

March 2025



Digital Skills Assessment

Executive Summary

Northern Ireland City and Growth Deals

PURPOSE OF RESEARCH ACTIVITY

To identify gaps in skills provision and to make recommendations to help ensure that an appropriately qualified workforce can be put in place to meet the anticipated development and growth of the Digital Sector in Northern Ireland expected to result from the programme of investment through City and Growth Deals in the sector.

The work to achieve this included:

- An overview of current and expected future skills challenges impacting the sector and associated implications as a result of city deal investments (drawing from existing intelligence and direct engagement with businesses and representative bodies)
- A profile of the spectrum of existing employability and skills provision targeting the development of digital skills
- A breakdown of the range and volume of current employability and skills provision (aligned to the sector)
- An assessment of the potential of existing interventions to meet the needs of the digital sector now and in the future
- An overview of gaps in provision by volume and/or the scale of intervention
- Identification of the need for new interventions and/or scaling up of existing provision to meet demand, aligned principally to areas of city deal investment
- Consideration of solutions we can use/learn from both within and beyond NI
- Recommendations to address gaps in provision and other challenges in the sector (based on emerging findings)

PRIORITY CONSIDERATIONS

In the course of this work, the key areas of focus reflecting the current policy priorities of City & Growth Deals to align with regional strategic priorities, included:

- **Skills for Growth**
Considering how skills programmes and employment opportunities can be aligned with the digital sector helping to unearth potential for new apprenticeship pathways, and the development of mid-tier and higher-level skills.
- **Skills for Inclusion**
Exploring opportunities to address skills imbalances and improve access to employment opportunities across the region through socially inclusive progression pathways and maximise inclusion and diversity.
- **Skills for a Digital Future**
Supporting local SME's and Micro Businesses to understand emerging technologies such as Artificial Intelligence and Cyber Security can improve their business models and support growth.
- **Supporting Innovation**
Supporting the drive for increased innovation capability to help achieve world-leading advantage in the digital sector.
- **Sustainability and Net Zero Sustainability**
Considering the rising importance of sustainability and the drive to Net Zero and its impact for skills development and how digital technologies and skills can drive greener economic growth.

THE POTENTIAL

Investing in digital skills through City and Growth Deals holds significant potential for economic growth in Northern Ireland. By enhancing digital literacy and competencies across the workforce, businesses can innovate more effectively, increase productivity, and compete on a global scale.

These investments can attract high-tech industries, create high-quality jobs, and drive sustainable development. Moreover, equipping individuals with advanced digital skills can foster entrepreneurship and support the growth of small and medium-sized enterprises (SMEs), further boosting the region's economic resilience and prosperity.

The City and Growth Deals are delivering £1.3 billion in investment across approximately 50 projects focused on innovation, digital advancements, and tourism. While these projects aim to create more jobs and expand opportunities, a digitally skilled workforce will be essential to their success. Each of the regional city and growth deals is at varying stages of development – the Belfast Region City Deal was signed in December 2021, the Derry and Strabane City Deal in September 2024, and the Mid South West Growth Deal in November 2024. It is hoped that the Causeway Coast and Glens Growth Deal will be signed in due course.

A full list of Projects across the four City & Growth Deals can be found by following the links listed:

BRCD Belfast Region City Deal	belfastregioncitydeal.co.uk
CCGGD Growth Deal - Causeway Coast & Glens	https://causewaycoastandglens.gov.uk/work/strategic-projects/growth-deal
DSCD Derry & Strabane City Deal	www.derrystrabane.com/citydeal
MSWGD Mid-South- West Economic Engine	midsouthwestregion.org

These City and Growth Deal projects will catalyse innovation in not only the digital Sector but will run through all identified growth sectors. The city and growth deal projects are fundamental to the success of these Centres; driving the sector forward is a skills eco-system to support Industry needs.





RESPONDING TO CHALLENGES

Research conducted for this report illustrates that the digital sector is growing, increasing the demand for a skilled workforce.

However, through employer survey responses, and workshop and interview feedback, challenges related to the supply of skilled labour to the digital sector have been identified.

These barriers need to be addressed:

- Numerous Digital ICT skills assessments and reports have been commissioned and published in recent years, leading to potential overlap and duplication. A more coordinated regional approach to marketing, branding, and outreach across Northern Ireland is needed to better inform learners of career options and pathways, and to streamline the promotion of jobs, apprenticeships, and work experience opportunities.
- There is a pressing need to enhance teachers' digital skills to support early intervention in schools. By equipping teachers with the necessary digital competencies, they can effectively integrate digital literacy into the statutory curriculum across the education system. This will ensure that students are introduced to essential digital skills from an early age, fostering a strong foundation for future learning and career opportunities.

“Expanding digital and higher-level apprenticeships, keeping pace with technological advancements, and building sector capacity are crucial.”

- There is a significant lack of work placement and project-based learning opportunities for students. These practical experiences are crucial for students to gain hands-on skills and real-world insights, which can significantly increase the supply of work-ready school leavers and graduates. By providing more opportunities for students to engage in practical learning, we can better prepare them for the demands of the workforce.

- Further Education (FE) and Higher Education (HE) students need to develop appropriate levels of digital skills to improve their employment opportunities across a range of disciplines. By integrating digital skills training into FE and HE curricula, we can ensure that graduates are well-equipped to meet the demands of the modern workforce and excel in their chosen careers.
- All targeted growth sectors face a significant challenge in securing a digitally skilled labour supply. Expanding digital and higher-level apprenticeships, keeping pace with technological advancements, and building sector capacity are crucial. Additionally, upskilling current employees to meet mid-level demands, and developing digital skills for sustainability to achieve net zero goals are essential steps.
- Many small and micro businesses struggle to grasp the potential of emerging technologies like AI, data literacy, and cybersecurity. This lack of understanding, coupled with limited data reporting capabilities, hinders their ability to gain deeper insights. Upskilling these businesses in digital opportunities is essential to bridge this knowledge gap and enhance their competitiveness.
- Accessing employment in Northern Ireland's digital sector presents distinct challenges for several groups, including those over 50, women, people with disabilities, and new migrant workers.

RECOMMENDATIONS

1	Recommendation 1	Increase collaboration among skills providers and promotion and distribution of information
2	Recommendation 2	Early interventions in schools
3	Recommendation 3	Improve digital literacy
4	Recommendation 4	Increase the numbers entering or upskilling in the digital ICT sector
5	Recommendation 5	Increase industry awareness of emerging technologies
6	Recommendation 6	Address diversity and inclusion across sector

RECOMMENDATIONS AND ACTIONS

1

RECOMMENDATION

Increase collaboration among skills providers and promotion of information

Actions

- Review all reports and plans and in the last 5 years
- Capture outstanding recommendations which still warrant support
- Explore potential for continued work on digital skills by a reference group including employers to shape a joinedup approach
- Work to reach agreement on common branding and information content

2

RECOMMENDATION

Increase early interventions in schools

Actions

- Develop school leader programme focused on digital skills
- Develop a suite of digital micro-credentials for teaching community
- Develop a centralised digital teaching resource pack for teachers
- Advocate for policy changes to incorporate digital skills into educational programmes of study

3

RECOMMENDATION

Improve digital literacy

Actions

- Develop project-based schemes to provide access to training
- Establish a centralised hub to provide wrap around digital services for the community and voluntary sector
- Embed digital skills training throughout all FE/HE programmes
- Build the potential for collaborative project based learning between FE and HE to enhance digital skills
- Innovation Centres to act as an interface between students and industry for project-based learning opportunities



4

RECOMMENDATION

Increase the numbers entering or upskilling in the digital ICT sector

Actions

- Develop specialised training programmes and qualifications in emerging technologies:
 - Cybersecurity
 - Data Science/ Data
 - Analytics
 - Robotics
 - Automation
 - Artificial Intelligence
- Collaborate with industry partners to design guidance that reflects real-world challenges and technologies
- Develop a flexible Micro-credential Framework spanning FE & HE to enable bite sized and rapid upskilling of those within and/or seeking to re-skill to enter the sector

5

RECOMMENDATION

Increase industry awareness of emerging technologies

Actions

- Offer workshops or seminars to educate businesses on the practical applications of emerging technologies e.g. AI.
- Promote the AICC (Artificial Intelligence Competence Centre) to enhance AI skills and understanding, addressing ethical considerations.
- Encourage proposals to support the development of Level 3 Data Analytics Apprenticeship and pathway to Higher Level Apprenticeship

6

RECOMMENDATION

Address diversity and inclusion across sector

Actions

- Increase and promote all-age apprenticeships
- Establish reverse mentorship programmes to bridge generational gaps and enhance knowledge exchange
- Increase support for initiatives focused on helping women transition into digital careers
- Implement the Apprenticeship Challenge Fund to break barriers for disabled individuals, including neurodivergent learners, with a focus on careers in data analytics





FOR FURTHER INFORMATION:

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