

Consultation on Ireland's new National Digital Strategy

Department of the Taoiseach

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SUMMARY

The American Chamber of Commerce Ireland warmly welcomes the development of a new National Digital Strategy for Ireland. The American Chamber views this strategy in the context of its vision for Ireland to be an **inclusive location-of-choice for talent and innovation with global impact**.

In order for the new National Digital Strategy to be a success, it must be ambitious for the transformative opportunities which digital can bring to society. Indeed, the American Chamber has made recommendations for how this strategy could be implemented, with Government leadership and inclusive discussions, allowing all stakeholders in society to travel on this journey of opportunity together.

For Ireland to be a true digital leader, it is vital to provide the national broadband coverage demanded by our knowledge-intensive economy; to show leadership in data protection and innovation; to have a reputation for resilience and robustness in its approach to national cyber security; to enable the digitisation of public services and to ensure that digital advancements are seen as inclusive and positive opportunities for society.

Through consultations with a representative taskforce of member companies, the American Chamber has laid out its Pillars of Focus for a new National Digital Strategy and made recommendations in each area.

- Pillar 1: Infrastructure
- Pillar 2: Talent Pipeline
- Pillar 3: Use of Internet Services by Citizens
- Pillar 4: Integration of Digital Technology by Businesses
- Pillar 5: Digital Public Services
- Pillar 6: Research and Innovation

The American Chamber acknowledges that there is a road to travel when it comes to realising digital priorities and that the related challenges and opportunities need to be addressed. The American Chamber looks forward to working with all relevant Government Departments and State Agencies in the drafting and implementation of the new National Digital Strategy for Ireland.

Summary of Recommendations

AIMS AND IMPLEMENTATION OF THE STRATEGY

- ❖ Inclusion of 'Ireland's Digital Priorities' as a **Citizens Assembly topic** to allow all stakeholders an opportunity to debate and discuss this key economic, cultural and societal issue and its related opportunities and challenges.

PILLARS OF FOCUS

Pillar 1: Infrastructure

- ❖ Speedy implementation of the **National Broadband Plan (NBP)** to meet Government's ambition of ensuring that the entire population has access to quality fibre-based broadband services.
- ❖ Establishment by Government of a **Regional Industry Support Body** for the implementers of the National Broadband Plan. Factors which may inhibit the rollout of the NBP should be highlighted at the earliest stages, via this body, to enable local champions within industry to engage in finding local solutions, where possible.
- ❖ Creation of a supportive regulatory environment for the **rollout of 5G**.

Pillar 2: Talent Pipeline

- ❖ **Increased investment at third level** to accommodate the projected additional 40,000 entering the student population by 2030.
- ❖ Rollout of **targeted third level courses** on emerging tech trends, such as security analysis and AI.
- ❖ **Further rollout of non-traditional pathways to attaining digital skills** and increased awareness-raising of these alternative pathways e.g. apprenticeships in cyber security, data analytics etc.
- ❖ **Adoption of new digital modes of teaching and learning** to enhance learning experiences and opportunities, such as deep learning.
- ❖ Continue to **pivot the strategic focus of the National Training Fund** towards programmes relevant to employers, delivered with more transparency and stronger evaluation.
- ❖ **Increased funding of STEAM subjects** (recognising the contribution of 'Arts' to innovation) and the acceleration of the implementation of relevant actions arising from the STEM Education and Review Group.
- ❖ Implementation of a **best in class talent mobility regime**, to include the modernisation of permit and visa processing, in order to facilitate the efficient and certain movement of highly skilled talent.

Pillar 3: Use of Internet Services by Citizens

- ❖ Championing the use of **traditional infrastructure** e.g. rural post offices, Citizens Information offices and local libraries to facilitate the rollout of technology in local communities, such as teaching digital skills; providing information on the availability of digital public services and advice on how to use them. By combining traditional infrastructure and new technology, this would demystify digital transformation in local settings via relationship-based interactions.
- ❖ Leveraging **Rural Regeneration and Development Funding** for greater rollout of technologies in rural communities e.g. to progress smarter living in towns.

Pillar 4: Integration of Digital Technology by Businesses

- ❖ Providing **targeted support, resources and guidance to the enterprise sector** to modernise business models; from online marketing, ordering and fulfilment to supply chain management, security and advanced manufacturing. The further rollout of **regional Digital Innovation Hubs** could be of assistance here, including the provision of programme supports for the Hubs, such as 'Gteic' in Donegal.
- ❖ Continued and enhanced rollout of **incentives for SMEs**, similar to the Trading Online Voucher Scheme, which could encourage innovation and the adoption of new technologies, such as cloud.
- ❖ Enhancing and furthering entrepreneurship within regions through the establishment of a **best-practice forum** for each region whereby peer-to-peer learning and mentorship could take place thus creating stronger linkages within regional clusters.

Pillar 5: Digital Public Services

- ❖ Leveraging the presence of **global talent and experience** in Ireland to tap into innovative practices for the benefit of modernising public services. **Peer-to-peer learning** and the rollout of a mentoring initiative would facilitate the sharing of leadership experiences and service transformation between company CEOs and Secretaries General.
- ❖ Publication of a **framework on the ethical use of data**. Building trust is key to ensuring confidence that the data being provided to Government is safe, secure and used for the purposes intended.
- ❖ Adoption of **strategic open-data policies**. Publishing with purpose will enable rich data to be leveraged and to power **insights** for better design and rollout of public services like transport, city planning etc.
- ❖ **Standardisation of ICT infrastructures** across all Government Departments and State Agencies, such as resilient security systems and the adoption of cloud technology.

- ❖ adoption of a **'Cloud First'** policy within the public sector.
- ❖ Application of the **Disruptive Technologies Innovation Fund** is applied to modernising the delivery of public services, such as a new system to enable talent mobility (streamlining permit and visa processing).

Pillar 6: Research and Innovation

- ❖ Ensuring the **R&D tax credit regime** is competitive, clear and consistent.
- ❖ Tiering **research prioritisation areas** to signal portfolios to be scaled significantly and to avoid the risk of stretching resources across numerous 'strategic portfolios'.

INTRODUCTION

The American Chamber's vision for Ireland is an **inclusive** location-of-choice for **talent** and **innovation** with global impact. Given that the competition for investment internationally has intensified in the face of changing trade policy and political uncertainty globally, including Brexit, the American Chamber believes that Ireland must focus on the things it can control in the face of geopolitical, economic and social developments to sustain competitiveness for inward investment.

The American Chamber welcomes the development of a new National Digital Strategy to follow on from the 2013 strategy "Doing More with Digital"¹ and the opportunity to input into the consultation on same.

American Chamber member companies and their teams have made a pivotal contribution to Ireland's evolution into a modern and diverse society; and an economy that trades with confidence and ambition on the world stage. It is in this vein that the American Chamber considers the development of a new National Digital Strategy to be integral to Ireland's continued success as a location of choice for FDI.

"Doing More with Digital" was a necessary first step in championing elements of digital transformation, such as the rollout of the Trading Online Voucher Scheme which currently sees the Local Enterprise Offices approving a minimum of 1,000 vouchers a year to small businesses across the country.² To follow on from this, the American Chamber recommends greater ambition for Ireland as a digital leader and an innovation island.

¹ [https://www.dccae.gov.ie/en-
ie/communications/publications/Documents/63/National%20Digital%20Strategy%20July%20202013%20compressed.pdf](https://www.dccae.gov.ie/en-
ie/communications/publications/Documents/63/National%20Digital%20Strategy%20July%20202013%20compressed.pdf)

² https://www.oireachtas.ie/en/debates/question/2018-02-07/61/#pg_61

Ireland is well placed to further enhance its reputation for digital leadership in Europe. According to the Digital Economy and Society Index³ (DESI) for 2018, Ireland currently ranks 6th in the EU for its digital performance and digital competitiveness. To improve Ireland's standing, it will require State alignment with long term economic and industrial planning that actively exploits public-private opportunities for data-driven innovation and world class cloud use. Protecting Ireland's digital leadership reputation also requires investment in the key competent authorities on which Ireland's digital economy depends. Increased funding allocations to the Data Protection Commission have been advocated for by the American Chamber. The combination of expanded regulatory responsibility, with the enforcement of the General Data Protection Regulation and the sustained attractiveness of Ireland for new business operations in Europe, means that continued increased investment in the Data Protection Commission will be necessary. In a comparable way, the implementation of the Network and Information Systems (NIS) Directive and the continuing significance of security and protection online requires an increase in funding and resources to the National Cyber Security Centre.

Digital transformation now impacts every facet of society: citizens – young and old; businesses – large and small; and Government – in delivering public services and incentivising innovation and technological transformation. It is therefore crucial that all stakeholders are brought along on this journey of digital transformation together – allowing them to understand the opportunities and getting their input on how the related challenges can be overcome. The American Chamber advocates adopting the approach outlined by the OECD: “calling for national digital strategies that are robust, but flexible enough to adapt to the changes in technologies and social norms, is the first step to closing the access and usage gaps and helping improve economic performance and well-being...”⁴

In 2018's IMD World Digital Competitiveness ranking⁵, Ireland positioned in 20th place – an improvement of one position from the prior year – out of 63 countries worldwide. The objective of this ranking is to assess the extent to which a country adopts and explores digital technologies leading to transformation in Government, business and society. Of the three factors it is measured across: knowledge, technology and future readiness, Ireland performed best in future readiness. This highlights that although Ireland is on the right path, there is still work to be done to improve its overall standing on the global stage. Sweden is the highest-scoring European country in these rankings, positioned in 3rd place. The Swedish National Digital Strategy was set out by its Minister for Digital Development

³ <https://ec.europa.eu/digital-single-market/en/desi>

⁴ <https://www.oecd.org/g20/policy-recommendations-for-digital-transformation-in-the-G20.pdf>

⁵ <https://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2018/>

Peter Eriksson as a whole-of-government commitment to leading the change which has been brought about by the ongoing digital transformation of society.⁶

Spotlight on a regional success story:

SOUTHWEST

Fexco is working with IT Tralee and Kerry County Council via a PPP structure to deliver a world-class **RDI and Enterprise Hotspot** within the Southwest region.

The RDI Hub is focused on new paths for **economic growth and accelerated job creation** through:

- a) A sustainable, pioneering, world-class, design-led, digital innovation hub and living lab ecosystem
- b) A USP as a globally connected financial services, innovation, enterprise and skills hotspot

This initiative will serve to increase the competitive advantage for the region, by building on existing geographical and sectoral strengths – fostering an ICT service and skills hotspot. It will ensure a sustainable flow of commercial outputs, creating opportunity and choice in sustainable high-end jobs.

The PPP model is a powerful example of leveraging existing public, private infrastructure and capability to deliver a transformative project for the region.

AIMS AND IMPLEMENTATION OF THE STRATEGY

The American Chamber strongly advocates for a new National Digital Strategy which aims to:

- Be **ambitious** for the opportunities that disruptive technologies will bring about.
- Position Ireland as a **digital leader: ranking in DESI's top three countries**.
- Be **holistic** in bringing together the broad range of Government strategies and initiatives already underway to strengthen and support the digital sector, e.g. the forthcoming Industry 4.0 Strategy, skills and education strategies.
- Implement a **cross-Governmental approach**, similar to the Action Plan for Jobs.
- Provide **detailed actions**, with regular and transparent status updates on the strategy's implementation.
- Have a **focused champion** at cabinet-level within Government to drive forward Ireland's digital leadership credentials in Europe and internationally.

⁶ <https://www.government.se/press-releases/2017/06/action-on-digital-transformation/>

- Promote a **cultural shift** and change of mindset to enable all cohorts of society to embrace and adopt digital practices.
- **Demystify developments** in digital, such as artificial intelligence, and showcase the humans behind the algorithms to convey the benefits to society of embracing digital.

Recommendation

- ❖ The American Chamber recommends the inclusion of 'Ireland's Digital Priorities' as a **Citizens Assembly topic** to allow all stakeholders an opportunity to debate and discuss this key economic, cultural and societal issue and its related opportunities and challenges.

PILLARS OF FOCUS

Through consultations with member companies, across a range of sectors and regions, the America Chamber has broadly aligned its priorities for the new National Digital Strategy with the key findings arising from Digital Economy and Society Index⁷ (DESI).

Pillar 1: Infrastructure

Why is it important for a new National Digital Strategy?

Enabling a transformative digital economy and society which is globally competitive, relies on the deployment of ubiquitous, reliable and high-quality broadband and wireless networks. In order to fully drive Ireland's digital capacity, broadband and 5G must be implemented side-by-side. The deployment of digital infrastructure has the potential to greatly advance the entire country, particularly the regions. The ability of companies to offer flexible and remote working arrangements, enables their employees to live in locations where housing is more accessible and affordable, contributing to growth in the regions and relieving pressure from cities. The rollout of key digital infrastructure enables companies to increase labour participation, add workplace flexibility and widen the talent pool. The ability of Small and Medium Enterprises (SMEs) from all across Ireland to operate globally, in terms of trading online, could be a real opportunity for economic growth.

⁷ <https://ec.europa.eu/digital-single-market/en/desi>

Recommendation

- ❖ The American Chamber recommends the speedy implementation of the **National Broadband Plan (NBP)** to meet Government's ambition of ensuring that the entire population has access to quality fibre-based broadband services.
- ❖ The American Chamber recommends the establishment by Government of a **Regional Industry Support Body** for the implementers of the National Broadband Plan. Factors which may inhibit the rollout of the NBP should be highlighted at the earliest stages, via this body, to enable local champions within industry to engage in finding local solutions, where possible.
- ❖ The American Chamber recommends the creation of a supportive regulatory environment for the **rollout of 5G**.

Pillar 2: Talent Pipeline

Why is it important for a new National Digital Strategy?

Investment in education, training and upskilling is a critical factor for the success of any national digital strategy as without appropriate talent, transformational opportunities cannot be realised. The application of AI will be pervasive; therefore, it will be crucial to have a strategy centred on developing both the technical skills and business consulting skills for transformation to remain competitive. Ensuring that third-level is educating and training students with the required skills is integral, therefore there is a need for an increased number of targeted courses in areas such as security analysis and AI. Creating a diverse workforce will contribute to building an inclusive sector and can tap into areas of growth for the talent pipeline. The presence of large global companies in Ireland offers opportunities for industry engagement with third level institutions and for the increased rollout of graduate programmes and internships with leading players in industry.

Recommendations

- ❖ The American Chamber recommends **increased investment at third level** to accommodate the projected additional 40,000 entering the student population by 2030.⁸
- ❖ The American Chamber recommends the rollout of **targeted third level courses** on emerging tech trends, such as security analysis and AI.

⁸ <https://www.iaa.ie/iaa-thea-joint-call-with-students-and-staff-unions-for-government-to-address-higher-education-funding-crisis/>

- ❖ The American Chamber recommends the **further rollout of non-traditional pathways** to attaining digital skills and increased awareness-raising of these alternative pathways e.g. apprenticeships in cyber security, data analytics etc.
- ❖ The American Chamber recommends the **adoption of new digital modes of teaching and learning** to enhance learning experiences and opportunities, such as deep learning.
- ❖ The American Chamber is very supportive of engaging more people in lifelong learning, as a key approach to boosting productivity and preparing for a world of work which will transform with the application of digital technology. Recognising that lifelong learning is a joint enterprise between Government and business; the American Chamber recommends that the **National Training Fund should continue to pivot its strategic focus** towards programmes relevant to employers and away from labour activation, delivered with more transparency and stronger evaluation.
- ❖ The American Chamber recommends **increased funding of STEAM subjects** (recognising the contribution of 'Arts' to innovation) and the acceleration of the implementation of relevant actions arising from the STEM Education and Review Group, through the provision of infrastructure necessary for the digital and language strategies for schools.
- ❖ The American Chamber recommends the implementation of a **best in class talent mobility regime**, to include the modernisation of permit and visa processing, in order to facilitate the efficient and certain movement of highly skilled talent.

Pillar 3: Use of Internet Services by Citizens

Why is it important for a new National Digital Strategy?

In keeping with the American Chamber's inclusive ambitions is the requirement for all cohorts of society to be included in the process of digitisation. No community – relating to age, education or socio-economic circumstances – should be left behind on this journey. The prevalence of internet use by citizens is representative of the public's ability to engage and have success in the digital world. The adoption of online services, such as Revenue.ie, banking and shopping, allow for efficient methods of carrying out daily tasks. The ability of elderly people to use methods of communication, such as skype and Facetime, allows them to interact with family and friends on a daily basis despite possibly living alone. However, poor broadband infrastructure, particularly in rural areas, can impede citizens' ability to engage with internet services.

Recommendations

- ❖ The American Chamber recommends championing the use of **traditional infrastructure** e.g. rural post offices, Citizens Information offices and local libraries to facilitate the rollout of technology in local communities, such as teaching digital skills; providing information on the availability of digital public services and advice on how to use them. By combining traditional infrastructure and new technology, this would demystify digital transformation in local settings via relationship-based interactions.
- ❖ The American Chamber recommends leveraging **Rural Regeneration and Development Funding** for greater rollout of technologies in rural communities e.g. to progress smarter living in towns.

Pillar 4: Integration of Digital Technology by Businesses

Why is it important for a new National Digital Strategy?

Adoption and integration of innovative technologies into business models allows more efficient work practices, resulting in productivity gains and cost reduction which can drive growth. For SMEs, such transitions are integral for the long-term survival and success in a globalised and fast-paced economy. The integration of particular digital technologies can also assist in reducing environmental impacts and the carbon footprint. In the past, purchasing IT hardware and software was a barrier to quick scaling, but now cloud technologies can enable SMEs to establish and grow at low cost. The ability of businesses to compete in the digital economy is also dependent on external factors, such as the State's investment in digital infrastructure and the provision of supports and guidance by Government. As businesses transition online or adopt new technologies, the ability to upskill staff or attract and retain new talent can also be a challenge, in addition to compliance with new regulations.

Recommendations

- ❖ The American Chamber recommends providing **targeted support, resources and guidance to the enterprise sector** to modernise business models; from online marketing, ordering and fulfilment to supply chain management, security and advanced manufacturing. The further rollout of **regional Digital Innovation Hubs** could be of assistance here, including the provision of programme supports for the Hubs, such as 'Gteic' in Donegal.
- ❖ The American Chamber recommends the continued and enhanced rollout of **incentives for SMEs**, similar to the Trading Online Voucher Scheme, which could encourage innovation and the adoption of new technologies, such as cloud.

- ❖ Experience and expertise within regions, in global companies and SMEs, could be enhanced and further entrepreneurship developed through the establishment of a **best-practice forum** for each region whereby peer-to-peer learning and mentorship could take place thus creating stronger linkages within regional clusters.

Pillar 5: Digital Public Services

Why is it important?

Government must lead by example if Ireland is to become a nation of digital-natives. The next phase of digital innovation will happen in the cloud. For Government, cloud adoption will enable significant public sector cost savings, increased security, scalability and a capacity to innovate far greater than what is possible with an on-premise infrastructure. As a global digital leader, digital-first policies must be permeated throughout all aspects of society, including in the delivery of public services. By delivering public services through the adoption of digital technologies, processes can be streamlined, and the administrative burden reduced. Such efficiencies need to be highlighted so that the public is aware of the benefits of modernising public services. There are, of course, challenges which must be met, such as the global competition for talent. Adoption of technologies to deliver services, such as health and water, can pose risks. Critical infrastructure is vulnerable to cyber attacks and therefore systems and data must be adequately secured. Trust must be built among stakeholders to ensure confidence in how Government will make use of personal data.

Recommendations

- ❖ The American Chamber recommends leveraging the presence of **global talent and experience** in Ireland to tap into innovative practices for the benefit of modernising public services. **Peer-to-peer learning** and the rollout of a mentoring initiative would facilitate the sharing of leadership experiences and service transformation between company CEOs and Secretaries General.
- ❖ The American Chamber recommends the publication of a **framework on the ethical use of data**. Building trust is key to ensuring confidence that the data being provided to Government is safe, secure and used for the purposes intended. Such trust-building will ensure successful implementation of digitised public services.
- ❖ The American Chamber recommends the adoption of **strategic open-data policies**. Publishing with purpose will enable rich data to be leveraged and to power **insights** for better design and rollout of public services like transport, city planning etc.

- ❖ The American Chamber recommends the **standardisation of ICT infrastructures** across all Government Departments and State Agencies, such as resilient security systems and the adoption of cloud technology.
- ❖ The American Chamber recommends the adoption of a **'Cloud First' policy** within the public sector.
- ❖ The American Chamber recommends that the **Disruptive Technologies Innovation Fund** is applied to modernising the delivery of public services, such as a new system to enable talent mobility (streamlining permit and visa processing).

Pillar 6: Research and Innovation

Why is it important?

A national digital strategy should have, at its core, the promotion of research and innovation – across all of its agencies and in education policy. The recent establishment of Science Foundation Ireland research centres and programmes which are focused on digital matters, such as ADAPT⁹ and ENABLE¹⁰, are crucial in building Ireland's research capacity. The presence of a young, highly tech-savvy workforce allows Ireland to participate in the development of new disruptive technologies, such as AI and machine learning. Finding the balance between regulation and innovation is integral to ensuring Ireland, and Europe, remains a competitive location for investment.

Recommendations

- ❖ The American Chamber previously called on Government to introduce challenge-centric funding to address societal challenges. The American Chamber welcomed the **Disruptive Technologies Innovation Fund** which it hopes will play a key role in the public and private sector working together to tackle societal needs. The American Chamber recommends that this innovative initiative is applied to modernising the delivery of public services.
- ❖ The American Chamber recommends that the **R&D tax credit regime** needs to be made more competitive, clear and consistent if it is to be effective. As such, it needs to reflect the overarching policy, as outlined by Government and the Department of Finance, to be strategically focussed on reducing the business cost of undertaking R&D in Ireland as an incentive to invest. Uncertainty within the enterprise community regarding eligible expenditure is preventing the effective use of this incentive to retain and win new innovative-led investment and employment.

⁹ <http://www.sfi.ie/sfi-research-centres/adapt/>

¹⁰ <http://www.sfi.ie/research-news/news/minister-heather-humphrey/>

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- ❖ The American Chamber welcomes the prioritisation update completed in 2018, with the addition of emerging areas of new and disruptive technologies especially in the digital and healthcare arena. The American Chamber recommends **'tiering' of research prioritisation areas** to signal areas to be scaled significantly and to avoid the risk of stretching resources across numerous 'strategic portfolios'.

CONCLUSION

"The industrial revolution changed the world. The ongoing digital transformation of society is a contemporary revolution of the same order."¹¹

The American Chamber is acutely aware of the road to be travelled when it comes to the digitisation of society. The opportunities and challenges it brings must be debated and discussed by all stakeholders in society and the subsequent policies delivered with strong political leadership.

The American Chamber looks forward to working with all Government Departments and State Agencies in the drafting and implementation of the new National Digital Strategy.

¹¹ <https://www.government.se/press-releases/2017/06/action-on-digital-transformation/>