An Roinn Caiteachais
Phoiblí agus Athchóirithe
Department of Public
Expenditure and Reform

Cruinniú GovTech Report

November 2019

Prepared by the Office of the Government
Chief Information Officer

V1.0

Contents

Cruinniú GovTech Report 4
Minister's Foreword 4
Creating a GovTech Eco-System for Ireland 5
Priority Action Plan to Achieve the Aspirations of Cruinniú GovTech 2019 5
1. Introduction 6
2. GovTech for Ireland 8
3. The articulated ambition to take Ireland forward and indicators of progress 15
4. The Priority Action Plan 18
5. Conclusion and Next Steps 23
Appendices 24

Cruinniú GovTech Report

Minister's Foreword

When I became eGovernment and Procurement Minister two years ago, one of my ambitions was to make it easier for our small, medium and start-up technology companies to grow their business by working with Government and public services at home and abroad. As I learned more about the concept of GovTech and how it was applied in other countries, I was very keen to test the idea within Ireland.

Future Jobs Ireland was an excellent opportunity for Government to commit to exploring the opportunities that GovTech might bring to the Irish Economy. And the *Cruinniú GovTech Ireland 2019* event, which I opened in June at the Tangent space in the new Business School building in Trinity College Dublin, proved to be the perfect forum for exploring the concept with a group of committed and passionate subject matter experts from various fields and backgrounds.

I personally took great value from the day and was extremely impressed by and pleased with the various contributions made, especially from the younger attendees at the event.

This document records the discussions and outputs of the day. It also outlines eight areas of activity that I intend to bring to Government and gain support for implementing, hopefully in a way that is as inclusive and forward thinking as *Cruinniú GovTech* itself turned out to be.

I would therefore like to thank all the participants on the day, the contributors to this report and the staff whose organisational, reporting and writing skills made this record possible.

Le dea-mhéin

Patrick O'Donovan TD

Minister of State for Public Procurement, Open Government and eGovernment

Creating a GovTech Eco-System for Ireland

The Future Jobs Ireland (FJI) 2019 annual report sets out core ambitions for each of the pillars within FJI. One of the ambitions of Pillar 1 – Embracing Innovation and Technological Change - is to *"convene a major GovTech Summit to explore the opportunities that GovTech could bring to the Irish Economy and set out an Action Plan for moving forward."* This document is the report of Cruinniú GovTech 2019, which took place in June. It involved representatives from across industry, academia, and the public service, on the topic of GovTech in Ireland. As such, it represent the views of the participants on the day of the Cruinniú or "Gathering".

Priority Action Plan to Achieve the Aspirations of Cruinniú GovTech 2019

1. **Government should seek to facilitate the re-use of Government Assets where lawful and feasible.**
2. **Government should review the Government business development funding frameworks to identify any gaps or opportunities for further cohesion, with a view to reviewing how the model can be better communicated to, and understood by, its target audience.**
3. **Government should develop a more cohesive life-long digital talent development model covering all life stages, from pre-school age to retirement and all levels of competence from service user, to systems developer and systems architect.**
4. **Government should seek to develop procurement solutions, which fully comply with EU legislation, to enable easier access for new market entrants to conduct business with Government.**
5. **Government should drive GovTech by being an exemplar in the delivery of digital services, the continuous development of employee skills and the adoption of innovation.**
6. **Government should actively engage with all sectors of society to ensure GovTech is fully inclusive and addresses the main societal obstacles to digital participation.**
7. **Government should create an appropriate GovTech Governance structure.**
8. **Government should create a GovTech branding model, which will be available to all contributors.**

1. Introduction

1.1 Definition of GovTech

The term GovTech has been described as "*applying emerging technologies (such as artificial intelligence, advanced sensing, blockchain, advanced data processing, etc.) to improve the delivery of public services through increasing efficiency and lowering costs*[1]".

1.2 An Assessment of Ireland's Digital Public Services

It is fair to say that Ireland's Digital Public Services have evolved over the last 3-4 years, after a period of considerable constraint imposed by the global financial crisis and the subsequent impact on the economy.

This is borne out by external assessment.

The EU's Digital Economy and Society Index (DESI), which measures the digital economy performance of the EU28 Member States and compares it to 17 non-EU countries, ranks Ireland in 7th place, behind Denmark, Sweden, Finland, the Netherlands, the UK and Luxembourg. However, we are in 10th place overall for Digital Public Services.

The "Enabling Digital Ireland" report, which was produced in summer 2018 by OGCIO and Microsoft, highlighted a broadly similar story, when Ireland was evaluated at a Global level by the Fletcher School at Tufts University in the United States.

1.3 Positive Signs of Progress

The period following the publication of the Public Service ICT Strategy (January 2015) has been one of continuous and accelerating progress. The Gov.ie portal is in place and experiencing substantial use. There has been encouraging growth in the uptake and use of MyGovID; there are now[2] almost 430,000 verified accounts, a significant increase on two years ago. In addition, digital services such as Passport renewals, Tax Assessments and Welfare are winning awards and being well received by the public.

[1] Ben Leich, Economic Adviser and GovTech Lead BEIS, UK Government
[2] At time of publication, November 2019

Ireland also has a very successful Open Data programme, and has been named number one in Europe, for two consecutive years. Several stakeholders, including the European Commission and the OECD, have commended the programme which is a great example of Government working with industry and academia.

1.4 Maintaining Momentum

Looking forward, Government has several new innovative services under development such as the Digital Postbox solution, which will enable citizens and businesses to maintain their government documents in an encrypted “vault”. Government is also in a good position to adopt new technologies such as blockchain, AI and IOT, to help it re-invent how it delivers services over the next few years, especially as the planned investment in national broadband will create new opportunities for digital access throughout the whole of the State.

1.5 The Opportunity for Acceleration

Several countries in Europe use the term “GovTech” to describe a paradigm in which start-ups, more established indigenous companies and well-established multinationals, can all be part of an eco-system where they can work with government to better understand public sector issues and address them in an agile, cost-efficient and effective way.

This, of course, can have implications on some or all of financing, procurement, talent development and collaborative working. Ireland has a strong track record in these areas, with many ground-breaking initiatives. However, even successful endeavors should be open to regular evaluation and evolution, especially in a world of ever-evolving technology and associated opportunities. Fine-tuning and adding to what is already in place, are important facets of any growth plan, whether it be for a small, ambitious business or for a small, ambitious country.

It was in this context that the Minister of State for eGovernment, Patrick O’Donovan, successfully argued for the inclusion of an appropriate Government commitment in the Future Jobs Ireland 2019 Annual Report, and then called Cruinniú GovTech, a “Gathering” of committed experts and authorities, to analyse the justification for, and potential construction of, an Irish GovTech Eco-system.

The Tangent space at the new Business School building in Trinity College Dublin proved to be the perfect surroundings to challenge thinking and drive the production of ideas.

2. GovTech for Ireland

A workshop followed the opening plenary session of Cruinniú GovTech, during which the participants[3] worked at their tables to consider a range of questions and themes. The feedback from discussions and the resultant proposed action plan have been collated and are set out below:

2.1 An Ambitious Ambition

Ireland, in many respects, punches well above its weight as a digital government and digital State. However, given that the country hosts most of the largest technology companies in the world and the abundance of talent that Ireland produces and attracts, it is perhaps reasonable to expect even more.

Consequently, all stakeholders at the Gathering agreed, that GovTech Ireland's over-riding ambition had to be:

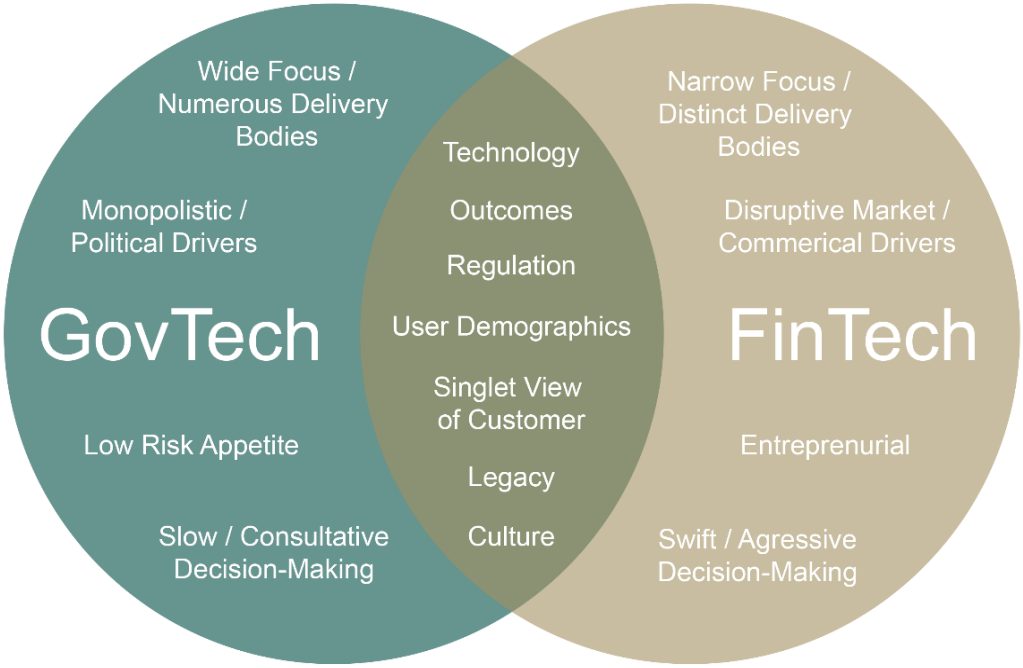
- the best place in Europe to transact digitally with Government; and
- the best place in Europe to be part of a tech start-up.

2.2 Learning from FinTech

As a starting point, the room debated whether we actually needed to make any specific GovTech interventions at all, or whether we needed to either re-apply the blueprint for FinTech (if such a thing actually existed) or simply extend emerging FinTech initiatives to cover Digital Government.

[3] See Appendix 4 for a list of contributing organisations

Figure 1 – Similarities and Differences between GovTech and FinTech



Similarities

The Gathering was asked to consider the likely similarities and differences between GovTech and FinTech paradigms. It concluded that both Government and Financial services were increasingly technology based, both were largely outcome focused and both were regulated, which could create an overly bureaucratic approach to service delivery. The broad commonality and demographic spread in customer base was also highlighted. Moreover, both were coming from a very traditional service model, largely based around “in person” delivery of services, which resulted in both recognising clear opportunities to drive efficiencies while improving user experience. Both realise the benefits of being able to have a *single view* of their customers and see change as being driven as much by customer demand and expectation as by “share-holder” demand.

Finally, with regard to the transformation challenge, the Gathering recognised that both Government and Financial services were burdened to some degree by dependence upon large legacy systems. Both also identified change as being highly dependent upon trust, which necessitated a very strong focus on security, GDPR compliance and data quality. And both recognised the need to change cultural attitudes on how services are currently being both provided and received, if they are to be successfully transformed through digital.

Differences

However, the Gathering identified more differences than similarities.

First, Government covers all life events, whereas Financial Services are more narrowly focused. Moreover, Digital Government embraces many delivery bodies including departments, local authorities, other public service bodies etc. while Financial Services organisations tend to be distinct legal entities with very clear decision-making structures and responsibilities. It was felt that Government should therefore be considering composite "platform" approaches when planning digital services to citizens, so their experience is of a seamless, end-to-end service rather than a sequence of separate transactions with different bodies.

Secondly, Financial Services are more exposed to market turbulence, whereas Government enjoys a level of predictability that comes with its "monopoly" position. As a result of this, it is perceived that there is much more agility and faster decision-making in Financial Services.

Thirdly, because Financial Services are commercially driven, an element of risk-taking, particularly around new products and services, is expected. Equally, and for the same reason, it is impossible for Financial Services to sustain economically unviable services or solutions. Government, on the other hand, must consider the needs of all stakeholders. This makes the retirement of certain delivery approaches more sensitive and difficult. Participants suggested that Government is under greater scrutiny regarding issues such as data-sharing and privacy. This can actually lead to anti-entrepreneurial behaviours including inertia and / or passivity, which in turn, creates risk for start-ups and SMEs as providers, since they are dependent upon quick progress for their revenue. It was also thought that, as Government was driven by politics rather than a strictly commercial focus, this could result in more inconsistent and less agile decision-making.

Fourthly, the Gathering firmly expressed the view that "failure" in or by Government is still not accepted or tolerated. Since it is not possible to innovate without failure, the concept of "incubate and fail fast" does not fit easily within Government, which means it rarely does 'at scale' innovation. Participants felt that Government's natural aversion to risk is often reflected in procurement models, which play into the hands of large players (with robust balance sheets and the resources to participate in lengthy procurements) while putting often insurmountable hurdles in the way of start-ups and SMEs. It was felt that Financial Services tend to have more scope for innovative (higher-risk) partnerships. It was also generally felt that Government's procurement rules create a significant challenge to collaborative innovation with start-ups and SMEs. This was due to the fact that running pilots or Small Business Innovation Research (SBIR), processes and then commencing follow-up procurement, can take too long. Also, where such innovative pilot approaches are tested, the

follow-up procurement process can still result in small innovative companies being pushed out of the market by larger companies.

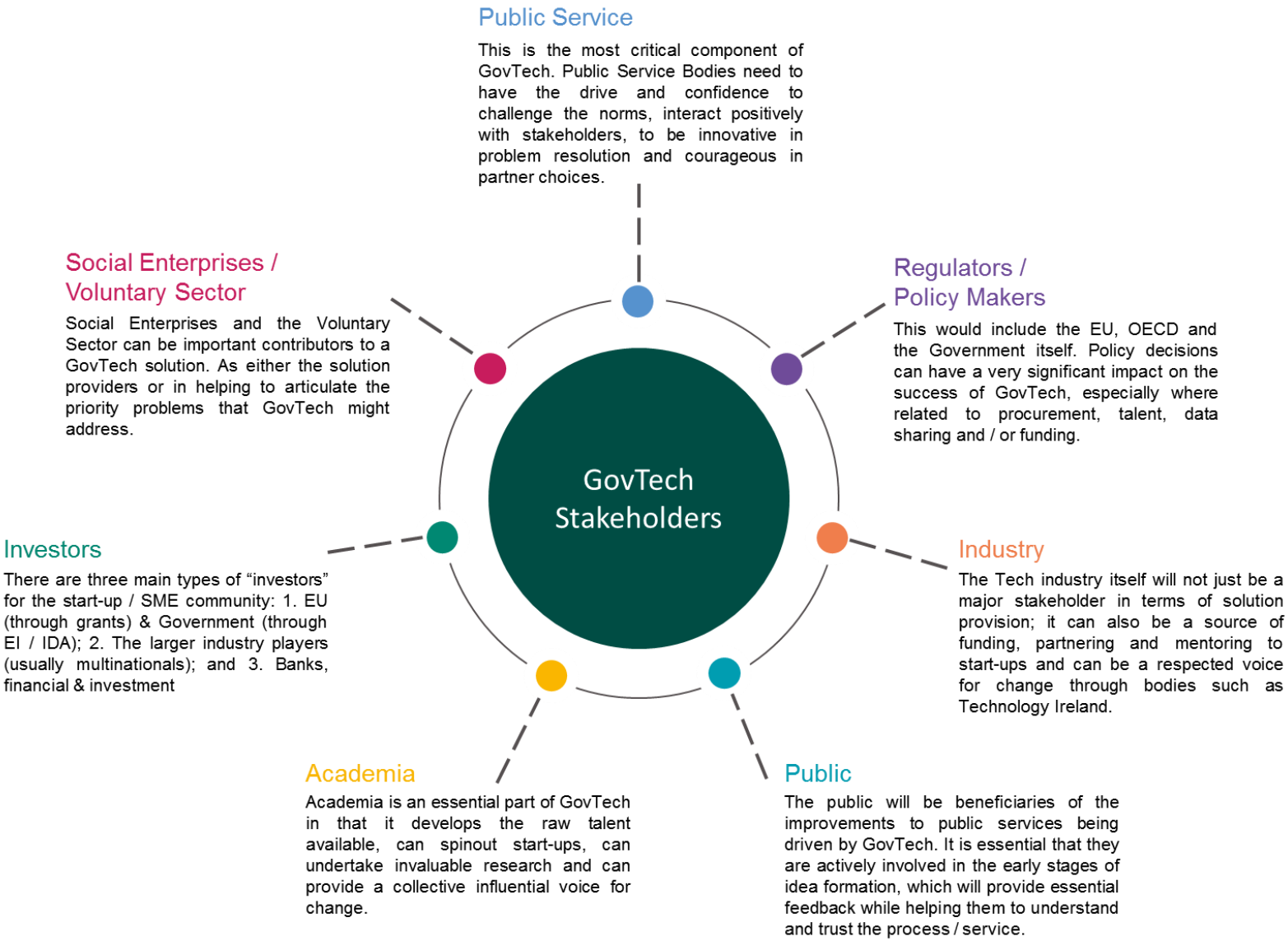
Finally, there was a strong recognition that public service problems are generally far more complex and multifaceted than the Financial Sector. This in itself justified a very serious consideration of a GovTech strategy, although it was also pointed out that GovTech can only assist in problem-solving, it can't be a panacea for all ills.

The full list of similarities and differences identified by the Gathering is shown in Appendix 1.

2.3 Identifying the Stakeholders

Given the complexities of public service, the next challenge set was to develop the list of stakeholders in the GovTech space. In developing their lists of stakeholders and how they are connected.

Figure 2 – The Stakeholders



2.4 The Strengths That Make Ireland Well-Placed to be a GovTech Exemplar and the Opportunities that Exist

Strengths

The Gathering highlighted several elements that enabled the State to punch above its weight in terms of international recognition and reputation. These included Ireland's comprehensive technical capability at workforce and academic level, its existing levels of funding, its tax regime and its significant business support structures, including Small Business Innovation Research (SBIR), Enterprise Ireland, IDA Ireland, Science Foundation Ireland and Teagasc.

The adaptability of the country and the friendliness of its people meant it was a good place to live and work, with a proven capability to attract talent from abroad. Its stable government and strong legal and regulatory environment were all seen as adding to the attractiveness of the country as a place to start up or relocate business.

It was also felt by the participants, that the scale of the country was conducive to partnerships and innovation.

Moreover, Ireland already has access to large multinationals, many of which have EMEA HQs in Ireland; an active start-up eco system; good infrastructure; a strong research base and innovative academia; a track record in FinTech and Biotech; and excellent open data.

Furthermore, Ireland enjoyed the advantages of being English speaking, of having favourable geographic location and time zone, of being part of EU and of strong relationships with US, UK, Canada etc. including a large and supportive diaspora.

Opportunities

Nonetheless, there was a clear consensus that more could be achieved to facilitate Ireland's recognition as a global leader in GovTech.

The opportunities listed included further enhancing the structure and cohesiveness of the capability building model. In other words, striving for real cohesion in the co-working across and between academia (as the main talent providers), other talent providers, and government / industry (as talent users). The participants felt that Universities were launching impressive new Masters Degrees for example, but without a real sense of co-ordination and

“sharing of effort”. It was also felt that the country needed to do more to encourage take-up of other languages.
There was an opportunity to push ICT-related apprenticeships to a greater degree, and introduce more structured management of the State’s skill base, e.g. by providing “credits” for workers to do short courses to upskill. It was also thought that Ireland should protect its “intellectual capital” and that incentives were needed to retain talent.

Alongside internal talent, it was felt that we needed to do more to attract external talent into the State. This could be achieved, for example, by streamlining processes to bring in skilled people into the country and by looking at extending graduate visas to enable non-EU workers, who have built up their skills and experience here, to stay.

There was a view that a specific GovTech communications platform could help with the understanding of all the related issues from starting up a business to becoming established, including finding talent and access to knowledge; this could either be part of, or separate to Gov.ie. The site could include information on all available funding options, accessing EU grants, means to achieve more structured and visible promotion for business, opportunities for mentoring and possibly some form of “connecting” forum for multinationals, SMEs and start-ups.

The participants felt that we needed to create a more embracing narrative impacting upon a greater number of people in additional parts of the country. GovTech represents a real opportunity for people to start up businesses from their own towns and villages, with technology helping to support similar levels of community and networking as already exist in the largest towns. It was suggested that this should be a key theme of the forthcoming National Digital Strategy.

While the best intentions behind related Government initiatives such as OPS2020 were recognised, it was felt that if our plans to improve our digital public services with the goal of equalling or exceeding the strongest global and European role models, we needed to understand what they do well and improve upon them; for example, the cohesiveness between Estonian Academia, Government and Industry, or the ground-breaking approaches to Digital Government by Denmark.

It was also called out that Ireland should do more to encourage positive assistance from the diaspora and also attract SMEs and start-ups from other countries who could, in turn, benefit from our skills and networks. It was mentioned that SMEs were increasingly setting up in the United Kingdom as they have particular tax reliefs for start-ups[4].

[4] For example, entrepreneurs’ relief, which can reduce the rate of capital gains tax.

There was a clear census that Government could do much to promote networking and ideas sharing, for example, workshops and / or hackathons addressing our most difficult social challenges, e.g. Climate, Housing, Ageing and Health. Government had the data available to facilitate this but it was felt that it also needed to simplify procurement and regulation to enable ideas to be very quickly productised and implemented. Procurement was specifically called out and Government asked to examine traditional procurement and question whether it can be done in a different way; for example, a process with more focus on start-ups and different payment schedules and insurance / turnover criteria. Government was also challenged to upskill its own public service staff so that they might have a broader understanding of technology.

The Gathering felt that a capable and visible centralised 'think tank' was needed, perhaps based on the old Forfás model, an observatory approach to new emerging technology and for Government to support GovTech with a clear ownership and a Governance structure.

Finally, there was the view that BREXIT had to be seen as an opportunity as well as a threat. And it was an appropriate time to look at tax allowances and incentives relating to technology development and GovTech in particular.

The full list of strengths and opportunities is shown in Appendix 2.

3. The articulated ambition to take Ireland forward and indicators of progress

3.1 What are reasonable GovTech aspirations and how will we know we are being successful?

Aspirations

The Gathering developed fifteen achievable aspirations for GovTech Ireland for the next five years. These were as follows:

1. Ireland is recognised as a Global Digital Innovator with a GovTech eco-system that other nations seek to copy;
2. GovTech is an all-embracing concept with the infrastructure, regulation, procurement, training, assistance and procedures in place to facilitate a State-wide eco-system encompassing Government, industry, academia and the citizens of Ireland, at home and abroad;

3. There is visible cohesiveness of all contributions to advancing GovTech in Ireland, including funding, academic development and infrastructure provision;
4. The GovTech concept is supported by a branding model available to all contributors;
5. Government is visibly driving GovTech by implementing infrastructure (National Broadband Plan, Community Hubs, Training etc.) and extending the use and availability of its assets, specifically its e-ID framework and data;
6. Government is also driving GovTech by being an exemplar in the delivery of digital services, the development of new employee skills and the adoption of innovation;
7. We have easy to find and easy to follow mechanisms for start-ups and SMEs to engage with Government, multinationals, and each other more easily. These should include meet-up days, hackathons and shared concept marketing (e.g. town hall events);
8. We also have easy to find and easy to follow mechanisms to enable citizens and communities to call-out problems and issues that technology can, or may be able to help resolve;
9. GovTech is actively aligned with departmental priorities and has clear Ministerial and Departmental ownership with an Advisory Board that represents stakeholder interests;
10. An Advisory Board will also serve as a future-thinking forum, identifying trends and issues as early as possible and helping develop deployment and remediation options;
11. The GovTech eco-system will include a skills development stream actively looking at the recruitment and development of talent;
12. The GovTech eco-system will also include an inclusion stream, actively looking at addressing the main societal obstacles to participation;
13. The GovTech eco-system and brand is trusted by all participants, including the citizen, as being an exemplar in security, efficiency, lawfulness and transparency. If required, a Citizens' Assembly type process and legislation should be prioritised to help facilitate this;
14. GovTech has a clear communications strategy, which includes plans to "showcase" its successes abroad;

15. All investment and value is tracked to demonstrate the clear value of having the GovTech eco-system in place.

Results

In terms of demonstrating that GovTech was working, the Gathering felt that we should include in future actions, to be achieved over the coming five years, plans for baselining and tracking progress against the following ambitious measures:

1. Ireland achieves top 3 status in relevant EU and Global benchmarks (e.g. DESI, Global Innovation Index);
2. Ireland achieves >80% digital take-up of "Top 20" key government services;
3. Ireland achieves 80% take up of broadband to households;
4. Ireland achieves double the number of GovTech enterprises;
5. 25% spend of Public Sector technology budgets on start-ups and SMEs;
6. Ireland's Global exports by indigenous technology industry increased by 20%;
7. Ireland's Government platforms transferred to PAAS / SAAS / IAAS increased by 25%;
8. GovTech community platform in place and receiving over 250K views per month;
9. Government produces an annual report on developments in digital & innovation across the public service with case studies for each Department / Sector and showing efficiencies made through innovation;
10. Maintain Government Open Data Maturity scores;
11. >30% of incubator projects are turned into commercially viable solutions;
12. Security benchmarking compares favourably at global level;
13. 30% growth in the number of digital jobs in Ireland;
14. 10% growth in the percentage of Irish workforce with a technology qualification;
15. Number of digital-related learning and start-up spaces increased by 10%.
16. 10% growth in the number of Smart City initiatives in sustained use across Ireland (move from 'Smart Cities' to 'Smart Ireland');
17. Increases in numbers of citizens and businesses online by 15%;
18. 10% growth in the numbers of Digital and ICT graduates, Digital and ICT Apprenticeships.

4. The Priority Action Plan

Having agreed upon the priority aspirations, the Gathering then debated the business case for actually making them happen, the actions that would be required to make them into realities and the obstacles that would need to be managed. This produced a comprehensive priority action table (see Appendix 3) which can effectively underpin any business case, action plan and risk or issues log for GovTech.

In short, the plan can largely be addressed by the completion of the eight summary actions outlined below:

1. **Government should seek to facilitate the re-use of Government Assets where lawful and feasible.**

   It is generally recognised that industry can generate GDP and value through the re-use of State-gathered data. Indeed, this recognition has been a fundamental driver behind the EU Open Data and Public Sector Information Directive, which Member States will have to transpose into National Law by July 2021, with the intention of making public sector and publicly funded data (more) re-usable. It is therefore essential that Government increasingly builds data re-use into systems design and actively stimulates the publishing of dynamic data and the use of Application Programme Interfaces (APIs).

   Equally, it is recognised that the Government should explore the provision of a lawful means whereby citizens can choose to utilise their State credentials (i.e. MyGovID & SAFE2 authentication) for easy verification in other sectors. This would be a significant stimulant to the digital growth of the State and make the lives considerably easier for new entrants to the country who wish to open bank accounts, take out insurance and / or find places to live.

   The participants expressed a strong opinion that addressing issues such as these would considerably help in the development of the GovTech eco-system and help facilitate the delivery of demonstrable proofs of concept of the value of the approach.

   However, it was felt that at a Public Service level, lack of understanding of GDPR / Data Protection was a barrier to digital progress and that further training and guidance on data in the context of digital development and innovation, was very important.

2. **Government should review the Government business development funding frameworks to identify any gaps or opportunities for further cohesion, with a view to reviewing how the model can be better communicated to, and understood by, its target audience.**

   While the Gathering felt that the Government already contributes generously to the establishment of new business, existing means should be examined to ensure that they best facilitate the GovTech ideals, sufficiently balance the development of both the indigenous and multinational sectors and would be easily found and understood by new potential entrepreneurs.

   It was felt that particular focus should be given to the adequacy of incentives to facilitate the retention of talent and support post-BREXIT sectoral growth.

3. **Government should develop a more cohesive life-long digital talent development model covering all life stages, from pre-school age to retirement and all levels of competence from service user, to systems developer and systems architect.**

   It was strongly believed that a GovTech eco-system had to include a skills development stream actively looking at the recruitment and development of talent. It was felt that no one method of talent acquisition (i.e. import, academic development and apprenticeships) alone will meet all future requirements and a more stream-lined cohesive and co-ordinated approach was required.

4. **Government should seek to develop procurement solutions, which fully comply with EU legislation, to enable easier access for new market entrants to conduct business with Government.**

   The Gathering felt that the length, complexity and requirements (e.g. insurance) of Government procurement were not conducive in attracting start-ups and small SMEs, into competitions. It was suggested that it should be possible to develop a GovTech procurement process with a new risk and compliance management framework that would be transparent and support innovation. While this would probably have limitations on contract size, it might reduce some of the (perceived) constraints and make it easier for start-ups and SMEs to provide services to Government, thus providing Government with faster access to a wider market.

   The participants held the view that if Government drove more “shared” procurement, i.e. through the Office of Government Procurement, this would provide the necessary scale

to cost-justify any new arrangements, including the development of different types of standardised procurement formats – thus providing a toolkit for GovTech related procurement. It was also felt that this would help justify the establishment of innovation / GovTech procurement experts in OGP.

The delivery of any new model would be underpinned by training and guidance for both public service staff and new / potential market entrants. It was also felt that regional education and discussion networking events should be arranged to ensure that GovTech discussions and ideas sharing were not limited by geography.

5. Government should drive GovTech by being an exemplar in the delivery of digital services, the continuous development of employee skills and the adoption of innovation.

It is generally accepted that advanced countries in digital government also have advanced digital economies. As described above, significant progress has been made in the implementation of the Public Service ICT and eGovernment Strategies, especially with regards to professionalisation, use of E-IDs, use of shared assets and better use of data. It is important that the momentum continues. Moreover, a lot of work has taken place to align sectoral strategies (i.e. Local Government, Health, Justice and Education) with the central Government strategic direction and this must also continue.

Given the scale of public service and the resultant digital challenge, the potential benefits of active Public Service participation in a GovTech eco-system are significant. Adjustments to procurement and progressing the use of Innovation, especially with regards to training, the creation of safe spaces or sandboxes and recognising the benefits of “learning” failure, will all help.

We must also actively encourage innovation from suppliers and be open to the use of “disruptive” technologies in developing business solutions. In addition, we must develop proofs of concept to show how GovTech solutions can sit alongside more established solutions in areas such as eHealth.

We will therefore look at extending the use of community hubs to include opportunities for problem solving, education, communication and harvesting of ideas and issues.

We must also develop the means to scale existing initiatives, such as Smart Cities, to a national level, where there are demonstrable benefits.

6. Government should actively engage with all sectors of society to ensure GovTech is fully inclusive and addresses the main societal obstacles to digital participation.

GovTech provides a strong opportunity to ensure that digital does not promote further "tiering" of Irish society. There are clear opportunities to drive wider inclusion and participation through education, events and approaches to employment and procurement. This is essential as the impact of AI and robotics on employment will not happen in a uniform way. Moreover, a wider participation in digital will bring benefits to the economy as well as ensuring that no individual or business is allowed to feel left behind or alienated.

We will therefore seek to empower everyone with the skills, and access to the infrastructure to enable them to interact with Government. And we will seek to facilitate everyone in society to play a role in Digital Ireland initiatives, e.g. Government, IBEC, Corporates, unions, citizen groups, voluntary sector etc.

Moreover, if a GovTech eco-system is to succeed, then it must be trusted by all participants, including the citizen, as being an exemplar in security, efficiency, lawfulness and transparency. Engagement will be a key part of this.

7. Government should create an appropriate GovTech Governance structure.

If Ireland is going to be the best, then we have to develop more agility than producing and delivering three to five year strategies. There was a clear consensus that strong governance would help standards rise, and would act as a draw for FDI, result in greater efficiencies in Government services, and enable future proofing by way of a competent digital citizenry.

We will therefore develop a GovTech Governance structure which will review all aspects of the GovTech eco-system, encourage feedback and contributions from all stakeholders and make appropriate recommendations.

It was felt that the governance model could help reconcile any conflict between 'open data' and 'data governance' and help to set out an agreed way forward for potentially contentious issues around E-IDs and data sharing.

The Governance structure has therefore to be seen to be actively supported by Government at a senior level and to involve all sections of the population and industry, and include all parts of the country.

It should therefore be actively aligned with department priorities and have clear Ministerial and departmental ownership with an Advisory Board that combines stakeholder interests.

The Advisory Board would also serve as a future-thinking forum, identifying trends and issues as early as possible and helping develop deployment and remediation options by leveraging appropriate expertise from private sector and multinationals.

Moreover, since GovTech will doubtless attract interest and scrutiny, it is important that any benefits are evidenced. We will therefore use the governance model to ensure that investment and value is tracked to demonstrate the clear value of having the GovTech eco-system in place.

This will be done by agreeing a number of measurable results (see list above) and developing mechanisms for creating baselines, measures and dashboards for reporting back to Government, and ensuring feedback is sought, received and recorded.

8. Government should create a GovTech branding model, which will be available to all contributors.

There was very strong agreement that GovTech will only work if it has the full support of all stakeholders whether political, from government, within the industry or from academia. Ireland is simply not large enough for any of the stakeholders to “do their own thing” and we cannot be constrained by “opposition for opposition’s sake”. Consequently, GovTech branding will be created for use by all those who support the initiative, whether they be purchasers, providers, consumers or beneficiaries.

Moreover, a strong GovTech narrative could become a unique selling point for attracting investment, talent and Global customers.

To that end, we should consider running a competition for branding to involve schools and colleges with a view to increasing the inclusiveness of the initiative.

We will also ensure that related advice, communications, events and ideas-sharing are all tied into the same communications structure.

5. Conclusion and Next Steps

As mandated by Future Jobs Ireland 2019, the objective with Cruinniú GovTech 2019 was to analyse the justification for, and potential construction of, an Irish GovTech Eco-system. The Gathering concluded that, at this stage, there is scope for further follow up on a number of priority actions which may then evolve into a full and comprehensive GovTech Strategy for Ireland.

It is therefore recommended that:

1. The Minister takes the Cruinniú GovTech findings to Government for approval through the Memo to Government process;
2. The Top Team be re-engaged to develop the ideas through further discussion and consultation.

Progress on the way forward and subsequent actions can then be included as part of reporting on Future Jobs Ireland 2019 and in future such annual reports.

Appendices

Appendix 1: the similarities and differences between GovTech and FinTech

Similarities	Differences
• Both are technology based • Both are regulated; this can create an overly bureaucratic approach to service delivery • Both are outcome focused • There is a broad commonality in customer base and these customers cover wide demographics • Both are coming from a very traditional service paradigm, largely based around "in person" delivery of services • Both are burdened to some degree by dependence upon large legacy systems • Both see clear opportunities to drive efficiencies • Both see change being driven as much by customer demand and expectation as by "share-holder" demand • For both, change is highly dependent upon trust; this necessitates a very strong focus on security, GDPR compliance and data quality • Both are (or should be) changing cultural attitudes on how we receive services and, in doing so, providing a better user experience	• Government covers all life events; Financial Services are more narrowly focused • Digital Government embraces many delivery bodies including departments, local authorities, other public service bodies etc. while FinTech organisations tend to be distinct legal entities with very clear decision-making structures and responsibilities; Government should therefore be considering "platform" approaches when planning digital services to citizens • Financial Services are more exposed to market turbulence whereas Government enjoys a level of predictability that comes with its "monopoly" position • Because of this, it is perceived that there is much more agility and faster decision-making in financial services • Financial Services are (obviously) more commercially driven • Government needs to consider (even) more diverse stakeholders than Financial Services; it must also be an exemplar in terms of privacy. This can lead to anti-entrepreneurial behaviours including inertia / passivity, which in turn, creates risk for start-ups / SMEs who are dependent on quick progress for revenue • Governments natural aversion to risk is often reflected in procurement models and plays into the hands of large players (with healthy balance sheets and the resources to play long game procurements) while putting often insurmountable hurdles in the way of start-ups / SMEs. Financial Service tend to have more scope for innovative (higher-risk) partnerships

Similarities	Differences
	• FinTech technology is perceived to be more cutting edge – although this should not be the case • Government "failure" is not accepted or tolerated and it is not possible to innovate without failure. The concept of incubate and fail fast is not really accepted in Government, which means it rarely does true innovation; • Government Procurement rules create a significant challenge. Running a pilot / SBIR and then commencing follow-up procurement all takes too long. Also the follow-up process can result in small successfully innovative companies being pushed out of the market by bigger companies • Government is driven by politics and Financial Services by Commercial focus; this can result in more consistent and agile decision-making in the latter • Government has to closely adhere to legislation while FinTech is governed by regulation • Greater public scrutiny of Government – changes can be viewed as 'imposing' • Citizens have to engage with Government – not all want to do it digitally; Financial Services have greater freedom to impose changes on customers • Every person in society has to engage with Government; customers choose banks and choose to move • Government is focused on social entrepreneurship whereas Financial Services are focused on making money • Public service problems are far more complex and multifaceted – GovTech can help solve them but is not going to be a panacea

Appendix 2: Ireland's strengths and opportunities in the area of GovTech

Strengths	Opportunities
• Ireland already has a comprehensive technical capability at workforce and academic level • Ireland already has good funding options • Very strong business supports (High Potential Start-Ups, Small Business Innovation Research, EI, IDA, SFI, Institutes, Teagasc etc.) • Ireland's capabilities are well projected at a macro level • There is some willingness in Ireland to adapt to change • Ireland is a good place to work, with a proven capability to attract talent from abroad • Ireland has a stable government with a strong legal and regulatory environment making Ireland a secure place to work • There are good relationships between Government and citizen; and good support for business • The scale of the country is conducive to partnerships and innovation • Being part of EU and equally strong relationship with US, UK, Canada etc. • Geographic location / time zones • We are an open, liberal economy – open for business with a supportive tax regime • Work culture is positive with good worker protections • English speaking • We have access to large multinationals as they have HQs in Ireland	• We should create an even more structured and cohesive capability building model. In other words, strive for real cohesion in the co-working across and between academia (as talent providers) and government / industry (as talent users) • The funding options should be more visible • We need more structured and visible promotion for business • We need to create a more embracing narrative impacting upon more people and more parts of the country • There are strong role models to aspire to and exceed (e.g. Estonia). We need to understand the things they do well and deploy them even better; for example, the cohesiveness between Estonian Academia, Government and Industry is a great exemplar to follow • We need to incentivise SMEs / innovation • We will have to innovate to meet social challenges e.g. Climate Action Plan • Skills development e.g. apprenticeships • We should not lose the State's "intellectual capital" – we need incentives to retain talent • We need a visible, good centralised 'think tank' e.g. Forfás • We need to simplify procurement and regulation • We need to extend graduate visas to keep non EU workers who have built up skills and experience here

Strengths	Opportunities
• Our creativity and ability to re-invent and adapt • Our social ability – we network and connect well – we are non-hierarchical, friendly, open and engaging which means people want to live here • Our data centres and capital investment in infrastructure • Government is a visible catalyst for change in its policy, with its strong buying power etc. • Ireland leads in open data • We have an active start-up eco system and the importance of Start Ups recognised by government • A high percentage of the population is already connected to broadband and there are plans to grow this further • Ireland has a tradition and culture of exporting talent, goods and services; it is naturally comfortable with looking outwards globally • Ireland has a strong entrepreneurial spirit; it is not afraid to fail (but perhaps too quick to want to "cash in on efforts") • We have a very strong research and science oriented base • Ireland's diaspora and international reach • Sectoral strength – biotech, fintech etc.	• We need to attract SMEs and start-ups from other countries – we have skills, networks etc. (SMEs setting up in UK as they have particular tax reliefs e.g. entrepreneurs' relief, for start-ups – we should match this) • We need to do more to leverage our diaspora – 36 million people • There is potential for data to be used in a better way to improve public services • We need to advertise our size as enabling Ireland to be makes us a good place to start • There is potential to further leverage our talented, educated, workforce • We need to look at ways to bring together the multinationals and SMEs, e.g. an accelerator programme post incubator • We also need to encourage promotion of SME / start-ups by FDI partners internationally • We need greater encouragement of SMEs to participate with governments, e.g. structural interventions and mechanics to make it easy to do so • We need more structured management of the State's Intellectual Capital, e.g. "credits" to do short courses to upskill • We need to create better links between the government and the private sector; for example, the government outlining and communicating problems and priorities to the private sector and then asking them to solve these problems • We could consider a thematic focus for this, e.g. climate change, eHealth • Look at augmenting central Government and agencies with an Eco-system at Country level

Strengths	Opportunities
	• To succeed, GovTech requires clear ownership and a Governance structure • Opportunities to looking at traditional procurement and question whether it can be done in a different way; for example, could we have a process with more focus on start-ups and different payment schedules and insurance / turnover criteria? • Use of an observatory approach to new emerging technology (i.e. can the government embrace it to improve service delivery?) • We need to upskill public service staff to have a broader understanding of technology • We need to streamline processes to bring in skilled people into the country • We need to set out and actively nurture a start-to-end innovation ecosystem • There are opportunities to develop more reference sites for new and emerging tech companies to interact directly with Government • Government could incentivise investment in GovTech further with tax allowances • Communications should be improved within the Public Service and with industry and the public • BREXIT

Appendix 3: Table of Actions, rationale & obstacles

	Aspiration	Rationale	Implications/Actions	Obstacles
1	Ireland is recognised as a Global Digital Innovator with a GovTech eco-system that other nations seek to copy	Creating a sector of scale will have a positive effect on GDP and help address the negative impacts of Digital / AI on other job areas, and reduce the dependency upon multi-nationals.	Government will drive digital services and seek partnerships for innovation Government will ensure cohesion in strategies for talent development and funding Government will review post-establishment support to identify additional opportunities to maintain sustainability in its emerging GovTech supplier community (e.g. incentives to retain talent or support post-BREXIT sectoral growth) Government will ensure alignment in its own business and operating models	Risk-averse, negative culture Trust in Government Existing levels of bureaucracy Existing procurement processes

	Aspiration	Rationale	Implications/Actions	Obstacles
			Government will actively encourage innovation from suppliers and be open to the use of "disruptive" technologies in developing its business	
2	GovTech is an nationwide concept with the infrastructure, regulation, procurement, training, assistance and procedures in place to facilitate a State-wide eco-system embracing Government, Industry, Academia and the citizens of Ireland	A GovTech restricted by geography will have limited success. A GovTech which facilitates better population, wealth and talent spread can only be of significant benefit to all A GovTech where delivery is limited to well-established, larger scale companies will limit scope for innovation Wider engagement facilitates more diverse options	We will develop a GovTech procurement process with a new risk and compliance management framework that's transparent and supports innovation; this will make it easier for start-ups / SMEs to provide services to Government and provide Government with faster access to a wider market with manageable risk We will increase use of Office of Government Procurement (OGP) procurement support to provide sufficient scale to justify any new arrangements and develop different types of standardised	Scale Existing practices / Institutional resistance Risk aversion in the Public Service The exchequer budgetary process is annual and therefore can't react as fast to challenges

	Aspiration	Rationale	Implications/Actions	Obstacles
			procurement formats – thus providing a toolkit for procurement. This will help justify the establishment of innovation / GovTech procurement experts in OGP We will provide training / guidance for staff and new / potential market entrants We will arrange regional education and discussion networking events We will develop proofs of concept to show how GovTech solutions can sit alongside more established solutions in areas such as eHealth	
3	There is visible cohesiveness of all contributions to advancing GovTech in Ireland, including funding, academic	Ireland is not large enough for any of the stakeholders to “do their own thing”	We will ensure broad, representative involvement in the GovTech governance structure We will ensure strong communications and	Competitive culture, even within public sector

	Aspiration	Rationale	Implications/Actions	Obstacles
	development and infrastructure provision		networking underpin any GovTech eco-system	
4	The GovTech concept is supported by a branding model available to all contributors	Provides a strong, tangible representation of the GovTech vision to unite all stakeholder groups Becomes a central part of a positive narrative for Ireland A unique selling point for attracting investment, talent and Global customers Establishes Government as a catalyst for positive change	We need to develop a strong governance model to provide ownership and direction We could consider running a competition for branding to involve schools etc.	Strong Global competitors
5	Government is visibly driving GovTech by implementing infrastructure (NBP, Community Hubs, Training etc.) and extending the use and availability of its assets, specifically its e-	Because of its scale and existing relationships, Ireland is in a good position for Government to be more “hands on” in the development of a positive GovTech eco-system	We will look at extending the use of community hubs to include opportunities for problem solving and ideas creation, hackathons etc. We will conduct a public consultation on extending the use of MyGovID / SAFE	Not universal citizen trust Active Opposition Not being actively prioritised Lack of understanding of GDPR / Data Protection

	Aspiration	Rationale	Implications/Actions	Obstacles
	ID framework and data		We will increasingly build data re-use into systems design We will use GovTech to deliver demonstrable proofs of concept of the value of the approach	
6	Government is also driving GovTech by being an exemplar in the delivery of digital services, the development of new employee skills and the adoption of innovation	Generally accepted that advanced countries in digital government also have advanced digital economies	We will continue to drive forward the Public Service ICT and eGovernment Strategies including use of E-IDs and better use of data We will continue to drive forward aligned sectoral strategies (Local Government, Health, Justice & Education) We will continue to drive sharing across government We will actively participate in the GovTech eco-system	Funding Existing culture and practice Lack of prioritisation Dependency on legacy systems Lack of existing cross-government standards
7	We have easy to find and easy to follow mechanisms for start-ups and	Everyone has something positive to offer in the development of a	We will consult further on the concept of establishing a joint government and	Suspicion of “agendas” Procurement restrictions

	Aspiration	Rationale	Implications/Actions	Obstacles
	SMEs to engage with Government, multinationals, and each other more easily. These should include meet-up days, hackathons and shared concept marketing (e.g. town hall events)	healthy GovTech eco-system	private sector incubator / play box We will examine the development of a regional engagement programme	Concerns over IPR
8	We also have easy to find and easy to follow mechanisms to enable citizens and communities to call-out problems and issues that technology can, or may be able to, help resolve	Every Irish citizen should feel that they can be an ambassador for their government's digital services Leading change and enabling tailored, efficient, convenient, accessible, trusted, sustainable and interactive digital public services can only happen by empowering citizens to be part of the changes	We will develop the existing engagement portal to enable better two-way engagement We will ensure the concept is well communicated We will deploy country-wide hackathons and ideas sessions We will encourage all stakeholders to help in education, communication and harvesting of ideas and issues	Expertise Cost Existing level of citizen engagement Lack of cohesive vision and drive Politics adversely impacting National interests
9	GovTech is actively aligned with department priorities and has	By developing world-leading governance, Ireland will be better placed to win a	We will ensure the GovTech Governance structures and	Cost Citizens' concerns

	Aspiration	Rationale	Implications/Actions	Obstacles
	clear Ministerial and departmental ownership with an Advisory Board that represents stakeholder interests	disproportionate share of the global market, currently valued at $400bn Strong governance will see standards rise, and will act as a draw for FDI, result in greater efficiencies in Government services, and will enable future proofing by way of a competent digital citizenry	behaviours are well defined and designed to ensure maximum trust and buy-in The governance model will take account of changes and allow for regulation evaluation The governance model will seek to reconcile any conflict between 'open data' and 'data governance' The governance model will be collaborative, supporting conversations between all stakeholders including the citizen and helping set out an agreed way forward for potentially contentious issues around E-IDs and data	GDPR vs Open Data – conflict in how these are managed and implemented Skills – greater levels needed in Government; better educated public service required Achieving balance in governance between compliance and innovation – room for ideas Governance not always responsive to changing technology Regulatory structures lack agility

	Aspiration	Rationale	Implications/Actions	Obstacles
10	The Advisory Board will also serve as a future-thinking forum, identifying trends and issues as early as possible and helping develop deployment and remediation options	If Ireland achieves pre-eminence in the GovTech space, it will need to work hard to maintain its position	We will ensure involvement of appropriate expertise, leveraging the capability of our private sector and multi—nationals where possible	Time constraints
11	The GovTech eco-system will include a skills development stream actively looking at the recruitment and development of talent	No one method of talent acquisition (import, academic development, apprenticeships) alone will meet all future requirements	We will ensure engagement with all stakeholders to encourage their support and active involvement We will ensure that all initiatives are tied into a single coherent vision We will develop a State-wide framework for re-training into digital and technology related careers. These will include the extension of our ICT apprenticeship schemes and re-training opportunity programmes	Potential inconsistent buy-in across all stakeholders

	Aspiration	Rationale	Implications/Actions	Obstacles
			We will examine means to increase the take-up of business and language skills	
12	The GovTech eco-system will also include an inclusion stream, actively looking at addressing the main societal obstacles to participation	It is essential for the Government to equip the population to be comfortable and at pace with (digitally-driven) change Every person is at a different starting point for digital based on many factors including education, background, age, ethnicity, disabilities etc. No-one should be made to feel left behind or alienated – we need to be mindful of vulnerabilities We need engagement to get success Societal impact of change – there is a growing awareness that people will increasingly need life-long education, reskilling and the ability to deal with change throughout	We will seek to empower everyone with the skills and access to the infrastructure to enable them to interact with Government We will seek to create digital services that provide a better user experience than traditional delivery Allow everyone in society to play a role, e.g. Government, IBEC, Corporates, unions, voluntary sector etc. We will start with our own workforce	Identifying trends and customer types can be very complex Scale of task v levels of funding required Resistance to change / fear of change

	Aspiration	Rationale	Implications/Actions	Obstacles
		their lives, e.g. the likelihood that no longer will there be “jobs for life”		
13	The GovTech eco-system and brand is trusted by all participants, including the citizen, as being an exemplar in security, efficiency, lawfulness and transparency. If required, a Citizens’ Assembly and Legislation should be prioritised to help facilitate this	People do not permit their data to be used by, or do business with those that they do not trust Government cannot afford the reputational damage of something going wrong with a system they have been central to developing There are high societal benefits associated with a trusting environment Better access to more data will improve public sector policy making and services We will strengthen our innovative environment if we strengthen trust around data	We will ensure that any data sharing is fully aligned with GDPR principles We will introduce training programmes for employees and communications plans for public We will ensure adequate expertise on advisory board We will work with National Cyber Security Centre to grow awareness of and capability in cyber-security Government will maintain momentum in the implementation of its Data Strategy and the Data Sharing & Governance Act We will review legislative underpinnings for any gaps and address	Perceptions about giving data to government Trust in politicians is low and this transfers over to government almost by association Insufficient communication / coverage around benefits of good data stewardship and sharing etc. Legacy systems & culture Absence of a common dictionary / taxonomy for data

	Aspiration	Rationale	Implications/Actions	Obstacles
			these as a matter of priority We will examine setting up a Digital Citizen's Assembly	
14	GovTech has a clear communications strategy, which includes plans to "showcase" its successes abroad	A cohesive GovTech can be greater than the sum of its parts Ireland has an opportunity to make a substantial statement in terms of its capability in this area	We will work with appropriate stakeholders on a GovTech communications plan covering internal and external responsibilities and activities	Time Commitment Competing priorities
15	All investment and value is tracked to demonstrate the clear value of having the GovTech eco-system in place.	GovTech will attract interest, including from those who would have no particular desire to see it succeed	We will agree a number of measurable results (see list above) and mechanisms for creating baselines, measures and dashboards for reporting back to Government	Time Cost and effort Competing priorities

Appendix 4: Contributors

Organisation		Organisation
Accenture		Fujitsu Ireland
Aer Lingus		Guinness Enterprise Centre
Aid Technology		HSE
Amazon		IBEC
Analytics Institute		IBEC - Technology Ireland
Arthur Cox		IBM
AWS		IDA
Bank of Ireland		Independent News and Media Plc
Central Bank		Insight UCG
Central statistics Office		Lero
College of Anaesthetists		Marino Software
Corlytics		Mercer
Creme Global		Microsoft
Deloitte		Moog
Department of Agriculture, Food & Marine		National College of Ireland
Department of An Taoiseach		NDRC
Department of Business, Enterprise & Innovation		Nuritas
Department of Communications, Climate Action & Environment		Office of the Revenue Commissioners
Department of Employment Affairs & Social Protection		Open Sky Data
Department of Finance		OpenStar

Organisation		Organisation
Department of Public Expenditure & Reform - Reform Division		Oracle
Department of Public Expenditure & Reform - Office of Government CIO		Palantir
Department of Public Expenditure & Reform - Office of Government Procurement		Pinpoint Alerts
Derilinx		Public Jobs
Digital Hub Development Agency		public.io
Dogpatch		QPQ
Dubai Aerospace		Science Foundation Ireland
Dublin BIC Investors		SONASi
Dublin City Council, Smart Dublin		Storm Technologies
Dublin City University		TCD LaunchBox
Enterprise Ireland		TCD Tangent Centre
ESB Innovation X		Trilogy Technologies
Expertivity		Trūata
Facebook		UCC
FIT		

Tithe an Rialtas, Sráid Mhuirfean Uacht
Baile Átha Cliath 2, D02 R583, Éire

Government Buildings, Upper Merrion Street
Dublin 2, D02 R583, Ireland

T +353 1 676 7571

@IRLDeptPer

www.gov.ie/per