

**From:** Tony Moretta, CEO, Digital Jersey  
**To:** Chief Minister's Department, Government of Jersey

August 2016

Dear Assistant Chief Minister Ozouf

### **Draft Digital Policy Framework 2016**

Digital Jersey welcomes the Government's publication of the draft Digital Policy Framework, which comprehensively details the future strategic vision for Jersey.

From our perspective, and that of our members, the framework demonstrates a clear statement of how the jurisdiction should develop in this important sector. We also welcome the willingness of the Government to publish the document as a consultation, rather than a completed entity, and for holding several industry feedback sessions in The Digital Hub, on Twitter, on Slack and in the Jersey Library; this commitment to openness in the policy development process should be seen as an exemplar by other Government departments.

We've taken the opportunity of this consultation process to discuss the contents of the framework with our Board and members. The members of Digital Jersey represent a broad cross-section of Jersey's economy, with member interests spanning core digital sub-sectors and professional services. These members extend from individuals in The Digital Hub to Jersey's largest digital and even non-digital businesses. Many of these firms have responded to your consultation directly, with their own commercial perspectives; instead of replicating their views here, the response from Digital Jersey seeks to amalgamate and represent the key issues raised by members across the industry.

As this work progresses, Digital Jersey urges Government to produce a tangible action plan with defined commitments alongside measurable output-focused targets with expected costs. To assist in this process, Digital Jersey has provided a list of requests which our members believe should be included in the framework and the action plan.

### **Actions for Jersey: Government, Regulators and Industry**

The key requests from Digital Jersey, for inclusion in the Framework and the Action Plan are as follows:

#### **What is the Digital Policy Framework?**

1. Digital Jersey and Government to commit to ambitious yet realistic economic targets and indicators for how the digital sector should grow over the coming years, by the end of 2016.

#### **Digital Skills for All Islanders**

2. Digital Jersey requests that Government stays fully committed to the IoT working group and its work on infrastructure projects related to internet access, including a cost/benefit analysis of rolling out free wifi in St Helier.
3. The Government must engage with and ensure that the Jersey Library is fully supported as a resource to aid residents in developing digital skills.
4. Education - Jersey must raise standards and align the curriculum with future skills requirements by:



- a. Development of an Education Business Partnership programme
  - b. Reshaping of Highlands' offering in ICT
  - c. The Education Department building a strategy for the development of post-secondary education
  - d. Consider if GCSE ICT or equivalent should be compulsory – as this could drive an improvement in digital skills generally as well as feed into further education
  - e. Assign a digital leader in every school
  - f. Implement recommendations made in the upcoming Aspire 2be report.
  - g. Progress the introduction of a permissions system modelled on the UK's Tier 4 visa structure
  - h. Government should review the Think Differently report to ensure that the Recommendations have been implemented fully
5. Government must encourage local talent to return to the jurisdiction
- a. The Education department should give more consideration to financial schemes aimed at retaining and attracting local digital talent.
6. Targeted migration - Digital Jersey believes that Government should continue to support Digital Jersey throughout the Business Licensing pilot and look to extend the scheme if appropriate.

#### **Resilient Digital Infrastructure**

7. Government should take a long term view on digital infrastructure, which is part of the forthcoming island plan, including support for the adoption of 5G roll out as and when appropriate. Government should work with telecoms partners to ascertain whether Jersey should be one of the first testbeds in the world for 5G.
8. Government completes Innovation Review Recommendation 20, which states that “Government should consult with businesses to ascertain which regulations are viewed as the major barriers to enterprise and undertake to reform or remove these, subject to a cost/benefit analysis.”
9. Government needs a robust technology plan for the hospital. This should include undertaking a cost benefit analysis for including an Innovation Lab in the planned new hospital.
10. Digital Jersey requests that all Government departments follow the good practice shown by HSSD by building relationships with industry, via Digital Jersey, to ensure they can deliver digital Government services that the island deserves.

#### **Government Digital Transformation**

11. Government should inform data subjects of the type of data that is being collected, the time it will be stored and for what specific purposes this data is collected, in order to help build trust.
12. Government should educate people about the benefits of their data being shared across Government so that it does not become a barrier to the future implementation of eGov.
13. Government should appoint Digital Champions in each department, who will ensure that Departmental Digital Strategies are developed and implemented.

#### **A Diverse and Innovative Digital Economy**

14. Digital Jersey would like Government to consider reallocating the remaining funds within the Jersey Innovation Fund towards a Match Funding and Risk Investment Stimulus proposal



15. Procurement improvements can be made to ensure that more local firms have the best opportunity to supply their services to Government:
  - a. Procurement Strategy needs to have a dedicated section instructing Departments to review local suppliers when it comes to a Digital procurement.
  - b. Public Sector Procurement should encourage joint ventures between local and off-island firms.
  - c. The weighting given to localness in the Procurement process should be increased.
  - d. The eGov project should prioritise enhancing the Open Data initiative. This will develop the local digital industry, allowing it to become more mature and be positioned where it is more likely to win public sector contracts.
16. Government should encourage effective regular steering groups bringing together Government, Regulators and Industry representatives, to discuss all matters raised in this framework. In parallel, Government need to coordinate more effectively how the jurisdiction is proactively marketing itself for inward investment from digital firms looking to relocate to Jersey.
17. Digital Jersey recommends that a set of measurable Innovation KPIs are defined and monitored on an annual basis in order to track progress. The Statistics Unit should also undertake an annual publication detailing changes in the digital economy. Recommended KPIs have been included in this consultation.

#### **A Favourable Environment for Emerging Technologies**

18. Government should review the R&D incentive environment in Jersey, to ensure it is effectively encouraging digital businesses to invest in their own development.

#### **A Responsive Regulatory Environment**

19. Digital Jersey would like to challenge the JFSC to create a regulatory sandbox, which achieves similar objectives to the FCA's sandbox, however is proportional in size and scope for the jurisdiction.
20. Digital Jersey should work with Government to have a simple infographic created that sets out the current system for IP in Jersey.

#### **A Robust Cyber Security Framework**

21. Digital Jersey requests that in the development of its cyber security strategy, Government takes into account the points raised in the JFSC's letter to CEOs and considers this approach to cover higher risk businesses in Jersey, regardless of their sector.

#### **A Secure and Effective Data Protection Framework**

22. Government should meet the requirements of the forthcoming EU General Data Protection Regulation, as well as the new EU Data Protection Directive and include Digital Jersey in this workstream as it develops over the coming months.



The following document looks to elaborate on these points and to answer the specific questions raised in your consultation, where Digital Jersey believes an industry response is most useful. We look forward to working closely with Government, regulators and the other delivery bodies in the coming months and years on its implementation.

Kind regards

Tony Moretta  
CEO, Digital Jersey



## Consultation Response

### **What is the Digital Policy Framework?**

*Action: Digital Jersey and Government to commit to ambitious yet realistic economic targets and indicators for how the digital sector should grow over the coming years, by the end of 2016.*

Digital Jersey and our members agree with the high-level purpose of the Digital Policy Framework (page6). In addition, the subsequent text outlining the strategy for an Efficient Government, Diverse Economy and a Connected Society, are suitably articulated and reflect the core components of a well-rounded digital economy.

Digital Jersey members would like to see greater priority given to the Government's economic ambition for the digital sector. Furthermore, that this vision should be developed to provide a sense of scale, tangible targets and Government commitment (financial and other) in this area.

To achieve this, Digital Jersey would like to work with Government to calculate and commit to ambitious yet realistic economic targets and indicators for how the digital sector should grow over the coming years. These overarching targets should be published before the end of 2016, they will likely focus on GVA and employment targets, and include complimentary indicators for innovation.

### 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? Please give details.**

For several connected and cross cutting reasons outlined below, it is important that for the immediate future, Government continues to fund Digital Skills training for the existing workforce in Jersey. At present, this is primarily delivered through Digital Jersey.

The importance and need for Government to fund digital skills training is as follows:

- **The Digital Jersey "opportunity analysis" report conducted by KPMG** states that in order to excel "Jersey needs to develop its environmental prerequisites at the right maturity level." This includes ensuring "relevant digital skills are being developed and retained locally."
- **There is a lack of local graduates returning to Jersey with tech skills** – Digital Jersey has estimated that an average of only 14 graduates with computer technology related degrees will be working in Jersey 5 years on from graduation. This figure is derived by combined data from an FOI request on returnee graduates and data from the Higher Education Statistics Agency on degrees studied by students' country of origin. From this data we can say that 56% of graduates that undertook their degree on-island or abroad will be working in Jersey 5 years after graduating (based on the average of those graduating between 2006 and 2010), and that of the average year group only 25 undergraduate students will graduate from mathematics, computer science or engineering and technology-related degrees. This constraint of skills is particularly harmful to the growth of the digital industries as subject specific graduates are essential to enable tech businesses to innovate at the same speed as technology.
- **Digital businesses in Jersey are struggling to find suitably skilled staff** - Research among digital businesses in Jersey, undertaken last year by 4Insight on behalf of Digital Jersey, found a clear consensus with regards to difficulties in employing staff for digital companies/roles, 'The main reason given was, the relative small size of the labour market and associated tech talent. This is



exacerbated by non-returnee graduates and the absence of on island training opportunities in computer science and other digital skills.’

- Likewise, the survey also concluded that ‘Jersey’s digital growth may be being hampered by the small pool of digital skills talent available. 51% of respondents said the current skill supply is off track in meeting local needs and this is exacerbated by incoming firms competing with local companies. The majority of these companies end up outsourcing to meet the shortfall in digital skills and this results in money/tax revenue going offisland and being lost from the economy. All of the companies said they would need to employ more people in the next three years, totalling 450 staff for the 43 respondent companies.
- **There is a lack of digital courses being provided in Jersey** - No degree level qualifications are taught on island in Science, Technology, Engineering and Mathematics (STEM) based subjects. The closest example is an ‘IT for Business’ course at UCJ, however this is a business supportive course, which is a different skill set to the development and theory based learning courses, which the industry informs Digital Jersey are favoured by digital firms.
- **Digital Skills Courses reduce our reliance on importing skills from overseas or outsourcing jobs overseas** - The nature of the digital industries means that tech employers have a particular reliance on the skills, ingenuity, and creativity of their staff. Locally this dependency is particularly challenging for digital firms given the relative small size of the labour market and associated tech talent. This is exacerbated by non-returnee graduates and the absence of on-island training opportunities in computer science, as mentioned above. Without increasing on-island opportunities to undertake tech related training, the supply of tech talent will continue to be exceeded by demand. Survey evidence, collected from digital businesses in Jersey undertaken last year by 4Insight on behalf of Digital Jersey, shows that subsequently this increases the trend to employ staff abroad, or to outsource activities, or recruit international talent (e.g. over reliance on imported talent), and that this will likely accelerate in line with industry growth.
- **Digital skills allow individuals to access higher value jobs** - From previous experience of those enrolled on the Digital Skills Courses, the opportunity has allowed individuals to gain access to higher skilled and better paid jobs. Of those enrolled on the Digital Jersey Coding course, 13 have directly secured employment in the digital economy and 11 have enhanced their CPD. These individuals are now using their tech skills to benefit local businesses and in turn potentially further enhancing the direct economic impact beyond the upskilling of individual people.
- These individuals mentioned would not have been able to save the necessary funds to take a private coding course, as similar courses cost in the region of £7,000-£10,000 such as the Makers Academy in London or General Assembly in New York – please note, as mentioned above, there is a lack of Digital courses being provided in Jersey, so local comparisons are not available.
- Almost all of the attendees were “entitled” residents, which it can be reasonably claimed makes it more likely to ensure that their skillset will remain in Jersey and may be used to train others in the same business.
- Three relevant examples are included below:
  - Example 1: Three attendees of the Digital Jersey Coding Course already had their own businesses as graphic designers; they applied to the Digital Jersey Coding Course as their customers were demanding a broader digital skillset including the building of websites and digital design work. The Coding course has enabled them to stay relevant in their industry and has resulted in increased revenue for their businesses.
  - Example 2: A graduate of the first coding course was delivering room service and working in a fish and chip shop prior to taking the course. Following the course, he was employed by the local tech firm Calligo, then promoted after a year and a half and is leading a team of three.
  - Example 3: The local tech firm Codentia has taken on three of the Coding Course graduates. The course was essential for the firm as no private firm was providing the necessary training and the lack of skills available would have resulted in a large time/money investment to train one member of staff to a suitable level. The additional benefit in this example is that the firm



decided to recruit three already trained individuals, rather than pay for the upskilling of one. Codentia's turnover has increased by 40% in recent years, and having skilled staff would have played a contributing factor in that success.

- **There is a proven track record of the public sector providing digital skills training through Digital Hubs, which in turn helps to grow the Digital sector.** In many local economies, the public sector has typically played host to digital skills zones and co-working spaces, often in conjunction with local universities. Examples include: Bristol city council and university, Manchester City Council, and Brighton City Council and university. These Hubs typically feature co-working space, skills zones, access to mentors and the other combination of offerings to the digital sector that enable Hubs to work. Having skills, co-working etc. all in one place facilitates interactions between members of the digital community that are drawn to the Hub for different purposes. The growth of digital firms in and around Digital Hubs has in turn drawn private investment into supporting industries, such as scale-up office space, cafés, and consultancy.
- **The link between Digital Skills with higher value jobs and productivity:** The CBI (a large UK trade association representing the voice of industry) note that those equipped with the knowledge and tools to engage with digital technologies earn a higher wage, reflecting their greater productivity. CBI, *Engineering our future – stepping up the urgency on STEM* (March 2014); Tech Partnership (DIG0040) para 3.1.
- Tech City UK (a large UK trade association representing the tech industry) calculate that the average advertised salary in digital roles is just under £50,000, which is 36% higher than the UK national average 37 TechCity UK and Nesta, *Tech Nation 2016 - transforming UK industries* (February 2016).
- **A UK Government Select Committee's report into the Digital Skills Crisis** - The UK House of Commons Select Committee for Science and Technology, published a report in June 2016 into the Digital Skills Crisis in the UK, available here. It states: "To address immediate gaps [in the availability of digital skills in the work place], the Government should put in place coherent strategies to address the shortage of skills of particular strategic importance to the UK economy—including cyber-security, big data, the Internet of Things, **mobile technology** and e-commerce—and how these capabilities should be introduced in workforce training."
- The Tinder Foundation reported that already almost 90% of new jobs require digital skills, with 72% of employers stating that they are unwilling to interview candidates who do not have basic IT skills. 40 Tinder Foundation, *A Leading Digital Nation by 2020: Calculating the cost of delivering online skills for all* (February 2014)
- Research in the Netherlands has shown that employees lose nearly 8% of productive time due to poor IT resources or inadequate digital skills. CBI, *Engineering our future – stepping up the urgency on STEM* (March 2014); Tech Partnership (DIG0040) para 3.1
- **Investment in skills has spill-over benefits into the wider economy** - In 2012 The UK Department for Business conducted a review into the wider benefits of adult learning. Part of this study looked into the attitudes and behaviours of those attending adult learning courses; it states that after controlling for other determinants and fixed effects, participation in formal and informal adult learning courses is associated with the following attitudes:
  - A desire to find a better job.
  - An increased likelihood of reporting improved financial expectations for the following year.
  - An increase in the perception of the importance of having a good job.
  - Informal learning may also be associated with a reduction in people agreeing with traditional roles for men and women.





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

*Action: Digital Jersey requests that Government stays fully committed to the IoT working group and its work on infrastructure projects related to internet access, including a cost/benefit analysis of rolling out free wifi in St Helier.*

*Action: The Government must engage with and ensure that the Jersey Library is fully supported as a resource to support residents in developing digital skills.*

Ensuring islanders and visitors alike have connectivity is key to our ongoing efforts to establish Jersey as a testbed for emerging technologies. Digital Jersey's Internet of Things (IoT) working group is considering a number of work streams covering infrastructure projects related to internet access, including a cost/benefit analysis of free Wi-Fi provision in St Helier.

Much discussion has taken place about the economic benefits of providing this service throughout St Helier. Anecdotal benefits include: the application of IoT technology, location based advertising for retailers and capturing data for analytics. However, no detailed work has taken place to fully ascertain the full scope, costings and expected return on investment of such a project; this work should be carried out by and a decision taken by Government, in conjunction with industry about what the next steps could be.

The Government must engage with and ensure that the Jersey Library is fully supported as a resource to aid residents in developing digital skills.

## **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? Please give details.**

*Action: Education - Jersey must raise standards and align the curriculum with future skills requirements – as laid out below*

*Action: Returning local talent - the Education department to give more consideration to financial schemes aimed at retaining and attracting local digital talent.*

*Action: Targeting migration - Digital Jersey believes that Government should continue to support Digital Jersey throughout the Business Licensing pilot and looks to extend the scheme if appropriate.*

Yes, at a high level the emphasis on attracting the best and the brightest is well placed and articulated. As mentioned in question 1, there are a lack of local graduates returning to Jersey with tech skills, at the same time evidence shows that digital businesses in Jersey are struggling to find suitably skilled staff. Furthermore, as there is a lack of digital courses being provided on Jersey, it can be stated that there are a combination of problems in this area.

Digital Jersey suggests a variety of steps that can be taken in this area within Education, returning students and targeted migration:

**Education – Jersey must raise standards and align the curriculum with future skills requirements:** Government should look to carry forward Recommendation 7 of the Innovation Review, which states that “The Education Department should work with businesses to create and implement an action plan to raise standards and align the curriculum with future skills requirements of innovative businesses, including problem solving, design STEM subjects and entrepreneurship.”





To enhance the jurisdiction's digital skills, Digital Jersey recommends that government undertake four key actions, in order to return the greatest value to Jersey.

- Development of a Business Education Partnership to act as a single point of contact between business and the education system (as currently stated in the Innovation Review action plan).
- Reshaping of Highlands, including making the curriculum more aligned with the requirements of the economy (as currently stated in the Innovation Review action plan). This should include an expansion in the range of ICT related courses. By encouraging students to study ICT courses at secondary school, Jersey will be encouraging more people into Further Education courses in this area.
- Working with the private and public sector both locally and internationally, the Education Department should develop a strategy for the development of post-secondary education on-island (higher education). Special consideration should be given to research based STEM subject at or above level 6.
- Government should review and consider if GCSE ICT or equivalent should be compulsory - as this could drive an improvement in digital skills generally as well as feed into further education.
- The education department should assign a digital leader in every school who is trained to a certified level. These digital leaders should have clear responsibilities and objectives.
- Government should implement recommendations made in the upcoming Aspire 2be Report.
- Government should progress the introduction of a Tier 4 permissions route modelled on the UK. Such a system would introduce controlled flexibility to the local labour market, fuelling cross-jurisdiction knowledge transfer by encouraging in work placements (secondees) and international students. By aiding students from off-island to undertake their studies in Jersey, local further education providers (level 6) will gain the economies of scale to offer a greater variety of courses, particularly in STEM subjects, which in turn will benefit locals. This will go some way in compensation for the net-outflow of further education students abroad, and the notable absence of a local university and its associated research capabilities (typically harnessed by the private sector as a platform from which to innovate).
- Government should review the Think Differently report to ensure that the recommendations have been implemented fully.

**Government must encourage local talent to return to the jurisdiction:** Statistics for local talent returning to Jersey is available in question 1. Digital Jersey would like to challenge the Education department to give more consideration to financial schemes aimed at retaining and attracting local digital talent. For example, grants for students studying STEM subjects, with caveats that they return to Jersey within a certain time period upon graduating, else the money is repaid.

**Migration should be targeted to the highly skilled and those who will raise productivity for local digital businesses.** In response to the findings of The Innovation Review, Digital Jersey has agreed a 6-month pilot scheme to provide staffing permissions. The permissions will be issued to local businesses looking to fill technology and digital commercial roles where there is no one currently available locally. These permissions are targeted at roles that will contribute towards the growth and development of the local digital industry. Roles aligned with the key industry sectors as identified in the Digital Jersey business plan 2016 (fintech, Digital Health, Internet of Things, testbed opportunities) in particular will be given consideration. This pilot scheme is intended to support companies with strong potential to achieve productivity above the economy average or which offer significant wider benefits to Jersey.



**4 Do you have any further comments that you would like to make to this strategic goal? Please give details.**

None

**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? Please give details?**

*Action: Government should take a long term view on digital infrastructure which is part of the forthcoming island plan - including support for the adoption of 5G role out as and when appropriate. Government should work with telecoms partners to ascertain whether Jersey should be one of the first testbeds in the world for 5G.*

Digital infrastructure is largely considered good, causing minimal barriers to growth for local digital businesses. Looking to the future, Government should take a long term view on digital infrastructure which is part of the forthcoming island plan. This should include support for the adoption of 5G role out as and when appropriate.

Jersey needs to grasp opportunities to be a global leader in areas where it can have a distinct advantage over other jurisdictions. Government should therefore work with telecoms partners to ascertain whether Jersey should be one of the first testbeds in the world for 5G.

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

*Action: Government needs a robust technology plan for the hospital. This should include undertaking a cost benefit analysis for including an Innovation Lab in the planned new hospital.*

*Action: Digital Jersey requests that all Government departments follow the good practice shown by HSSD by building relationships with industry, via Digital Jersey, to ensure they can deliver digital Government services that the island deserves.*

Communication to the industry about the expected scope and timetable for a telecoms strategy for Jersey, would be welcomed.

Challenges to overcome, listed in the framework, should include a functioning digital ID and a well-resourced Open Data platform. In progressing these initiatives, Government will directly be supporting Digital Jersey's efforts to deliver on its objective of using Jersey as a testbed location.

**a. Digital Health Infrastructure**

Digital Health should be considered an objective in achieving resilient digital infrastructure. Digital Health itself will play an increasing vital role in improving community care, and the planned new hospital offers a great opportunity to build on current success. One metric on which to measure Jersey's success in this area would be for the planned hospital to aspire to meet HIMMS Stage 7 standards. The globally recognised standard for measuring the digitalisation of health care provisions.



Digital Jersey would like to praise the work of the HSSD, Primary Care and the further bodies representing Public Sector Health, who have been working closely with industry, via Digital Jersey, to develop a health strategy for the jurisdiction. Digital Jersey requests all Government departments follow a similar example and build relationships with industry, via Digital Jersey, to ensure they can deliver digital Government services that the island deserves.

### **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.**

Implementing the Education plans outlined earlier in this response, will deliver a more digitally sophisticated jurisdiction and remove the barriers for residents using government services online.

**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.**

*Action: The Government should inform data subjects of the type of data that is being collected, the time it will be stored and for what specific purposes is this data collected, in order to help build trust.*

*Action: Government should educate people about the benefits of their data being shared across Government so that it does not become a barrier to the future implementation of eGov.*

The way in which data is collected, stored and protected, can make a significant difference in terms of the public's willingness to share data and also the quality of data that is being shared. It is important to inform the data subjects (such as patients in a Digital Health environment) of the type of data that is being collected, the time it will be stored and for what specific purposes is this data collected.

During the collection process the data collectors must be able to address concerns around data privacy and security. Also, learning from previous NHS testbed experiment results, there must be a clear and consistent terminology used by every data collector in every place data is collected. For example, every doctor should explain the need for data gathering, in the same way in every clinic. It will be important to have a shared terminology ensuring common understanding between the specialists collecting the data and the technological specialists.

### **Educating citizens about the benefits of data use:**

Presently, the Government and Parishes hold public data in many different databases across Departments and Parish Halls. Several barriers (legal and other) prevent this information from being collated into a single source. A single source of information has a variety of benefits such as economies of scale, the ability to utilise the data for eGov purposes more effectively and the potential to allow private sector businesses to utilise data, within reason, to provide more effective public services. Digital Jersey would like the Government to begin to educate people about the benefits of their data being shared across Government so that it does not become a barrier to the future implementation of eGov.



**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.**

*Action: Government should appoint Digital Champions in each department, to ensure that Departmental Digital Strategies are developed and implemented.*

Digital Jersey believes that if this framework is to be a success, it must be championed across government and at all levels of seniority. Our members would like to see Departmental Digital Strategies established and led by nominated Digital Champions, to ensure that the ethos of this framework can be turned into a Pan-Governmental reality.

### **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.**

*Action: Digital Jersey would like Government to consider reallocating the remaining funds within the Jersey Innovation Fund towards a Match Funding and Risk Investment Stimulus proposal, which are detailed below.*

At the policy framework discussion at The Digital Hub, members felt strongly that this was one of the most important sections for their businesses. Attendees agreed that the framework's Action Plan should make commitments and have measurable output-focussed targets. Members also agreed that it will be very difficult to grow the tech sector without creating a favourable environment to immigration.

However, this section needs to be amended following the Government's recent statement placing a hold on further funding from the Jersey Innovation Fund. Digital Jersey would like Government to consider reallocating the remaining funds within the Jersey Innovation Fund towards a Match Funding and Risk Investment Stimulus proposal, which are detailed below.

Difficulties gaining access to early stage funding for innovative businesses is an issue recognised by both the Access to Finance study ("finance providers cited the level of risk as being too great") and Jersey Innovation Review ("Key Weakness: limited funding for early stage ideas" and Recommendation 1). Whilst the Jersey Innovation Fund (JIF) has provided support to a number of businesses, its remit and structure make it difficult to recommend support to those start-up enterprises which require "smart money" – i.e. hands-on angel/mentor reach combined with flexible, responsive equity funding.

Digital Jersey and Jersey Business have been working with a specialist private sector provider to consider a solution to this problem. We have been developing proposals to catalyse investment through a combination of match funding and risk investment stimulus. The proposal mirrors key elements of the highly successful UK SEIS arrangement but without the need for Government tax breaks.

**Match Funding** - The output of this work would be a private sector members club for individuals who are interested in supporting bright ideas arising in the local digital and non-digital sectors. The club (working title: "49North Club") is not a formal collective fund or similar vehicle but simply an information exchange so that supporter investors can assess those innovative start-ups which need assistance and funding (typically £5k-£50k) and individually decide if they want to get involved.



**Risk Investment Stimulus** - Alongside a match funding scheme, which provides risk mitigation at the time of investment, a risk investment stimulus scheme would provide mitigation in the event of investment loss.

The need for funding support for local early stage innovative businesses is well known, as is the requirement to stimulate local private investors. The proposed match funding and risk investment stimulus schemes would provide a means of encouraging and corralling local investment into target businesses and establishing local investment partnering as the norm rather than a fortuitous opportunity.

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

Digital Jersey commissioned KPMG in 2015 to undertake an Opportunity Analysis of how the jurisdiction could progress a digital industry.

The report identified the advantages of Jersey to digital businesses as follows:

- Ability to legislate and regulate locally appropriately and rapidly in response to needs
- Potentially agile and responsive to new ideas, compared to larger jurisdictions
- Great lifestyle and physical environment
- Typical western demographics
- Low and simple tax rates
- Proximity of key players

The Opportunity Analysis has also identified a number of barriers that may inhibit the development of the digital opportunities locally, as follows:

- Access to funding (in terms of seed capital, bank loans, grants, etc.)
- Access to local development centres (other than the ones already provided)
- Access to skills locally
- Local culture/acceptability for the Island
- Current legislation and regulation, particularly around the use of data and impressions of IP law
- Business model sustainability
- Connectivity requirements

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

*Action: Government completes Innovation Review Recommendation 20*

There is a perception amongst Digital Jersey members that the amount of regulation involved in starting up and running a business is disproportionately large. Furthermore, the variety of bodies that need to be involved in this process, such as the JFSC, Social Security, Income Tax and so forth, has resulted in an inefficient system which takes much time to navigate.

To help address and alleviate any problems in this area, Digital Jersey request that the Government completes Innovation Review Recommendation 20, which states that "Government should consult with businesses to ascertain which regulations are viewed as the major barriers to enterprise and undertake to reform or remove these, subject to a cost/benefit analysis."

Specifically, Members have voiced concerns about the difficulty for non-residents in setting up a business in Jersey and Digital Jersey would like this to be factored into the response to Recommendation 20. Whilst a



Jersey resident can set up a company in their own name and obtain support from Jersey Business to better understand the processes required to meet the company obligations for Social Security, Income Tax, Employment consent, Data Protection, and JFSC permissions; a non-resident has no current support to understand the complex company formation processes.

If the potential company is part of a relocation of a High Net Worth Individual or a larger business looking to re-domicile, then they will be supported by Locate Jersey. However, for smaller businesses such as digital startups, there is no clear support network.

Currently a non-resident would need to contact a regulated Trust company for support in the company formation due to the local regulatory obligations regarding providing Registered Office, Company Secretarial and Directorship services. The costs incurred by going down this route are cost prohibitive for smaller startups.

In addition, the provision of banking services to start-ups, especially non-local startups are proving to be time consuming and challenging. In the instance of Blockchain related startups, there is no bank in Jersey that will currently provide basic banking services. This is a fundamental impediment to providing a 'one stop shop' that facilitates the marketing of Jersey as a suitable destination for technology startups.

**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.**

*Action: Procurement improvements can be made to ensure that more local firms have the best opportunity to supply their services to Government – see details below*

Government places itself in an unavoidable invidious position when it comes to IT procurement. On the one hand Government needs to make clear movements towards encouraging growth in the local digital economy; whilst on the other hand, Government needs to ensure that it secures the best quality IT services that tax payers deserve within limited budgets.

Unfortunately, the reality is that in recent months this approach has not been working in the favour of local digital businesses. Several large public sector IT procurements, such as the eGov Design Authority, have been awarded to off-island suppliers, leaving a very negative impression with local suppliers that Government does not support local firms.

Digital Jersey believes that Government inherently supports local digital businesses, and that improvements can be made to ensure that more local firms have the best opportunity to supply their services to Government.

These improvements are as follows:

1. At a policy level, the soon to be published Procurement Strategy **must have** a dedicated section instructing Departments to review local suppliers when it comes to a Digital procurement. This should also be included in the Financial Directions, which govern the steps civil servants must take when conducting a procurement process.
2. Public Sector Procurement should encourage joint ventures (JV's) between local and off-island firms. This approach would allow local digital businesses who may not be sufficiently experienced or large enough to deliver an entire public sector contract by themselves, to partner with off-island expertise who can bring their expertise to the project. Digital Jersey believes that this approach may deliver better results than using off-island firms, as a local partner will provide beneficial local





knowledge and context to a project. One suggestion for implementing this JV approach in practice, would be to grant longer procurement periods, or to give advanced notice to local firms who wish to initiate process JV's in this way; the longer time period is required so that a suitable off-island partner can be located and the JV's agreed.

3. The weighting given to localness in the procurement process should be increased.
4. The eGov project should prioritise enhancing the Open Data initiative. As detailed elsewhere in our response, this initiative has the potential to stimulate the local tech sector and create new businesses, jobs and skills. This will develop the local digital industry, allowing it to become more mature and in a position where it is more likely to win public sector contracts.

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

*Action: Government should encourage effective regular steering groups bringing together Government, Regulators and Industry representatives, to discuss all matters raised in this framework. In parallel, Government need to coordinate more effectively how the jurisdiction is proactively marketing itself for inward investment from digital firms looking to relocate to Jersey.*

Since the publication of the Government's Financial Services Policy framework, the Government has been justifiably proud to talk about improvements in the relationships between the Government, Regulator (JFSC) and Industry (through Jersey Finance and other trade bodies).

Digital Jersey believes it would be advantageous to replicate this symbiotic relationship for the digital industry. At a high level, this would allow the industry bodies who have interests in the digital sector (such as Digital Jersey, Jersey Finance, Locate Jersey, Jersey Business and so forth), to regularly communicate requests and developments with the Government (Chief Minister's Department, Economic Development, Tourism Sport and Culture, eGov and so forth), and also with the regulators (JFSC, OIC, CICRA) as appropriate.

In parallel, Government need to coordinate more effectively how the jurisdiction is proactively marketing itself for inward investment from digital firms looking to relocate to Jersey. This should be led by Locate Jersey, with close involvement of all industry bodies who have interests in the digital sector.

As referenced earlier in this response, Government departments need to develop better relationships with the local private sector. This relationship has been effectively demonstrated recently with the Health Department.

**Tracking the Innovative Economy**

*Action: Digital Jersey recommends that a set of measurable Innovation KPIs are defined and monitored on an annual basis in order to track progress. The Statistics Unit should also undertake an annual publication detailing changes in the Digital Economy.*

In order to strive for a diverse and innovative digital economy, Government must define what good outcomes should look like. To help achieve this, Digital Jersey recommends that a set of measurable KPIs are defined and monitored on an annual basis in order to track progress.

Digital Jersey also recommends that the Statistics Unit undertake an annual publication detailing changes in the Innovative Economy. This to inform policy on Jersey's innovative eco-system and act as a performance





measure for government bodies such as Locate Jersey, Jersey Business and Digital Jersey. Key metrics easily available include:

- Creation and importing of new Digital Businesses
- Number of high growth businesses *annual employment growth +20%*
- Start-ups per 1,000 of population between 16-64 *(by sector)*
- Number of students in level 6 or above training on-island
- % share of students undertaking STEAM training on-island *(level 6 or above)*
- Percentage employment deemed to be in highly innovative companies
- Public investment in R&D as share of GVA
- % of jobs in local digital businesses *(as defined by ONS)*
- High tech services and high tech manufacture employment *(SIC classification)*
- OECD comparison

### **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? Please give details.**

Digital Jersey believes that by working with Government, Regulator and the Industry, Jersey can strategically:

- a. Build a fintech industry by capitalising on its existing financial services industry
- b. Lead in the Digital Health area
- c. Become a world renowned testbed
- d. be an attractive place for IoT testing and development

Government has an instrumental role fostering an environment favourable to emerging technologies, most notable in:

- Stimulating R&D investment
- First mover advantage in adopting new technologies

In many of the world's leading digital centres it was government policy which fuelled growth. For instance, Estonia's thriving digital economy has largely been attributed to a proactive approach by government to digital services. Lastly, in developing annual business plans, Digital Jersey must take it upon itself to re-energise its approach to developing the digital economy in light of global developments in technology.

#### **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? Please give details.**

No



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

*Action: Government should review the R&D incentive environment in Jersey, to ensure it is effectively encouraging digital businesses to invest in their own development.*

In fostering an environment conducive to emerging technologies government must work to overcome core hygiene factors. This includes an open data platform which hosts both public and private data, enabling users to measure behavioural responses to say weather conditions and or government policy change.

Other hygiene factors in need of consideration include Research and Development (R&D) incentives. R&D is the fundamental driver of innovation and in developed, knowledge-based economies like Jersey's, innovation powers long-run economic growth. For example, a study published by the National Endowment for Science, Technology and the Arts (NESTA) found that two-thirds of UK private-sector productivity growth between 2000 and 2007 was the result of innovation<sup>1</sup>.

Presently Government financed support for local R&D is narrow, with only the Innovation Fund allocating financial support to relatively risk adverse activities. The Innovation Review found;

*'The Fund invested just under £1 million in 2014, representing approximately 0.02 per cent of GDP. Assuming that less than half of this was invested in R&D, government-funded BERD is at most 0.01 per cent of GDP, in contrast to between 0.02 per cent and 0.12 per cent in the comparator jurisdictions.'*

**M2: Government Financed BERD (Business Enterprise Research and Development) as % of GDP.**

<b>Estonia</b>	<b>0.12</b>
<b>Iceland</b>	0.10
<b>Israel</b>	0.10
<b>UK</b>	0.09
<b>Ireland</b>	0.07
<b>Luxembourg</b>	0.04
<b>Switzerland</b>	0.02
<b>Jersey</b>	0.01

*(Innovation Review, Page 87)*

Generally, R&DI can either be encouraged by input or output incentives. "Input" incentives affect the cost side of R&DI expenditures, "output" incentives affect the income i.e. motivating companies to allocate turnover and profits to a single jurisdiction (patent box). R&DI incentive schemes are widely adopted in advanced economies, including innovation leaders like the United States and Japan. Within the EU, only two member states currently do not have a tax policy aimed directly at stimulating innovation.

Experience in other jurisdictions has shown 'input' incentives to be highly effective in stimulating R&D expenditure. For instance, public investment in R&D 'crowds-in' private investment, with £1 of public R&D funding giving rise to an increase in private investment of between £1.13 and £1.60<sup>2</sup>. Furthermore, direct

<sup>1</sup> NESTA, The Innovation Index: Measuring the UK's Investment in Innovation and Its Effects (London: NESTA, 2009), pg. 4, <http://www.nesta.org.uk/library/documents/innovation-index.pdf>

<sup>2</sup> What is the relationship between public and private investment in science, research and innovation? Economic Insight, BIS, 2015



support provides positive returns to government in the form of productivity gains resulting both from product and process innovations<sup>3</sup>.

Due to R&D incentives in competing jurisdictions, Jersey is disadvantaged in attracting mobile R&D spending. Several companies have expressed a need for financial support in order to progress new product development. These sentiments are reinforced by the Innovation Review which found Jersey underperforms its peers in Government Financed BERD (Business Enterprise Research and Development) as % of GDP. Accordingly, **for Jersey to both draw much needed FDI and to foster an environment conducive to emerging technologies Government should review the R&D incentive environment locally, in light of schemes in similar jurisdictions.** Examples below:

- Ireland: A 25% credit is available for expenditure incurred on constructing or refurbishing buildings or structures used in the conduct of qualified R&D activities (provided at least 35% of the building is used for qualified R&D over a four-year period).
- Luxembourg: The common Luxembourg incentives framework grants aid of up to 25% of R&D investments. However, the level of aid can be higher. In addition to the R&D incentive program, businesses may be eligible for further incentives

Challenges to Overcome: Limited on-island academic capabilities and training in STEM subjects at or above level 6. **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.**

*Action: Digital Jersey would like to challenge the JFSC to create a regulatory sandbox, which achieves similar objectives to the FCA's sandbox, however is proportional in size and scope for the jurisdiction.*

Protecting Jersey's reputation as a centre of regulatory and legal excellence, which is compliant with international standards that are widely adopted, is understandably a high priority for Government and the JFSC. At the same time, the jurisdiction should always look for opportunities to capitalise on differentiating itself where there are legitimate business benefits for local firms.

Digital Jersey would like to praise the work of the Government and the JFSC for actively monitoring fintech developments and the potential regulatory implications. Some examples of this work on fintech include, amongst others:

- Regulation of virtual currencies
- Updating the JFSC's AML/CFT handbook to provide further guidance to firms looking to use digital systems to satisfy certain customer identification requirements
- Issuing FAQs on crowdfunding

The JFSC has also signaled to the industry that it is more open towards innovative ideas and business models; this has been seen through references in the JFSC's 2016 business plan and on the 'Innovation and Fintech' support section of the JFSC website.

Looking to the future, Digital Jersey would like to challenge the JFSC to create a regulatory sandbox, which achieves similar objectives to the FCA's sandbox, however is proportional in size and scope for the jurisdiction. The FCA's regulatory sandbox aims to create a 'safe space' in which businesses can test

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<sup>3</sup> Innovation matters: Reviving the growth engine, McKinsey & Company, 2013 p26  
Registered Office: Digital Jersey Limited, Block 3, The Forum, Grenville Street, St Helier, Jersey, JE2 4UF  
Tel: +44 (0)1534 789 333 • Registered Company Number: 110982



innovative products, services, business models and delivery mechanisms in a live environment without immediately incurring all the normal regulatory consequences of engaging in the activity in question.

The sandbox may be useful for unauthorised firms that need to become authorised before being able to test their innovation in a live environment. The sandbox may also be useful for authorised firms looking for clarity around applicable rules before testing an idea that does not easily fit into the existing regulatory framework. The FCA's sandbox can help authorised firms in the following ways:

- Individual guidance: setting out how the FCA will interpret relevant rules in the context of the test.
- Waivers or modifications to FCA rules: if a test might breach FCA rules they may be able to waive or modify it where it is unduly burdensome or not achieving its purpose.
- No enforcement action letters: this letter would give firms some comfort that as long as they dealt with the FCA openly, kept to the agreed testing parameters and treated customers fairly, they accept that unexpected issues may arise and they would not expect to take disciplinary action.

More information is available [here](#).

**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.**

*Action: Digital Jersey should work with Government to have a simple infographic created that sets out the current system for IP in Jersey.*

When an innovator develops some IP in the Jersey, or potentially transfers some to the jurisdiction, the innovator will wish to ensure that there is an appropriate IP framework that gives suitable legal protection.

Greater innovation will lead to the potential for IP to be developed in the jurisdiction and possibly registered here. Jersey needs to understand what its proposition in this area is and how it fits in with the current taxation model, particularly with regards to how royalties etc. flow to Jersey in the absence of double tax treaties with many significant markets. These matters are complex and require a separate workstream to ensure they are fully understood so that Digital Jersey and other agencies understand what is possible and that potential new entrants are informed accordingly.

As a first step, a simple infographic setting out the current system would be helpful.

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

none



## **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? Please give details.**

*Action: Digital Jersey requests that in the development of its cyber security strategy, Government takes into account the points raised in the JFSC's letter to CEOs and considers this approach to cover higher risk businesses in Jersey, regardless of their sector.*

A robust cyber security platform for the island is a key environmental layer and these matters need to be addressed considerably more rapidly than currently timetabled. In addition, sufficient funding needs to be allocated by the States of Jersey to ensure that this matter is addressed. It is also noted that the number of islanders with appropriate cyber security credentials is currently limited and it is likely that a combination of rapid re-skilling and/or immigration will need to be encouraged to ensure that resourcing is available to deliver the action points.

Digital Jersey agrees with the approach taken by the JFSC in February 2016, in its letter to all Chief Executives of registered financial services businesses in Jersey. In the letter the JFSC has identified a number of resources that are likely to assist with identifying and managing these risks.

*"The financial services sector is an attractive target for cyber-attacks and therefore I expect that your business will already be aware of the potential effect such an attack would have on you and your clients... Given the potential impact on businesses, the public and the reputation of Jersey, we are keen to ensure that registered persons have appropriate cyber-security measures in place... We expect that registered persons will take appropriate steps to properly manage their cyber-security arrangements."*

As a minimum, the Commission would expect the registered person to:

- Understand and document the risk of a cyber-attack on their business and take appropriate documented measures to mitigate this risk.
- Have in place appropriate contingency arrangements that they can deploy in the event of a cyber-attack and their effectiveness should be tested at appropriate intervals.
- Boards of Directors (or equivalent) should take overall responsibility for ensuring that their firm adequately addresses cyber-security risks.
- The letter also reminds firms of their existing cyber-security obligations under Principle 3 of the Codes of Practice. In most cases this states that "a registered person must organise and control its affairs effectively for the proper performance of its business activities and be able to demonstrate the existence of adequate risk management systems".

It is important for Government to set the overarching cyber security strategy for the jurisdiction. This strategy should set out its own detailed action plan for managing and mitigating cyber security risks to the island. Digital Jersey requests that in the development of its cyber security strategy, Government takes into account the points raised in the JFSC's letter and considers this approach to cover higher risk businesses in Jersey, regardless of their sector.



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

The framework should provide greater prominence to the support provided to Government by the deliver bodies who help support Government in this work. These include: Jersey Business, Digital Jersey, and the Library/consumer council, who all assist in reaching out to the general public and to the workforce to help build cyber awareness.

*Advantages and Achievements*

- a. From the Jersey Cyber Security Review of 2015, which action were taken, and which ones are planned.

**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.**

*Action: Government should meet the requirements of the forthcoming EU General Data Protection Regulation, as well as the new EU Data Protection Directive and include Digital Jersey in this workstream as it develops over the coming months.*

Digital Jersey fully supports the Government's plans to update the jurisdiction's data protection legislation so that it will meet the requirements of the forthcoming EU General Data Protection Regulation, as well as the new EU Data Protection Directive on the protection of personal information processed for the purposes of policing and public protection.

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

The Channel Islands are likely to benefit from economies of scale if this approach is taken collaboratively.

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

Digital Jersey would like to request that it is fully involved in these discussions as they develop over the coming months. Having the legitimate interests to hold, process and transfer data inside and outside of the jurisdiction is essential to digital businesses operating in Jersey.

**ENDS**