits of digital technology. Digital Jersey and Jersey Library will continue to upskill the community in digital skills, with exciting opportunities, including coding programmes, one-to-one entry level IT training sessions and European Computer Driving Licence training and testing. Every Islander should be confident when using technology. Whether that means taking advantage of online government and parish services, such as completing your annual

rates returns online; using next generation medical technology to monitor your own health; or engaging with social media.

2. **Work with schools and businesses to develop a pipeline of future digital leaders**: Creating an education system that works closely with the private sector, teaches advanced digital skills and inspires the digital leaders of tomorrow is essential. A new computing curriculum is in place in Jersey's schools up to Key Stage 3, with coding being taught from primary school. In addition to this, the creative use of cutting edge technology is becoming increasingly integrated into daily school life, and high quality professional development is increasingly available for teachers. Government will continue to work with schools and the private sector to ensure our education system provides the skills necessary for a diverse digital economy.

3. **Upskill Jersey's workforce with digital skills and qualifications**: Jersey's economy is built around finance and professional services – all of which already require a good baseline in workplace digital literacy, so we are not starting from the ground floor. Yet as business processes become increasingly digitised, a good understanding of IT is becoming essential in almost every job. The Education Department will work with Digital Jersey to ensure our workforce has the skills needed for the digital age. Government will also continue to work with the local private sector to ensure Corporate Social Responsibility projects focussing on digital skills development play a role in delivering this objective.

4. **Attract and retain off-island digital talent to meet short-term skills demand**: In the long term, government's ambition is to meet the skills demands of the digital sector in Jersey through a sufficient supply of skilled local people. However, to attract and grow digital businesses, Jersey needs access to highly skilled digital workers and digital leaders now. In the short term, government will work with Digital Jersey to ensure businesses are empowered to identify and attract the best and brightest digital professionals to the Island to boost Jersey's jobs, wealth and future digital potential.

Consultation Questions

- In terms of upskilling Jersey's existing workforce to use digital technology, how much responsibility do you think lies with government and how much with the private sector in Jersey? Give details.

- What do you think government could do to ensure everyone in Jersey has the means to access the internet? Give details.

- Do you think this section strikes the right balance between growing Jersey's domestic digital skills and attracting off-island talent to meet short term demand? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

Resilient Digital Infrastructure

Data connectivity is an essential foundation of flourishing digital economies and societies. The Island has a strong telecommunications infrastructure, a well-established telecommunications industry and world-class data centres. Jersey has already invested in Fibre to the Premises (FTTP) infrastructure, a leap ahead of many advanced jurisdictions. Jersey Telecom is rolling out fibre to all homes and businesses in Jersey, with over 19,000 premises (over 55%) connected as of June 2016.[5] Jersey already enjoys good access to the internet, 91% of Islanders are online, compared to the UK's 89%.[6]

Despite these advantages, government recognises that our infrastructure must continue to develop so that we can capitalise on new technologies and opportunities, ensuring Jersey has the best digital infrastructure possible to benefit Islanders and businesses. We will achieve this by ensuring low barriers to entry and effective regulation, while facilitating investment and innovation in next generation connectivity.

Advantages and Achievements

- Government has committed to developing a new telecommunications strategy in response to the Oxera Competition and Regulatory Framework review recommendations7

- Over £50 million invested in Jersey Fibre Broadband project, with over 55% of customers connected as of June 2016

- Island-wide 4G coverage, with three network operators

- Multiple cables connecting Jersey to the UK and the continent make the Island a globally connected and resilient jurisdiction

Challenges to Overcome

- A lack of joined up government telecommunications policy and clarity over the roles of CICRA and government

- A number of Oxera Competition Review recommendations left to deliver

- Nearly 50% of premises still to be connected to fibre broadband

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[5] Jersey Telecom Gigabit Jersey Statistics (June 2016)

[6] 2014 Jersey Annual Social Survey, http://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=1239 & 2015 Ofcom European Broadband Scorecard, http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/scorecard/2015/European_Broadband_Scorecard_2015.pdf

[7] Oxera, A Review of the Jersey Regulatory and Competition Framework (2015), http://www.oxera.com/getmedia/17401ec0-3dba-44f0-8b7e-cbc83208042e/A-review-of-the-Jersey-regulatory-and-competition-framework.pdf.aspx?ext=.pdf

- A small minority of Islanders still do not have access to the internet

Objectives

5. **Provide telecoms services that meet current and future demand:** The amount of data that is used, stored and transferred is increasing exponentially. As technology becomes increasingly converged, and as our devices join up to provide more sophisticated and specialist services, there will naturally be a greater demand on fixed and mobile infrastructure. Our telecommunications infrastructure and services must be ready not just for today's requirements, but for tomorrow's. Jersey's Fibre Broadband project goes a long way toward this, but we must continue to evolve our telecommunications capacity to meet future demands through, for example, working to introduce 5G mobile connectivity once standards have been developed. A strong telecoms and data infrastructure will not only allow us to stay connected, and enhance Jersey's attractiveness as a jurisdiction to do business in, but also, it will have the potential to improve our day to day lives by enabling Jersey's infrastructure to become 'smarter' and better able to meet our evolving demands.

6. **Encourage affordable telecoms services, giving consumers the power to choose and switch providers:** Over recent years, consumer choice in Jersey's telecommunications sector has improved. However, government's forthcoming telecommunications strategy will help to develop the sector further and will build on the relevant recommendations from the 2015 Oxera Competition and Regulatory Framework review. Government will develop a new telecommunications policy framework, giving CICRA a clear space to operate within, giving consumers and businesses effective choice over provision, while incentivising innovation in the telecoms sector.

7. **Create a resilient and secure infrastructure with world class connections:** First class connectivity is good for individuals, businesses and the economy. We will continue to ensure that our off-Island and on-Island data infrastructure is resilient, secure, affordable and fit-for-purpose through the upcoming telecommunications strategy.

8. **Complete the rollout of Jersey Fibre Broadband project to all homes and businesses:** Up until the end of 2019, Jersey Telecom will be finishing its project to bring fibre broadband to every home and business in Jersey. Fibre connections will future-proof Jersey's broadband capacity, initially giving the Island some of the fastest residential internet speeds in the world, while generating significant opportunities for local businesses.

Consultation Questions

- Do you think that Jersey should commit to a universal service obligation for broadband access? If so, what do you think would be appropriate? Give details. **15**

- Do you have any further comments that you would like to make on this strategic goal? Give details.

Government Digital Transformation

Using digital technology to deliver more government services will enhance the quality of those services, and make government more efficient. But creating a digital government is about more than just moving government online. It is crucial that all areas of government work better together to deliver more joined-up services that meet Islanders' needs. Government's transition to digital has already started through its eGov programme. More public services with online access are being rolled out, from customs duties and pensions to business registration and bus tracking. Jersey is committed to working with other world leading digital jurisdictions to ensure our we can learn from their digital transformation programmes, while also ensuring our digital solutions are tailored to Jersey's specific need

Advantages and Achievements

- A number of government and parish services are already online

- Gov.je website provides a platform for digital services

- Common infrastructure for the States network enables safe cross-government working

- Opendata.gov.je provides a hub for public service data sets to be published

Challenges to Overcome

- Government must build public and industry confidence in eGov by speeding up execution after initial delays to delivery timescales

- Need to ensure eGov is fully aligned with public sector reform

- Some Islanders may not either have the skills to interact with government services online or recognise the benefits from doing so

- Government will need to assure Islanders that their personal details will be secure when interacting with government services online

Objectives

9. **Develop and implement an effective Digital ID for all Islanders:** To deliver joined-up digital government services, it is essential that government knows who it is interacting with, and that individuals are confident their details are safe and secure. We will work to create a digital identity solution to ensure Islanders and businesses can communicate securely and easily with government, and that will allow further innovation as opportunities arise and technology develops. This will also empower

digital transformation throughout the public sector, allowing parishes and the States Assembly to deliver vital services digitally such as voter registration and potentially e-voting in the future.

10. **Rollout more customer centred online services and improve customer experience:** The driving principle behind eGov is to bring high quality services to every Islander, at a reduced cost to taxpayers. Learning from international best practice, we will continue to roll out more and more services onto the gov.je platform to make transacting with government simple, intuitive and fast. For example, online GST payment will be improved and Tell Us Once functionality will roll out to registration services such as births, deaths, new residents and new businesses. As well as bringing government services online, we will work with parishes to explore ways of empowering them to modernise their services and engage better with Islanders.

11. **Make better use of government data for the benefit of the public and private sector:** Alongside the direct advantages of moving government services online, Islanders will also benefit indirectly from the wealth of data these services will provide. This data will enable public officials to make better policy decisions, based on more detailed and up-to-date evidence. Furthermore, if this data could be made available to the private sector, the benefits could be multiplied. The public sector – both government and state owned companies – in Jersey collects a wealth of data that, if disseminated appropriately, has the potential to be a useful raw material for digital businesses in the Island. Through opendata.gov.je, government will continue to release public sector data for greater transparency, and for private sector use to spur innovation and create more jobs – while crucially protecting the privacy of individual Islanders.

Consultation Questions

- Can you identify any barriers that Islanders may face in using government services when more of these are brought online? Give details.

- How do you think government could make Islanders more comfortable with the idea of government managing more of their data due to digital transformation of services? Give details.

- Can you identify any public sector services that you would particularly like to see moving online in the future? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

A Diverse and Innovative Digital Economy

Governments are not entrepreneurial by nature. However, they have the power to create an environment in which innovation and entrepreneurship can flourish. The 2015 Jersey Innovation Review made a number of recommendations to help Jersey achieve this.[8] Government will work with the private sector to identify and remove legislative and regulatory barriers to innovation, explore options to incentivise innovation and continue to provide access to finance through the Jersey Innovation Fund. We will work with the private sector and Digital Jersey to make it easy to set up or relocate digital businesses in Jersey, while actively supporting businesses with high growth potential.

Advantages and Achievements

- Government investment in innovation through the Jersey Innovation Fund

- The creation and ongoing support of Digital Jersey and Jersey Business

- Jersey businesses recognise the need for innovation, with 72% of businesses in innovative sectors engaging in in-house research and development[9]

- Digital Jersey's Hub, along with Jersey Business, help young businesses to grow and develop their ideas

- 2015 Innovation Review provides a clear improvement pathway for innovation in Jersey

- Low and simple business-friendly tax system

- Locate Jersey has strong links with other jurisdictions for inward investment

- A Strategy for Procurement that acknowledges a variety of suppliers is required to deliver a diverse and sustainable economy

Challenges to Overcome

- Need to ensure digital start-ups are able to access funding for early-stage ideas

- There are a large number of recommendations from the Innovation Review that still need to be delivered

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[8] Jersey Innovation Review, https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=1616
[9] Jersey Innovation Review

Objectives

12. **Incentivise and support innovation in the private sector:** Government currently provides financial support for businesses who undertake innovative ventures through the Jersey Innovation Fund. Through the Innovation Review Action Plan, government will ensure that appropriate support is available for businesses developing innovative products and services.[10] We will also map out and sign-post the range of funding and finance available for innovative firms in Jersey.

13. **Support digital companies in Jersey with high growth potential:** In response to the Innovation Review recommendation, the importance of supporting firms with high growth potential will be a key tenet of the forthcoming Enterprise Strategy, which will set out the approach to monitoring and tracking progress. Digital Jersey has also identified specific high growth areas to focus on, including FinTech and MedTech.[11] Government will fund Digital Jersey to support local companies developing products and services in these target sectors.

14. **Attract existing digital businesses to Jersey:** As well as encouraging domestic digital businesses to take root in the Island, attracting inward investment will be an important source of growth for Jersey's digital economy. Digital Jersey plans to work with Locate Jersey to undertake promotional activity in specified technology areas, such as FinTech and MedTech, to encourage inward investment and business activity.

15. **Streamline business registration and start-up support to encourage the creation of new digital businesses:** Government is committed to making the process of setting up a new businesses as simple as possible. eGov's Tell us Once programme gives businesses a simple process for registration, and the Population Office has started to publish timescales for new business applications and will outline whether there are any further barriers or costs to improving this.

16. **Assist local businesses to make use of technology to improve their services:** All businesses in Jersey should be empowered to capitalise on digital technology, which can give a competitive advantage by improving efficiency and customer engagement. Digital Jersey will work with Jersey Business to provide local businesses with advice on how to remain competitive in a digital world, including, for example, how to use new payment systems. Government will also task Digital Jersey with developing and implementing a plan for publicising and celebrating innovative firms in Jersey.

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[10] Jersey Innovation Review: Action Plan,
https://www.gov.je/Government/PlanningPerformance/Innovation/pages/innovationreviewactionplan.aspx
[11] Digital Jersey 2016 Business Plan, https://www.digital.je/2016businessplan

17. **Consider the local digital economy in government procurement:** Open and transparent procurement plays a role in supporting government policy objectives. Procurement can stimulate the market, encourage competition, reward innovation and enhance skills. Where it adds value to a project and does not negatively impact on cost, quality and capability, government will continue to consider the value of innovation and the impact on Jersey's economy when assessing bids and tenders, on a project by project basis. In 2015 more than 50% of the States of Jersey's third party spend was delivered locally. However, government recognises that it continues to play an important role as a purchaser of digital services and technology and is, therefore, committed to reviewing the existing procurement policy on localness with a specific focus on the digital sector. As part of this it will review how the procurement process could further enable the delivery of cost-effective and high-quality services to support technology as well as encourage upskilling to advance the government's ambitions in growing the digital economy. However, in doing so it is essential that government contracts deliver value for money and take into account the whole life costs in contract decisions; this means considering quality, longer term cost and benefit to the Island as well as initial price. All tender processes and contract awards will comply with Article 9, Public Procurement and Management of Public Finance, of the UN Convention against Corruption in which the principles on non-discrimination, equal treatment and transparency are embedded.[12]

Consultation Questions

- Do you think this section strikes the right balance between nurturing existing local digital businesses, and attracting inward investment? Give details.

- What do you think are Jersey's main selling points, and main barriers, for digital businesses looking to relocate? Give details.

- What are the barriers to local businesses making better use of technology (e.g. e-commerce / digital marketing)? Give details.

- Do you have any suggestions for how government procurement policy could do more to encourage growth in the local digital economy, without compromising on cost, quality and capability? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

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[12] UN Convention against Corruption, https://www.unodc.org/unodc/en/treaties/CAC/

A Favourable Environment for Emerging Technologies

Jersey will prioritise technology areas where it is best placed to succeed. KPMG's opportunity analysis for Digital Jersey identified a number of specific areas for focus.[13] Given Jersey's status as a world-leading International Finance Centre, FinTech is a clear priority. Jersey is also in a prime position to develop its MedTech business clusters and has the opportunity to spearhead the adoption of distributed ledger – Blockchain – technology. Government can directly assist by ensuring Jersey's regulation is flexible and responsive to new technologies and by continuing to collaborate with Digital Jersey and the private sector to further clear the path for technology development in Jersey.

Advantages and Achievements

- A world-leading International Finance Centre, with natural links to FinTech development

- Digital Jersey already works closely with Jersey Finance to further Jersey's FinTech agenda

- Advanced connectivity, developed economy and responsive regulators

- On-island MedTech community and ideal MedTech testbed features

Challenges to Overcome

- Jersey has limited links with off-island technology companies and academic institutions

- There are limited collaborative links between businesses and knowledge bases

- Lack of strong case studies to demonstrate Jersey's proposition in target areas and as a testbed-jurisdiction.

Objectives

18. **Support development of our FinTech industry in tandem with our existing financial services industry:** Jersey is an established and world-renowned international business and finance centre, and supporting the sector to develop new technologies is an immediate government objective. FinTech offers real opportunities for new businesses, as well as opportunities for existing businesses to improve efficiency

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[13] KPMG Opportunity Analysis for Digital Jersey, http://www.digital.je/media/Public_Files/DJLKPMGReport2016.pdf

and customer experience, such as through compliance automation and other business software to reduce the manual or paper based work needed to run the day to day activities of trusts or fund administration. Building on our strong base, getting the right regulation in place and establishing Jersey as a thought leader in FinTech will give the Island a competitive edge in this industry.

19. **Support the development of Jersey as a MedTech centre:** Like most western societies, Jersey is experiencing societal aging and rising levels of non-communicable disease. These challenges bring with them an increased incentive to develop technology to empower patients, improve health outcomes and optimise efficiency in the health and social care system. Jersey already has an established MedTech community looking at these areas. Government will work with Digital Jersey to develop a Digital Health strategy for the island, improve links with off-Island MedTech organisations, capitalise on Jersey's MedTech base, and grow the sector.

20. **Exploit Jersey's suitability as a testbed for firms to test new technologies**: Jersey is well placed to act as a testbed for a range of emerging technology areas. Due to Jersey's financial sector experience and the presence of a small scale contained environment, Jersey is well placed for FinTech ecosystem experimentation – such as rolling out a full digital payments system or compliance automation testing. Government and Digital Jersey will work together to explore the potential for regulatory sandboxes in Jersey to enable innovative firms to test new finance technology in a safe environment. Jersey's self-contained health system and western demographics make it ideal as a testbed for MedTech technology. Jersey's unique mixture of high quality digital connectivity in a contained island environment also makes it an ideal candidate for Internet of Things experimentation. Government, Digital Jersey and local industry will create and foster relationships with global technology firms to ensure Jersey is well-marketed. By being a recognised location for development and testing, and encouraging the businesses to register their operations in the Island, Jersey could see long term financial benefits from the exports of the new products and services.

21. **Facilitate the usage of distributed ledger technologies in Jersey:** Jersey was the first jurisdiction globally to regulate a Bitcoin fund and has been proactive with introducing virtual currency legislation. Government will focus on ensuring Jersey's legislation and regulation further enables the applications of distributed ledger – otherwise known as 'Blockchain' – technologies that are suited to Jersey's business environment, while also creating the right ecosystem for future potential uses of distributed ledgers in the public sector.

Consultation Questions

- What role does government and / or Digital Jersey have, and what steps should they take, in keeping track of developments in emerging technology areas? Give details.

- Other than those mentioned in the draft framework, are there any emerging technology areas that would be appropriate to Jersey's technology agenda, and that government should be actively tracking? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

A Responsive Regulatory Environment

Regulators have a dual purpose to protect customers and employees while enabling businesses to operate freely. Only with the correct regulatory environment will new technologies be able to take root and benefit customers. One of Jersey's biggest success stories is how government, the private sector and regulator have worked together to produce a world-leading financial services sector. Jersey must ensure that this excellent cooperation continues to extend to digital innovation. So that Jersey may continue to prosper through international cooperation, it is also important that Jersey aligns its regulations with relevant international standards, while seeking appropriate opportunities to distinguish itself as a competitive place to do business, and a safe, stable place to live.

Advantages and Achievements

- Developed and respected independent legal system brings stability and confidence

- Jersey takes a pioneering approach to virtual currency regulation[14]

- TRIPS-compliant copyright, unregistered rights and main registered IP laws

- Jersey Financial Services Commission (JFSC) is an internationally respected financial services regulator

Challenges to Overcome

- New legislation and regulations must be flexible enough to reflect the fast-moving technology landscape

- The government and regulator needs to respond swiftly to business needs in all sectors

Objectives

22. **Remove legislative and regulatory barriers to emerging technologies:** New technologies often bring regulatory challenges. Jersey's history of regulatory responsiveness in finance gives it a first mover advantage in this area. In the short term, government and Jersey's financial services regulator, the JFSC, will build on Jersey's successful financial services sector by ensuring the Island's legislative and regulatory framework enables the development and adoption of FinTech and RegTech.

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[14] States of Jersey, Regulation of Virtual Currency Policy Document 2015, https://www.gov.je/sitecollectiondocuments/government%20and%20administration/p%20regulation%20of%20virtual%20currency%2020151021%20gp.pdf

23. **Ensure open markets with low barriers to entry**: A competitive economy works in consumers' interests and keeps prices down, leading to better quality products and more choice. It supports the economy by encouraging businesses to be innovative. By working with CICRA to implement the Oxera Competition and Regulatory Framework Review recommendations, such as updates to the Competition (Jersey) Law, government will ensure that the right framework is in place to support a more competitive business environment in Jersey that ultimately delivers benefits to businesses and individual consumers.

24. **Ensure legislative connectivity, alignment and interoperability with the UK, EU and world:** Meeting international legislative and regulatory standards gives Jersey access to overseas markets and keeps it internationally competitive. Government will continue to work with regulators and other governments to ensure it meets any future standards, agreements and conventions that are relevant to the digital economy.

25. **Maintain an efficient and innovation-friendly IP protection regime:** Intellectual Property rights form the foundation upon which innovation is encouraged and shared. Jersey is almost entirely compliant with TRIPS and fully so in all areas relevant to a digital economy, such as copyright law. Government will work with stakeholders to ensure our Intellectual Property framework continues to meet relevant international standards and fosters innovation.

26. **Maintain robust cyber security and an effective data protection regime:** Robust cyber security underpins many of the ambitions within this Framework. It is crucial in protecting critical national infrastructure, businesses and islanders. Government will amend legislation to facilitate the extension of the international Convention on Cybercrime to Jersey in 2017, and continue to work with other jurisdictions to ensure our cyber security legislation meets international standards. Good data protection regulation can secure individuals' information, while allowing businesses to capitalise on data opportunities. The EU's General Data Protection Regulation has been agreed and will come into force in 2018. Working with our new Data Protection and Information Commissioner, government must ensure it adapts its legislation to maintain adequacy with the new standard so that Jersey's business can continue to process EU citizens' data and remain internationally competitive.

Consultation Questions

- What is the right balance between aligning Jersey's regulation and legislation with international standards, and seeking to differentiate ourselves? Give details.

- What is your experience of Jersey's IP regime? Is there more that government could do to make it friendly to digital innovation? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

A Robust Cyber Security Framework

Cyber security comprises potential threats not just to areas such as data and systems in government and business, but also to Jersey's critical infrastructure, which includes communications, emergency services, energy, public services, health, transport and water. Cyber security has been recognised as a key priority by Jersey's Council of Ministers, and the Island is developing a new island-wide cyber security strategy, to be published in 2016. This strategy, which will support all five objectives below, will play an important role in supporting economic growth and ensuring that Jersey continues to be a safe and resilient place to live and to do business.

Advantages and Achievements

- 2015 Jersey Cyber Security Review covering government, critical national infrastructure and industry

- Cyber Security Task Force created to bring together and focus cyber security activity in Jersey

- Development of new 2016 Cyber Security Strategy

- Jersey-led SINCERE project brings Jersey, Guernsey, Isle of Man, Gibraltar, Malta and Cyprus together to combat the threat of cyber crime[15]

- Agreement between government and critical national infrastructure operators to work together on protecting Jersey

Challenges to Overcome

- As Jersey is a small island, we do not have the resources of some other jurisdictions

- Occurrences of cyber crime are increasing at an exponential rate globally

- There is a global shortage of skills in cyber security, which is reflected in Jersey

- Lack of a national incident response capability or information sharing networks

Objectives

27. **Secure States of Jersey systems and information**: Government must be able to operate with confidence in a digital environment, with the utmost consideration for the security and privacy of individuals' data. The Information Security Governance Board has been established, chaired by the government's Chief Executive, and is

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[15] SINCERE project launched, http://www.jersey.police.uk/news-appeals/2016/january/cyber-crime-funding-secured/

responsible for overseeing the implementation of IT security improvements within government, providing a clear governance structure from individual information owners up to the top of government. Any staff who operate IT equipment will also receive an appropriate level of cyber security training to ensure human error does not compromise government systems.

28. **Strengthen Jersey's critical national infrastructure against cyber threat**: Our critical infrastructure keeps Jersey running. Whether it's our water supply, our hospital or our telecommunications, it is vital to keep it safe from, and respond quickly to, cyber threats. Government will work with critical national infrastructure owners and operators to ensure that individuals and businesses remain safe.

29. **Work with the private sector to improve security across the Island's businesses:** It's vital that Jersey's economy continues to grow and prosper, and that the Island remains a safe place to do business. A successful cyber-attack has the potential to put these things at risk. Jersey's finance sector relies on strong cyber security, and, globally the sector is particularly attractive to cyber criminals. Government will work in partnership with the private sector to encourage and incentivise tightening of businesses' cyber security in relation to people, places and processes. Government will recommend that all businesses adopt a minimum security standard, based on international best practice, while also encouraging the establishing of intelligence sharing mechanisms to protect organisations against vulnerabilities.

30. **Ensure appropriate cyber security legislation is in place and enhance international cooperation**: Working across borders is crucial in the fight against international cyber crime. Jersey is amending its legislation to facilitate the extension of the international Convention on Cybercrime to Jersey in 2017. We are leading the Small Island Nations Centre of Excellence for Research and Education (SINCERE) to combat cyber crime. This is an international collaboration with Guernsey, the Isle of Man, Gibraltar and Cyprus, based on an EU model that involves law enforcement, academia and industry.

31. **Help ensure people in Jersey are secure online by building cyber skills, knowledge and capability**: Islanders should be able to enjoy the benefits of online resources while staying safe from cyber threat. Being safe online will remain key to Jersey's school curriculum, while States of Jersey Police will offer support and guidance on cyber security to Islanders.

Consultation Questions

- What do you think the most appropriate role for government is in helping to ensure an appropriate level of cyber security in Jersey? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

A further, detailed consultation on cyber security is expected later in 2016.

A Secure and Effective Data Protection Framework

Ever-accelerating advances in data generation, storage, transmission and analysis are transforming the ways businesses and governments operate, but with them come challenges to privacy and security. Jersey is already a secure and trusted jurisdiction for data storage and processing, complying with international standards and with high levels of protection for businesses and individuals. Jersey is committed to aligning regulatory standards with Europe's General Data Protection Regulation (GDPR) when it is adopted in spring 2018, in tandem with building a new data protection regime that works for businesses. If Jersey is to further capitalise on the opportunities that come from data, the regulatory environment needs to continue to adapt in an intelligent and forward-thinking way, in harmony with international regulatory regimes but pursuing the advantages conferred by being independent, agile, and adaptable.

Advantages and Achievements

- Data Protection Law aligns with EU standard, providing for the free flow of personal data to the Island from EEA Member States

- Jersey is committed to aligning our regulatory standards with the GDPR

- Office of the Information Commissioner established in 2015

- Simple-to-use register for those processing personal data in Jersey

- Freedom of Information Law gives Islanders access to information held by public authorities, which will be enhanced by the pursuit of open government data

Challenges to Overcome

- Jersey must act swiftly in order to enact new legislation that is compatible with the EU's GDPR, due to come into force in May 2018

- Some lack of awareness over data rights for customers and data responsibilities for companies

Objectives

32. **Ensure continued adequacy with the highest international standards in sending, storing and processing data:** The GDPR is due to come into force in 2018. Jersey will perform an assessment of what legislative and regulatory changes will be needed to meet the requirements of the GDPR, to ensure the continued free flow of personal

data across international boundaries. Government will work with the Office of the Information Commissioner to ensure resources and regulation are appropriate to meet the relevant standards.

33. **Ensure highest levels of data protection for Islanders while maximising benefits of enhanced data use:** Islanders have a right to know and consent to how their data is used, while businesses should be able to capitalise on the commercial advantages of being able to use, share and access personal data, with confidence and clarity. Getting this balance right is crucial, and government will be working closely with the Information Commissioner, businesses and international partners to achieve this.

34. **Seek opportunities to enhance Jersey's international competitiveness as a jurisdiction for processing and storing data:** Through research and consultation with the private sector, government will identify how Jersey could enhance its international competitiveness as a data processing jurisdiction, in the way that it implements the GDPR.

35. **Provide a workable, effective and simple data protection regulatory framework for businesses, and educate businesses and Islanders on their requirements and rights under this framework:** Businesses need clear regulations to be able to process and use data effectively and safely. Government will ensure that any new regulations are simple to follow, and will work with the Information Commissioner to provide appropriate education to local businesses on how to comply with the new regulatory framework.

Consultation Questions

- Do you agree with government's ambition to ensure adequacy with the GDPR and New Directive? Give details.

- Do you believe that there would be benefits in working with Guernsey on data protection policy? Give details.

- Do you have any further comments that you would like to make on this strategic goal? Give details.

Summary of Objectives

Digital Skills for All Islanders

1. Ensure all Islanders have the ability and confidence to use digital technology

2. Work with schools and businesses to develop a pipeline of future digital leaders

3. Upskill Jersey's workforce with digital skills and qualifications:

4. Attract and retain off-island digital talent to meet short-term skills demand

Resilient Digital Infrastructure

5. Encourage affordable telecoms services, giving consumers the power to choose and switch providers

6. Provide telecoms services that meet current and future demand

7. Create a resilient and secure infrastructure with world class connections

8. Complete the rollout of Jersey Fibre Broadband project to all homes and businesses

Government Digital Transformation

9. Develop and implement an effective Digital ID for all Islanders

10. Rollout more customer centred online services and improve customer experience

11. Make better use of government data for the benefit of the public and private sector

A Diverse and Innovative Digital Economy

12. Incentivise and support innovation in the private sector

13. Support digital companies in Jersey with high growth potential

14. Attract existing digital businesses to Jersey

15. Streamline business registration and start-up support to encourage the creation of new digital businesses

16. Assist local businesses to make use of technology to improve their services

17. Consider the local digital economy in government procurement

A Favourable Environment for Emerging Technologies

18. Support development of our FinTech industry in tandem with our existing financial services industry

19. Support the development of Jersey as a MedTech centre

20. Exploit Jersey's suitability as a testbed for firms to test new technologies

21. Facilitate the usage of distributed ledger technologies in Jersey

A Responsive Regulatory Environment

22. Remove legislative and regulatory barriers to emerging technologies

23. Ensure open markets with low barriers to entry

24. Ensure legislative connectivity, alignment and interoperability with the UK, EU and world

25. Maintain an efficient and innovation-friendly IP protection regime

26. Maintain robust cyber security and an effective data protection regime

A Robust Cyber Security Framework

27. Secure States of Jersey systems and information

28. Strengthen Jersey's critical national infrastructure against cyber threat

29. Work with the private sector to improve security across the Island's businesses

30. Ensure appropriate cyber security legislation is in place and enhance international cooperation

31. Help ensure people in Jersey are secure online by building cyber skills, knowledge and capability

A Secure and Effective Data Protection Framework

32. Ensure continued adequacy with the highest international standards in sending, storing and processing data

33. Ensure highest levels of data protection for Islanders while maximising benefits of enhanced data use

34. Seek opportunities to enhance Jersey's international competitiveness as a jurisdiction for processing and storing data

35. Provide a workable, effective and simple data protection regulatory framework for businesses, and educate businesses and Islanders on their requirements and rights under this framework

Annex 1: Consultation Questions

Digital Skills for All Islanders

1. In terms of upskilling Jersey's existing workforce to use digital technology, how much responsibility do you think lies with government and how much with the private sector in Jersey? Give details.

2. What do you think the government could do to ensure everyone in Jersey has the means to access the internet? Give details.

3. Do you think this section strikes the right balance between growing Jersey's domestic digital skills and attracting off-island talent to meet short term demand? Give details.

4. Do you have any further comments that you would like to make on this strategic goal? Give details.

Resilient Digital Infrastructure

5. Do you think that Jersey should commit to a universal service obligation for broadband access? If so, what do you think would be appropriate? Give details.

6. Do you have any further comments that you would like to make on this strategic goal? Give details.

Government Digital Transformation

7. Can you identify any barriers that Islanders may face in using government services when more of these are brought online? Give details.

8. How do you think government could make Islanders more comfortable with the idea of government managing more of their data due to digital transformation of services? Give details.

9. Can you identify any public sector services that you would particularly like to see moving online in the future? Give details.

10. Do you have any further comments that you would like to make on this strategic goal? Give details.

A Diverse and Innovative Digital Economy

11. Do you think this section strikes the right balance between nurturing existing local digital businesses, and attracting inward investment? Give details.

12. What do you think are Jersey's main selling points, and main barriers, for digital businesses looking to relocate? Give details.

13. What are the barriers to local businesses making better use of technology (e.g. e-commerce / digital marketing). Give details.

14. Do you have any suggestions for how government procurement policy could do more to encourage growth in the local digital economy, without compromising on cost, quality and capability? Give details.

15. Do you have any further comments that you would like to make on this strategic goal? Give details.

A Favourable Environment for Emerging Technologies

16. What role does government and / or Digital Jersey have, and what steps should they take, in keeping track of developments in emerging technology areas? Give details.

17. Other than those mentioned in the draft framework, are there any emerging technology areas that would be appropriate to Jersey's technology agenda, and that government should be actively tracking? Give details.

18. Do you have any further comments that you would like to make on this strategic goal? Give details.

A Responsive Regulatory Environment

19. What do you consider to be the right balance between aligning Jersey's regulation and legislation with international standards, and seeking to differentiate ourselves? Give details.

20. What is your experience of Jersey's IP regime? Is there more that government could do to make it friendly to digital innovation? Give details.

21. Do you have any further comments that you would like to make on this strategic goal? Give details.

A Robust Cyber Security Framework

22. What do you think the most appropriate role for government is in helping to ensure an appropriate level of cyber security in Jersey? Give details.

23. Do you have any further comments that you would like to make on this strategic goal? Give details.

A further, detailed consultation on cyber security is expected later in 2016.

A Secure and Effective Data Protection Framework

24. Do you agree with government's ambition to ensure adequacy with the GDPR and New Directive? Give details.

25. Do you believe that there would be benefits in working with Guernsey on data protection policy? Give details.

26. Do you have any further comments that you would like to make on this strategic goal? Give details.

Other comments

27. Do you have any further comments in relation to the draft Digital Policy Framework that you feel have not been addressed in this consultation? If so, Give details.

Annex 2: Links to Relevant Documents

- Oxera review of competition and regulatory framework (2015) - http://www.oxera.com/Latest-Thinking/Publications/Reports/2015/A-review-of-the-Jersey-regulatory-and-competition.aspx

- Jersey Innovation Review (2015) - https://www.gov.je/innovationreview

- Jersey Innovation Review: Action Plan (2015) - https://www.gov.je/Government/PlanningPerformance/Innovation/Pages/InnovationReviewActionPlan.aspx

- Vision for IT in Education 2013-2015 'Thinking Differently' (2013) – https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=985

- Digital Jersey 2016 Business Plan (2016) - https://www.digital.je/2016businessplan

- KPMG Opportunity Analysis for Digital Jersey (2015) - http://www.digital.je/media/Public_Files/DJLKPMGReport2016.pdf

- Regulation of Virtual Currency Policy Document (2016) - https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/P%20Regulation%20of%20Virtual%20Currency%2020151021%20GP.PDF

Annex 3: Contributors

- Chief Minister's Department
    - Economics Unit
    - Financial Services Unit
    - Information Services
    - eGovernment
    - Population Office
- Education Department
    - Education
    - Jersey Library
- Treasury and Resources Department
    - Corporate Procurement
- Economic Development, Tourism, Sport and Culture Department
- States Greffe
- Digital Jersey – https://www.digital.je/
- Jersey Finance – https://www.jerseyfinance.je/home
- Jersey Business – http://www.jerseybusiness.je/
- Jersey Financial Services Commission – http://www.jerseyfsc.org/
- Office of the Information Commissioner

Annex 4: Digital Sector Methodology

Digital employment has been calculated from the aggregate employment of defined *'Standard Industrial Classifications'* codes identified by the Office of National Statistics (ONS) as the digital sector. Figures were obtained from the SoJ Manpower returns survey published in December 2015. The follow sub-sectors have been included:

- Cyber security

- Data management & analytics

- Digital advertising & marketing

- Digital entertainment

- Digital health

- E-Commerce & marketplace

- Enterprise software & cloud computing

- FinTech

- Gaming

- Software & app development

- Telecommunications & networking

- Wholesale of computers, computer peripheral equipment and software

This method only measures the jobs in defined digital businesses, i.e. the 'Digital Sector'. It does not include jobs that may be considered 'digital' in other sectors.