DIGITAL JERSEY

Andy Harris
Scrutiny Office
Morier House
St. Helier
Jersey. JE1 1DD

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Dear Deputy R. Ward

**RE: Post-16 Education Review**

Digital Jersey welcomes the time and consideration given by the Education and Home Affairs Scrutiny panel to review the provision of post-16 education in Jersey. The scope of the panel's research is timely with our own efforts to enhance the quality and provision of education for this age group.

Skills are inextricably linked with the growth and development of the digital economy, and a strong link can be shown between higher education, higher salary levels and a successful digital sector.

However, the Jersey Innovation Review 2015 concluded that access to the right talent and the skills in the workforce are a major constraining factor for Jersey's innovation performance.

Specifically, the share of the workforce with their highest qualification at Level 3 (i.e. technician level) is significantly **lower** than that of England and there is an even higher share of those with no formal qualifications at all. Only 20% have degree or above qualifications (census 2011), when compared against Britain's top 20 biggest tech hubs, only Birmingham has relatively fewer degree level graduates. Compared to UK cities more widely, on this measure, Jersey is in the bottom 30%, marginally ahead of Preston and below the likes of Swansea and Dundee.

This shows there is a large gap in the qualification levels of the workforce, with a high proportion who need upskilling to prepare them for the impact of technology on the labour market. This can partly be attributed to the island's low graduate retention rate, with just 54% of local graduates working in Jersey eight years on from graduation and the limited higher education opportunities on-island.

With this in mind, in November 2017 Digital Jersey worked with the Marchmont Observatory, an impartial research body at the University of Exeter with previous experience of education strategy, to conduct detailed interviews and analysis of the current pipeline of digital skills, training opportunities, and industry demand. In March 2018, in partnership with the research team, we launched the Digital Skills Strategy.

The research paper revealed that:

- The number of students pursuing digital qualifications at all levels is insufficient to meet the island's needs
- Education provision at A level/Level 3 provision is not satisfactory
- The provision of post-secondary opportunities for retraining and upskilling is insufficient
- Industry demand for digital skills exceeds supply significantly
- There is a strong tendency to expand abroad or to relocate once a digital business grows to about twenty staff
- The most common response to recruitment difficulties is to reduce the job specification. This suggests that businesses are operating with skills levels below the optimum

The following paper addresses the scrutiny panels specific research questions and provides evidence and external links where appropriate. Please feel free to follow up with any further additional questions or comments

Yours sincerely

TONY MORETTA
CEO DIGITAL JERSEY

1. **To identify Post-16 education provision in the Island.**

Between 2015 and 2017, approximately 115 local students studied and completed IT related qualifications with the islands' state funded schools at **Key Stage 5**. The provision is listed in the below table:

| **Digital Qualifications entered (Further Education 2015-2017)** | **Entries** |
|---|---|
| A2 ICT | 54 |
| A2 Computing | <10 |
| A2 Computer Science | 14 |
| AS ICT | 10 |
| AS Computing | <10 |
| AS Computer Science | <10 |
| BTEC IT | 36 |
| **Total** | **115** |

In recent months some of the islands' secondary schools have taken a proactive approach to improving the provision of training opportunities at Level-3. For instance, Beaulieu recently launched the BIT (Beaulieu Institute of Technology), while Highlands College intends to launch a Diploma in Games Development from 2019.

With regards to **Higher Educations** (Level-5 and above), there is very limited local provision of digital skills. The only non-employee selected degree programme **was the Foundation IT for Business** program delivered by University College Jersey, which typically onboards between 10-15 students per-year. However, this program has been discontinued. It is hoped that the IT for Business foundation degree will be replaced by a Higher National Diploma in Computing from September 2019 onwards.

Beyond what is delivered by University College Jersey, KPMG runs a Digital Degree Apprenticeship Programme delivered and accredited by Exeter University. This has an annual intake of two students.

**Recommendation:** Consideration should be given to the digitalisation of non-IT courses, such as Media Studies and Mathematics which will increasingly feed industry demand in roles like data analytics and web design/UX/UI design.

2. **To examine the current Post-16 education provision and determine whether it meets the needs of local students, allowing them to gain relevant and further qualifications.**

According to informed Researchers who contributed to the Digital Jersey Skills Strategy, the training options offered on island for key stage 5 were 'barely sufficient'. The number of digital 'digital' courses is inadequate and inconsistent at key stage 4.

Digital Jersey conducted a survey of nearly 300 students at the 2018 Skills Show (October) which demonstrated that student interest and demand for post-secondary and higher education in digital subjects delivered on-island is not being met[1]. **89%** of the 16-20 age bracket want to study higher education. **65%** of them either wanted to study on-island or didn't mind where they studied. The 16-20 age bracket also displayed a high level of interest in the digital industry and over **75%** of them had considered a career in the digital industry.

3. **To examine the current Post-16 education provision and determine whether it meets the needs of local business and industries.**

The following findings represent the outcome of extensive research with digital employers in Jersey as part of the creation of the Digital Skills Strategy:

Without exception, all employers interviewed, strongly emphasised the difficulties faced in recruiting staff. The recruitment of IT staff with 3-5 years post degree experience (mid-range) was highlighted as being particularly challenging. For this reason, employers were willing to employ applicants with lower skill levels of experience, and instead provide job-specific training. However, this suggests that businesses are operating with skills levels below optimum, which has wider implications on their productivity and performance of the business.

These recruitment pressures were attributed to a strong tendency for **digital businesses to expand abroad or to relocate once scaled to about 20 staff.** This tendency to expand internationally raises concerns that employers are shifting their more highly-skilled and technically focused IT roles off-island, indicating a need to drive up digital skills utilisation of on-island staff. This trend directly impacts Jersey's potential to diversify its economy and develop a strong digital sector.

[1] The survey was completed by 288 students during this year's Skills Show with a balance respondent rate from Men and Woman.

Specifically, regarding training, employers had a desire to use tailored, rather than traditional, qualifications, with particular interest in novel approaches like ECOLE 42 and WozU. Employers also showed a strong interest in the use of internships and undergraduate/post graduate placements to meet their recruitment needs.

Separately, but related, the Skills Jersey Employer Survey 2017 identified that Jersey businesses already have widespread concerns over the level of digital skills among the islands workforce, highlighting difficulty finding suitably skilled people from within the local labour force. Accordingly, the SoJ Skills Strategy, 2017-2022 recommends positioning Jersey as an international centre of excellence for training in 'Digital' by: improving vocation pathways to higher level skills, aligning training with priority sectors, and linking employers with learners.

Case Study: Local Digital Business

*"We wanted to recruit and advertised simultaneously in Jersey and Sussex for someone with 5+ years' experience. In Jersey, we had 1 applicant in 6 weeks and he had no relevant skills. In Sussex, we had 25 applicants and I could pretty much have recruited any of them. We will open an office there at some point."*

4. **To examine how Post-16 provision equips young people for wider participation as an active member of society.**

The OECD Employment Outlook found that cities with a high concentration of workers with higher education have seen increased productivity and earnings in their Digital Sectors. This relationship between innovation and a highly skilled workforce is reinforced by research undertaken by the 'Centre for Cities' which found cities with the greatest share of graduates have seen the biggest increase in 'new work' professions e.g. Creative and Digital sector. These same factors have corresponded to the greatest rise in job growth, productivity and average earnings. Indeed, a study of LinkedIn profiles over the past five years, shows a significant increase in occupations with high levels of digital skills, such as in software development, social media, data science, user interfaces, digital marketing and cloud services. This indicates that occupational employment is shifting from manual and repetitive tasks to those that require higher levels of **cognitive ability and creativity**. These are roles for which the digital sector is a significant creator.

This has occurred in the broader context of a polarizing jobs market, with an increase of low and high-skilled jobs and fewer medium-skilled jobs. This trend can partly be attributed to **Artificial Intelligence** (including Robotic Process Automation), which is beginning to remove the need for many mid-level jobs occupied by the lowest educated, but also more administrative roles in Jersey's finance industry. This trend is further exacerbated by the proliferation of remote working, which is increasingly removing physical barriers to company expansion and, in doing so, fuelling the success of towns and cities with a high skill profiles.

As the adoption of Artificial Intelligence continues, the need for ongoing, self-paced learning will be essential. Closer industry-academic connectivity, both physically and virtually will be crucial if the island's workforce is to adapt to a changing employment landscape; particularly as traditional areas of employment are disrupted by technology. Specifically, as digitisation becomes widespread (AI, Automation etc.), the income gap between those who actively seek out learning, and those who don't will increase. For this reason, wider recognition is needed of the importance of self-paced lifelong learning.

To this end, the **recommendations included in the Digital Jersey Skills Strategy include the creation of a Digital Skills Academy (Academy**). The Academy is proposed as a focal point for industry and academia to work together, share resources, communicate, and ultimately to foster the island's next generation of industry skills. This will be achieved by providing higher level training opportunities that branch into industry specialisms, such as digital marketing, coding and data analytics.

The Academy will deliver and oversee a program of initiatives, including:

1. **A Digital Skills Pathway**: Working with partners for completeness of training pathways needed at all levels, consistent across schools/colleges into a career in the digital industries. This will provide clear career progression for applicants and will enable students to select study routes, secure well-paid jobs, and provide the digital skills needed by industry.
2. **Promote Digital studies and careers**: Communicate opportunities through a variety of channels to school leavers, career changers, teachers, career advisers and key influencers. It will also encourage gender diversity.
3. **Facilitate Industry / Academic cooperation:** Create opportunities for businesses to work with students (primarily Degree/PhD level) on product innovation. It will also better connect talent with employers.
4. **Create a physical Digital Skills Academy to undertake the activities outlined above:** This will be independent of Government, with the flexibility to raise funds and a long-term ambition of becoming self-funding.

The planned courses seek to address the specific needs of islanders, with a focus on three groups; school leavers, career changers/re-deployment, and industry upskilling. The intention is to run, in partnership with other education providers, tailored courses that suit users' needs and personal commitments. For example, full-time degree level qualifications for school leavers, part-time evening courses for career changers, and accelerator style programmes for those already in the industry.

Underpinning all these training programmes is a common approach to delivery as outlined below.

Accreditation:
Students assessments will be guaranteed by a combination of:

- Professional performance assessments
- Course work
- The application of learnings to sponsored projects

Quality assurance of the course will be assured by being:

- Accredited and validated by professional bodies (level 6)
- Designated as 'accredited centres' by professional bodies
- Adopting the UK Quality Code for Higher Education (QAA)

Learning Outcomes:
By participating in the course, students would:

- Gain experience working in international cross-functional teams
- Master in-demand digital skills
- Work on real world digital projects as part of the learning experience
- Develop digital skills to ready them for a career in the industry

Delivery of the programme is being guided by the newly launched Digital Skills Partnership; an advisory group that draws together stakeholders from the Education Department, Industry and educators themselves. The group plays a crucial role in guiding the programmatic plans for the Academy in providing insights into demand for skills, constrains of educator's time, and policy considerations of the Education Department.

**5. To identify best practice Post-16 education provision in other jurisdictions.**

Listed below are a number learning centres that provide guidance on best-practice and a president from which to follow:

The Catalyst Programme:
Each year, 12 students from the University of Sussex (UoS) join the catalyst programme as part of the Innovation team at the Sussex Innovation Centre. Over the course of a year, those 12 students work with businesses to address their specific needs, helping start-ups to scale. This gives students exposure to a diverse range of real-life projects, while providing companies with access to risk free, flexible and supported students to develop their product propositions at a competitive price.

The General Assembly:
General Assembly began in early 2011 as a co-working space, having since evolved into a private school. General Assembly focuses on offering short courses, online classes (including overnight courses and free short online courses), and immersive 10-12 week 'boot-camp' style courses in computer programming, data science, and project management, with an emphasis on web development and user experience design. Approximately 20% of its courses are offered through companies to their employees. As of September 2016, General Assembly has 15 campus locations on 4 continents.

General Assembly is not accredited but has been approved by the California Bureau for Private Postsecondary Education. They have also begun the process to become accredited, working with partner corporations such as GE, PayPal, Adobe, IBM, and many others to review such criteria to measure skills and competency in each program offered.

Digital Skill Academy (Dublin):

Founded in 2008, Digital Skills Academy is an established, innovative leader of digital industry-linked Higher Education & Training programmes with a proven track record of achieving graduate career goals. The programmes combine academic learning with the practical skills of 'doing', through applying learning directly in industry-assigned projects. 'These projects are sourced from our respected international Corporate and Industry Partners. Each participant works in a cross-functional virtual team (Coders, Data Scientists, Managers, Marketers, Sales professionals and Designers, working together). Continuous project-based assessment methodologies are applied. Handbook here.'

The Edge Hotel School:

In 2012 the Edge Foundation[2] partnered with the University of Essex to launch two-degree programmes that provide industry-led hospitality and events management degrees with hands-on experience in a real 4* hotel on campus. Both qualifications are delivered over two-years in Hotel Management and Events Management with Hospitality, with an annual tuition fee of £9,250. Undergraduates at the School 'learn by doing' as the basis of their degree qualifications.

The degrees are delivered at the Edge Hotel School which is based in Wivenhoe House Hotel, a 40-bedroom country house hotel with a brasserie restaurant, conference facilities and events functions that hosts over 300 events and 50 weddings annually.

The degree programmes are unique in several ways:

- Two-year fast-track degree with two annual intakes in February and September.
- Prepares students for employment through an innovative combination of professional experience and academic learning.
- Lecturers have international industry experience to support learning and development
- Students gain experience alongside their studies in a real 4* hotel to boost employability
- Placement is fully integrated into the course which allows students to take on more responsibility in the hotel as they progress through their degree.
- Assessments take place throughout the course. A Professional Performance Assessment (PPA) gives students the opportunity to demonstrate the learning.

**END.**

[2] **Edge Foundation**, commonly referred to as '**Edge'**, is an independent education foundation, dedicated to raising the status of practical and vocational learning in the UK. Its aim is for young people to have the opportunity to achieve their potential, to ensure that the UK's future workforce is equipped with the skills to succeed. The charity was launched in 2004 when education services provider Edexcel was partially sold to Pearson PLC. The trustees of Edexcel opted to use the proceeds of the sale to set up an educational foundation: Since its inception **Edge** has invested millions of pounds in practical learning schemes and initiatives run by other organisations, as well as running its own projects.