

# DIGITAL TECH

## A Skills Plan for New Anglia

Putting skills at the heart of building  
a competitive and sustainable  
local economy



Welcome to the Digital Tech Skills Plan for New Anglia. It sets out our collective vision for how skills development can support the growth of the Digital Tech sector, increasing local competitiveness, supporting economic growth and building high quality local careers in this high potential, globally-influential dynamic sector. Consider this a ‘Green Paper’ for further development by the sector into a roadmap or ‘White Paper’ over the coming months. Today I see this plan as the first key step to enabling local collaboration to ensure business growth and skills opportunities are maximised. We look forward to businesses and education providers coming even closer together to shape the future of a vibrant regional tech economy in the East of England.



**Neil Miles**

TechEast Chair

---

## Contents

---

introduction .....	page 2
future priorities .....	page 10
appendix A – Methodology .....	page 21
appendix B – Employment and Education Consultation .....	page 23
appendix C – Digital Tech Evidence Base .....	page 27

The Digital Tech Skills Plan has been developed by the digital tech sector in Norfolk and Suffolk, working alongside the New Anglia Local Enterprise Partnership, the New Anglia Skills Board and supported by SkillsReach.

SkillsReach was contracted to facilitate and prepare eight sector skills plans for the New Anglia LEP priority sectors. The project was commissioned by the Education and Skills Funding Agency, in partnership with New Anglia LEP, and funded through the European Social Fund. Each Sector Skills plan and supporting Data Pack has been developed in collaboration with local employers and other stakeholders.

The Digital Tech Skills Plan has been developed in partnership with TechEast, the lead organisation taking forward the further development and implementation of this plan in conjunction with New Anglia LEP, local education institutions and other stakeholders and key sector champions.

The New Anglia Skills Board places employers at the centre of decision making on skills in Norfolk and Suffolk to ensure the skills system becomes more responsive to the needs of employers, and the future economy.

TechEast is the lead Digital Tech employer group for New Anglia, and aims to accelerate the growth of the digital economy, creating a further 5,000 jobs across the East (including Cambridge), generating an extra £650M GVA of economic growth, establishing the area as one of the UK’s top 5 Tech Clusters.

SkillsReach is an established East of England-based strategic skills consultancy with an associate project team with extensive experience of developing skills plans.

# introduction

---

## Overview

---

To ensure that the New Anglia Digital Tech sector maximises its potential for business and the wider economy and community, TechEast and our partners share the following ambition:

Ensuring that our local skills infrastructure enables sector growth, supporting the take-up of 10,000 jobs, through an expanding, diverse pipeline of talent and best in class in-career development.

The New Anglia Local Enterprise Partnership has prioritised the Digital Tech Sector as one of **five high impact sectors with the greatest opportunity for economic growth** within its Strategic Economic Plan (SEP) published in 2014<sup>1</sup>. The SEP sets out major economic targets to be achieved by 2026, including a net increase of 95,000 new jobs, 10,000 new businesses and an overall increase in regional productivity from £36,000 to £40,000 by Gross Value Added (GVA). **This plan identifies the need for the Digital Tech sector to respond to replacement and expansion demands of approximately 6,000 vacancies by 2024, principally at graduate and post graduate levels, plus the TechEast sector growth aspiration to create an additional 4,000 jobs in New Anglia by 2024.**

Nationally, the 2017 TechNation Report<sup>2</sup> highlights that the Digital Economy is growing twice as fast as the wider economy, with an economic output of approximately £100 billion per year. The Digital Tech sector has been placed in the centre ground of driving UK competitiveness, with the emerging Industrial Strategy and the emerging UK Digital Strategy. It is recognised as a sector that is a driver for innovation and economic growth and an enabler for a digitally fluent, more resilient economy. Pivotal to national developments for the sector is the role of business in guiding the planning and delivery of the skills development that is critically important for a globally competitive market.

New Anglia's Digital Tech sector is diverse and productive, with a **total employment base of 16,600**, up nine per cent since 2010, and a GVA of around £1.3bn. Employment opportunities in the region are increasingly requiring higher skills, creating even greater demand for qualifications at degree level and above. **As well as businesses that self-define as Digital Tech, this plan recognises Digital Tech professionals employed across all sectors in the area.** There is an expanding digital economy across New Anglia, involving marketing, finance, public services and tourism, and recruitment opportunities for digital workers with transferable digital skills are set to accelerate

---

<sup>1</sup> New Anglia LEP Strategic Economic Plan (2014), New Anglia LEP

<sup>2</sup> TechNation 2017, TechCity



according to replacement demand forecasts. Also, there is significant demand for competencies across marketing and sales within a Digital Tech environment and this is set to increase.

In compiling this Skills Plan, detailed consultation with employer groups, education and other stakeholders, including rural economy groups, Local Authority economic development and current European Social Fund skills providers, has focused on **three key themes**:

- Skills gaps and barriers
- Perception of skills supply
- Employer leadership

Based on feedback from these groups, **six key needs** for the Digital Tech sector have been identified:

- Fill gaps in skills provision
- Meet growing demand for higher level qualifications
- Tackle graduate talent migration
- Build industrial partnerships
- Promote careers within schools
- Combine resources and grow investment

In addition, **three priorities** have been identified as having the most potential to support the ambitions of the SEP and deliver the ambitions for growth in the regional digital economy:

- Local employer skills leadership, **in partnership with education and skills stakeholders**
- New and Broader Talent Pipelines
- In-career learning and development

The priorities are developed within the plan into an outline implementation schedule which incorporates practical tactical objectives alongside more strategic longer term wins.

In identifying the relationship between skills and acceleration of the sector's competitiveness, **two key impact categories** have been defined, against which the plan's priorities and action plan have been indexed. These are:

- Increasing Digital Tech Competitiveness Nationally
- Growing Digital Tech Economy Jobs, Businesses, and Value

---

## Embedding employer ownership in goal setting

---

The Digital Tech skills plan aims to address key goals to support the economic development priorities of the New Anglia Local Enterprise Partnership.

First and foremost, the plan aims to represent the views of the Digital Tech industry and build a series of priorities that enable the sector to lead and take ownership of skills requirements. The plan summarises the importance of building a **responsive skills market** that is adaptive to the demands of industry, as a way of driving competitiveness. Central to this is the reform of skills policy and delivery itself, with **employers at the centre**, articulating the standards they expect to see within their industries, which will define training and qualification outcomes. Industrial partnerships between public agencies, educational



institutes and employers is a further key element. The aspiration is to create a **future-proofed skills partnership**, able to drive national and local investment, to act as a catalyst in driving excellence in training and to deliver added value through a responsive and 'skills in demand' approach.

The plan aims to support the **overall strategic development** of New Anglia's skills system. The area's further and higher education institutions and training community are key assets for all sectors in the region and the education sector already demonstrates a range of cutting-edge activity. Through the Digital Tech skills plan, the aim is to demonstrate how priorities developed in consultation can amplify such innovation, with the intention of achieving greater access, greater coordination and **value for employers across all sectors**.

The plan aims to **complement existing strategic skills development** activity locally. The focus on employer leadership aligns with opportunities for public and private sector co-investment and with the LEP's strategic focus on enterprise across schools, colleges and universities. The plan also recognises the role of the New Anglia Skills Board and its key priorities for equipping young people for success, workforce development and increasing the overall growth in employment for the area.

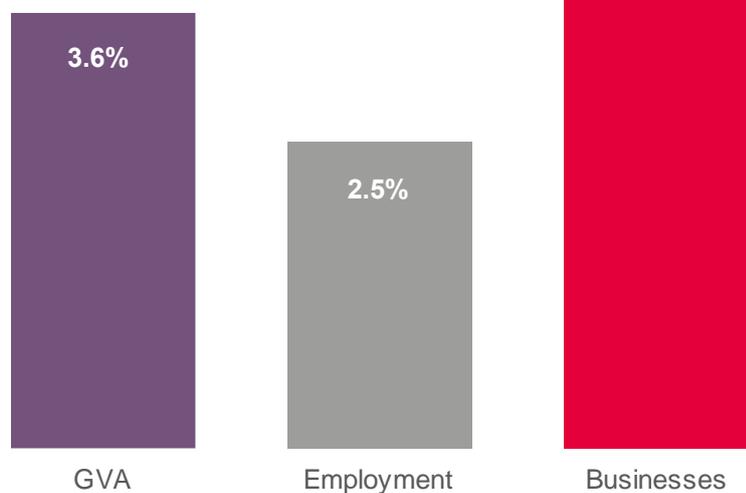
---

## Sector Value, Employment and Skills

---

**The Digital Tech sector is an important economic engine for the New Anglia area. It demands a highly skilled and talented labour supply, with higher than average wage earnings and significant GVA output, indicating a productive industry that can stimulate the retention of economic value in the local area.**

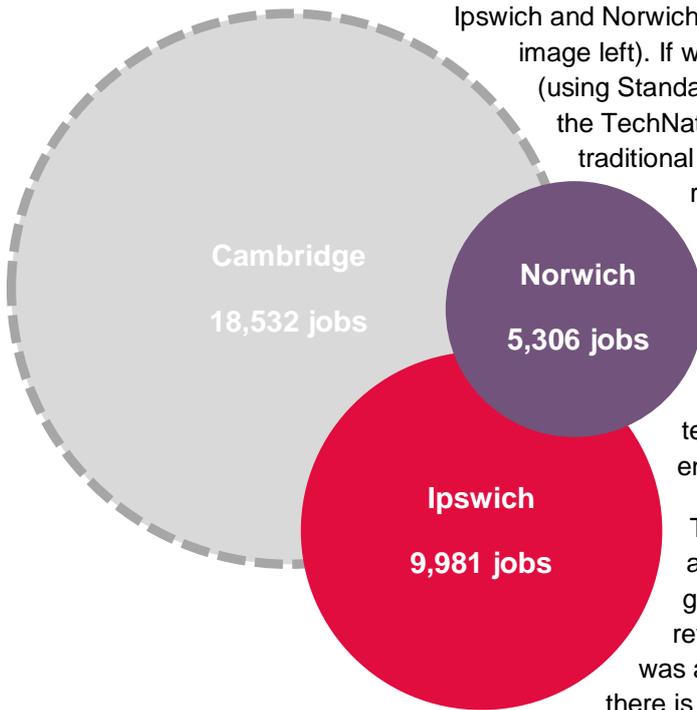
The Digital Tech sector's contribution to the New Anglia economy



The Digital Tech sector contributes nearly 4 per cent of total economic value (Gross Value Added or GVA) generated, which is around £1.3bn of the £35.5bn generated by the New Anglia economy in 2015.

Nearly 5 per cent of businesses, over 3,400 of the 72,900 businesses in New Anglia, are Digital Tech businesses.

Employment in the sector (as measured by the employment provided by Digital Tech businesses) stands at just under 17,000, or 2.5 per cent of total employment in the area. This aligns well with the job numbers in



Ipswich and Norwich identified by the TechNation16 report (as per the image left). If we take a slightly wider measure of the sector (using Standard Occupational Classification codes identified in the TechNation report), and estimate for Digital Tech jobs in traditional industries as well, then this employment figure rises further to an estimated 24,000.

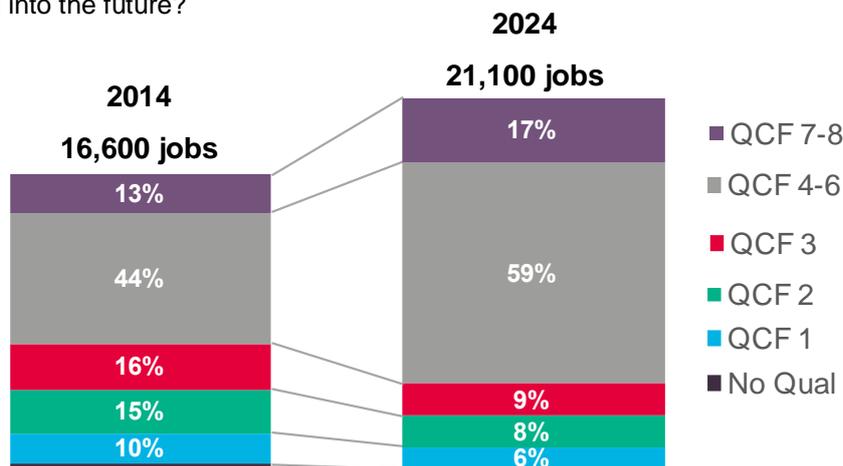
Average wages across all employees (both full-time and part-time) in the sector nationally stand at just over £39,000pa in 2016. This is around a six per cent increase on 2014 wage levels. Wages range from £69,000pa for IT & telecoms directors to nearly £27,000pa for IT engineers.

Total average wages across New Anglia are around 10 per cent lower than nationally, and given that consultation with sector stakeholders revealed that the pull of higher wages elsewhere was a barrier to attracting and retaining talent, then there is little to suggest that the Digital Tech sector is

immune from this effect. This would put average wages for the Digital Tech sector in New Anglia at around £35,000pa. However, this is still considerably higher (c66%) than the average wage across all sectors in New Anglia of around £21,000pa.

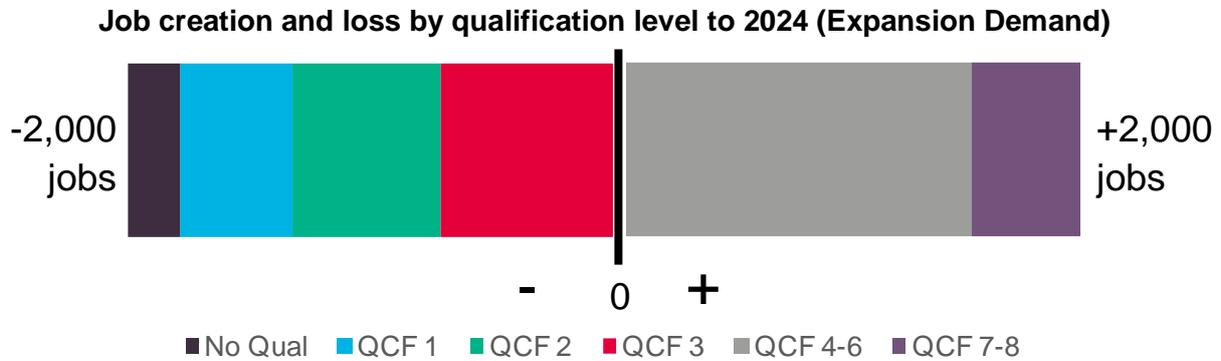
Forecasts suggest that employment levels within the New Anglia Digital Tech sector are set to remain steady between now and 2024. However, this does not take into account TechEast’s original target of 5,000 new jobs created and the associated activity taking place to achieve it. Further to and supporting this endeavour will be the intervention of the New Anglia Local Enterprise Partnership and its identification of the Digital Tech sector as ‘high-performing’ and therefore integral to its delivery of 95,000 new jobs across the New Anglia area.

The TechEast target of 5,000 jobs includes job creation in Cambridge. If we break this target down, based on employment in each of TechEast’s constituent areas, then the target for New Anglia comes out at 2,237 jobs by 2020. If we push that jobs target forward to 2024, bringing it into line with the Working Futures data we are using to estimate replacement and expansion demand, then this target reaches approximately 4,500 jobs (please note that in total target calculations this figure is rounded to the nearest thousand i.e. 4,000). Given that forecasts for employment in the sector show that growth will be in those jobs with higher level qualifications (QCF 4 and above), there will be less roles in lower qualification roles, and we can assume that any additional job creation in the sector will be in those higher skilled roles as well. So, what does this mean for the skills make-up of the Digital Tech sector now, and into the future?



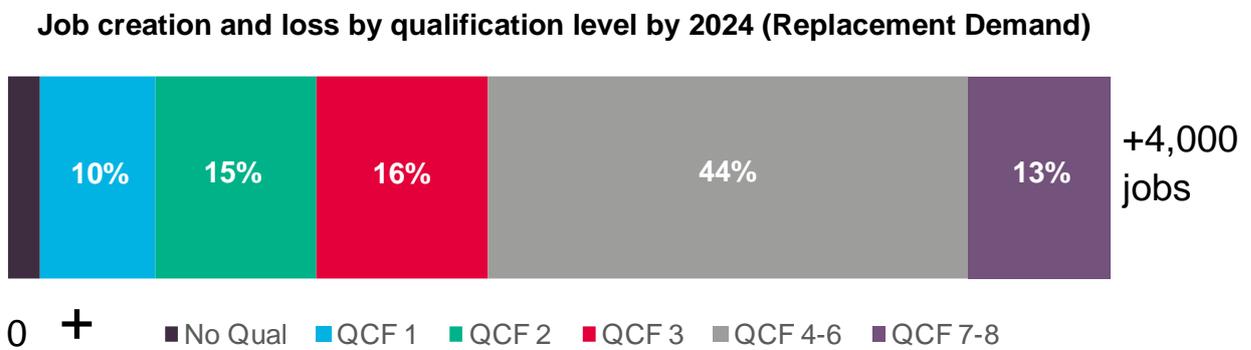


TechEast’s target for creating 4,500 jobs in New Anglia will be the main driver of jobs growth in the Digital Tech sector over the remainder of this decade and well into the next. Beneath that headline job increase there is much to observe in terms of the growth in higher skilled jobs and the loss of those that require lower qualification levels. Jobs that require a qualification level 4 or above are set to grow by approximately 2,000, whilst those requiring a qualification level 3 or below are set to reduce by roughly the same number.



This creates a further challenge for the sector in that these higher level jobs will have to be filled, though not just simply through the recruitment of higher skilled individuals. Clearly some of those people already working in the sector in the lower skilled roles will up-skill, either through training or just general work experience, and will be equipped to take on these higher skilled roles.

However, this churn in the sector, in terms of job creation and loss, forms only part of the jobs challenge for the sector. Between now and 2024, the sector is also forecast to lose nearly 4,000 workers due to retirement or relocation.



Given that many of these workers will have been in the sector for a significant amount of time then the vast majority of new opportunities will be at a higher level. Again, people already working in the sector will be able to fill some of these posts (e.g. through up-skilling), but this in itself creates the requirement for further backfilling down the skills/job chain. Equally, not all the posts required will be high level with some continuing demand for lower / intermediate positions.

Latest figures in New Anglia (2014/15) suggest approximately 280 Digital Tech sector apprenticeships starts which constitute around 1.7 per cent of the total sector workforce. The large majority of these apprenticeships are at lower qualification levels suggesting that these will make a significant contribution to replacement demand at lower levels, but will not currently enable the sector to respond to the higher skills challenges.



Levels of student/graduate retention in New Anglia, and the relatively small numbers of higher level apprenticeships in the area, mean that the challenge for the sector is concentrated in filling those higher level roles that will come open or be created in the future, placing a significant emphasis on up-skilling the current workforce. The Apprenticeship Levy and the emerging higher / degree apprenticeships may create a new impetus for higher skilled recruitment and up-skilling, although Digital Tech employers have articulated that they remain focused on the challenge of recruiting and retaining recent graduates.

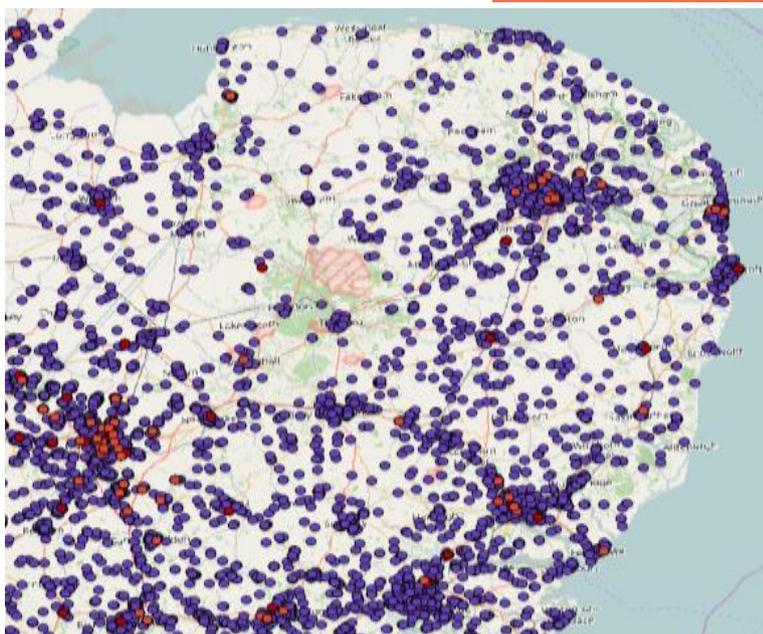
**Taking into account these factors of expansion and replacement demand, and the TechEast target for job creation; in total the overall jobs challenge for the sector is to fill 10,000 posts.**

## Sector Activity

In close proximity to two of the most important tech clusters in the world (London and Cambridge), the New Anglia region of Norfolk and Suffolk has a distinctive tech economy, primarily B2B/enterprise-oriented but with a significant number of B2C businesses.



Source: TechEast



The data analysis shows that Digital Tech businesses are widely spread across New Anglia, with two main spatial clusters, in Norwich and Greater Ipswich. Furthermore ICT/Digital is recognised in New Anglia as a key enabler by other high growth sectors including Agritech, Cleantech, Life Sciences and Advanced Manufacturing / Engineering with exciting developments such as the Internet of Things (IoT) and Big Data. The skills strategy will reflect the needs for underpinning digital technology in those priority markets and industries.

Source: East of England Science and Innovation Audit 2017



## Important Digital Tech spatial business clusters : Adastral Park, Suffolk

Adastral Park includes BT's global research centre, employing approximately 3,500. This has been an important catalyst in attracting telecommunication and hardware/software development enterprises, with over 50 other companies located at Adastral Park.

Businesses play an important role as primary suppliers to BT (CISCO, ALCATEL) and benefit from increased market opportunities due to proximity to BT and its related supply chain activity (KCOM, Cisco, Huawei).

Alongside there is business incubation and support through Innovation Martlesham, which has attracted SMEs and start ups and now houses home-grown Digital Tech businesses such as Silicon Safe and InnStyle.

The University of Suffolk has been central to the Smart Anglia business partnership that has seen the development of the Ipswich Waterfront Innovation Centre and works closely with Suffolk New College for the delivery of STEM based qualifications and in the provision of apprenticeship training to BT. Meanwhile West Suffolk College is increasingly engaged with globally recognised brands such as ARM in apprenticeshp training.





## Important Digital Tech spatial business clusters : Norwich's Digital and Creative cluster

Norwich features a growing and nationally significant digital cluster, with specialisms in digital creative, gaming and app development, digital advertising and marketing. Notable home-grown success stories include Epos Now, Proxama, Brandbank and Rainbird.

University of East Anglia (UEA) and Norwich University of the Arts (NUA) are key to the output of talent for the Norwich area. UEA ranked consistently in the Top 20 UK universities, has global pull with students drawn to specialisms that include computing science; computer systems engineering; business information systems; computer graphics, imaging and multimedia; data mining; engineering and environmental science. NUA is gaining national recognition for its UX - user experience - digital design courses. There is major demand for UX standard skills across both digital creative primary industries, such as web and software design, and in customer experience in the broader digital economy. UEA and NUA have also developed partnerships with AVIVA and Virgin Money to respond to the digital demands of the FinTech finance sector and support SMEs within the local tech networking groups.

SyncNorwich, now in its fifth year has a membership of over 1,300 members and provides a vibrant networking programme that supports business start-up, business development and ongoing good practice sharing for the local technology community. Other networking groups include Norfolk Developers, SyncDevelopHer, Hotsource, Norfolk Data Science, Norfolk Games Developers and Digital East Anglia.

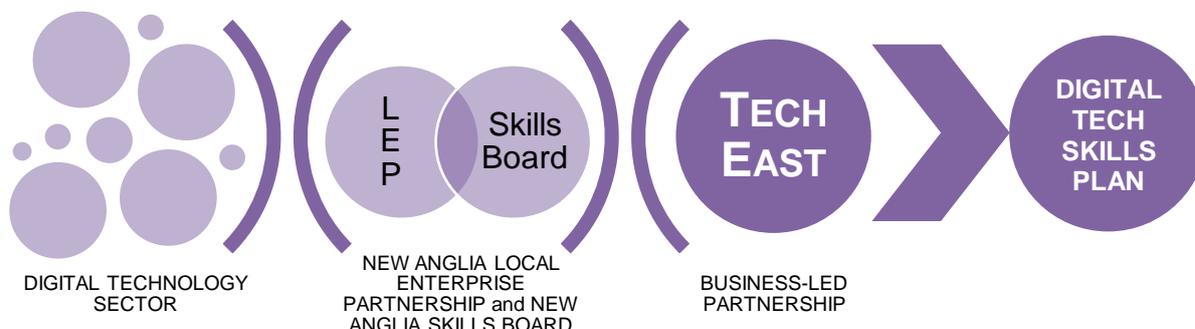
Main picture: Digital City 2016. 15 year old Hellesdon High School student Andy Moncur with Aviva digital software engineer Jamie McLeod. Picture: ANTONY KELLY. Reproduced from EDP





## Snapshot

### DEVELOPING THE SKILLS PLAN THROUGH COOPERATION AND AN EMPLOYER-LED PARTNERSHIP



#### Sector Lead

As part of the East of England region, Norfolk and Suffolk have worked alongside Cambridge to launch the Cambridge Norwich Tech Corridor, which has a vision to be a destination of choice for global technology by 2031, that includes engineering, agri-tech and digital companies.<sup>3</sup>



Supporting the region overall, TechEast, a business-led partnership that draws in key

stakeholders from local companies, business support organisations and the Universities, was formed in 2016 to promote New Anglia and the broader East of England Digital Tech economy. TechEast is a primary stakeholder in the development of the region's Digital Tech Skills priorities and its vision is for New Anglia to be recognised as one of the 5 top tech clusters in the UK.



**Given the paramount importance of developing effective business leadership and ownership of the sector's skills priorities, TechEast is ideally placed to be the lead partner across New Anglia for Digital Tech Skills.**

<sup>3</sup> Leading Growth in the UK for Science, Innovation and Enterprise, Cambridge Norwich Tech Corridor (2016)

# future priorities

## OVERVIEW

Key needs identified during research and consultation and their fit with the three sector priorities (**P1** - Local employer skills leadership; **P2** - New and Broader Talent Pipelines; **P3** - In-career learning and development):



Key impact categories:





**To ensure that the New Anglia Digital Tech sector maximises its potential for business and the wider economy and community, TechEast and our partners share the following ambition:**

**Ensuring that our local skills infrastructure enables sector growth, supporting the take-up of 10,000 jobs, through an expanding, diverse pipeline of talent and best in class in-career development.**

## TARGETING THE PRIORITIES

Pinpointing the areas that will deliver a major contribution to growth of the sector



**PRIORITY ONE**  
Local Employer Skills Leadership



**PRIORITY TWO**  
New and broader talent pipelines



**PRIORITY THREE**  
In-career learning and development

### What the goal is

Develop closer collaboration between Digital Tech sector business and skills providers to improve the responsiveness, accessibility and value of skills outcomes for local employers and residents

Stimulate the pipeline of talent for the sector to overcome skills shortages in higher technical and management skills; create alternative pathways for graduate-level talent and raise awareness in schools of sector career choices

Ensure existing sector employees are competent, enterprising, adaptable and able to apply leading edge solutions in a rapidly changing industry through effective coordination of bespoke in-career technical and professional learning and development

### What success looks like

New Digital Skills Task Force to develop investment and excellence in the sector's skills offer, articulating and responding to employer needs and maximising opportunities for New Anglia's residents

Sector has access to sufficient, diverse talent to fulfil employer business growth aspirations, attract talent from elsewhere and provide exciting opportunities for residents

A dynamic, local learning and enterprise development environment facilitating high quality continuing technical and general professional development for the specialist and wider business community

### Where it will have impact

**Increasing Digital Tech Competitiveness Nationally**  
  
**Growing Digital Tech Economy Jobs, Businesses, and Value**

**Increasing Digital Tech Competitiveness Nationally**

**Growing Digital Tech Economy Jobs, Businesses, and Value**



## Priority 1 : Local Employer Skills Leadership

### Growing Digital Tech Competitiveness and the Digital Economy

Effective business leadership and ownership of the sector's skills priorities is vital. TechEast, working with the New Anglia Skills Board, would be ideally placed to be the lead partnership across New Anglia for Digital Tech Skills. Central to this role is strategic responsibility for leveraging public and private sector resources for the sector. The outcome of the recent East of England Science and Innovation Audit will bring further impetus to developments locally.

The development of the skills plan has highlighted strong examples of how FE and HE are developing cutting edge and employer-facing skills and qualification activity for the sector. However, the interaction between businesses and skills providers is mixed and there is a perception that the overall offer does not fully meet the demands of industry. New Anglia's skills providers and universities should therefore be supported by TechEast, to develop closer collaboration to improve the responsiveness, accessibility and value of skills outcomes for local employers.

**OBJECTIVE - Create a new Digital Tech Skills Task Force, led by TechEast, to articulate and respond to the sector's skills needs. The Skills Task Force should aim to maximise the investment in skills development for the sector by leveraging resources from public and private investment, leading to the development of a world class digital skills offer for New Anglia's businesses and residents.**

### ACTIONS



TechEast to establish a **Skills Task Force** as a sub-committee to the main TechEast Board, with a recommended focus on establishing direct relationships with government on the new Industrial Strategy and the emerging national Digital Partnership. A key output from the Task Force should be a Digital Tech Skills Investment Strategy, including an assessment of relevant national skills investment opportunities **and identifying opportunities to collaborate with local partners such as universities and FE Colleges to develop compelling funding proposals.**



TechEast to lead the development of a **Digital Tech Skills Observatory**, which can support the Digital Tech Skills Task Force. The Observatory should be developed in partnership with national stakeholders, New Anglia's HEIs, FE, the lead independent training stakeholder and business partnership members. The Digital Tech Skills Observatory would establish the key skills demands and gaps in New Anglia's digital industry and develop mechanisms to regularly plan and review the dissemination of key information for skills providers, careers stakeholders and Digital Tech business networks.



TechEast should proactively **build collaborative relationships with HEIs and FE (and through to schools)** across New Anglia to ensure effective channels for communicating employer-led skills development and to ensure effective coordination of national investment opportunities.



**OBJECTIVE - Improve the standard and impact of technical digital skills through greater collaboration amongst employers to define and share skills solutions, working in partnership with New Anglia's skills institutions.**

## ACTIONS



New Anglia Skills Board and TechEast to work together to identify how the **reform of apprenticeships** - the Levy, Standards and Higher-Degree level pathways - **can stimulate an enhanced, more diverse and sustainable local Digital Tech skills supply**. TechEast to be supported in leading a **Skills Reform** action plan that can align the high demand occupational areas (as identified through the skills plan and ongoing role of the recommended Skills Observatory) with updated skills standards and clear vocational pathways.



Prepare a **Post-16 Digital Tech Skills Prospectus** in consultation with the New Anglia FE group and the New Anglia independent training group. Ensure the Prospectus supports key high-impact Digital Tech occupational skill requirements and the general development of digital skills across the New Anglia economy. The prospectus could provide 'one-stop shop' access to the high quality courses available to prospective industry entrants and existing workers seeking professional development. It will provide an invaluable resource for employers, schools, workers, young people, and parents.



## Priority 1 : Local Employer Skills Leadership : Implementation Plan

How we stand	Action (Short / Medium term)	Align	Outputs	Added Value	Goal
High performing sector with scope to grow	<b>Establishment of a Digital Tech Skills Taskforce (DTST) as sub group of Tech East Board</b>	NASB	Taskforce established, with clear brief and representative engagement of business, education and other stakeholders	A new cohesive, partnership skills voice for the Digital Tech sector, which can engage with national strategic opportunities for investment	New partnership articulating and responding to employer skills needs taking opportunities for New Anglia residents into full account
Two nationally significant sector clusters	Establishment of a Digital Skills Observatory remit for DTST	NASB			
Lack of clear employer leadership in local sector skills	<b>Ensure effective representation on DTST (HEIs/FE/Schools/Other stakeholders)</b>	NASM			
Lack of connectivity with Schools and Further Education					
TechEast acknowledged as key Digital Tech employer sector body	Lead on joint review / development of sector bespoke skills provision; exploring potential for a Digital Tech prospectus that reaches out beyond the two identified clusters to encompass businesses across New Anglia including those for whom Digital Tech is a key growth enabler e.g. Advanced Manufacturing	NASB			
HEIs of national renown for this sector					

Key: NASB: New Anglia Skills Board, NASM: New Anglia Skills Manifesto



---

## Priority 2 : New and Broader Talent Pipelines

---

### Growing Digital Tech Competitiveness

The skills plan consultation has highlighted a heavy **and increasing** reliance on graduate skills, with a particular target of graduates with approximately two years' post-graduation experience. There is some evidence of employers engaging with interns and work experience that leads to permanent employment, but overall the talent pipeline for the sector is limited. **Apprenticeship provision today plays only a minor role in Digital Tech recruitment and upskilling strategies, with numbers being maintained, but not increasing despite a high public profile and the introduction of a Levy.**

There are skills shortages in higher technical and management skills and alternative pathways need to be created to establish new pipelines of experienced graduate-level talent, for example through Higher and Degree Apprenticeships, to expand the current talent pool and build on the traditional graduate route. There is also some evidence nationally of a gender imbalance in some Digital Tech occupations. The importance of stimulating effective career choice for entry into the sector through schools is significant, given the replacement and growth demands identified in this analysis.

**OBJECTIVE - To raise the overall profile of the Digital Tech sector across New Anglia and establish an overarching Digital Talent Attraction Strategy to attract fresh talent and respond to the projected high skills growth forecast for the sector.**

### ACTIONS



Develop a **shared portal** to promote the New Anglia Digital Tech sector, its opportunities/vacancies, challenge stereotypes and inspire career entrants. Ensure place-marketing for New Anglia has a specific focus on the Digital Tech sector, its unique infrastructure and the careers/skills opportunities it offers.



Assess the feasibility of implementing a **shared skills service** for coordinating the delivery of apprenticeship and internship/work experience activities based on occupationally critical areas identified by the Digital Skills Task Force (including jobs brokerage and apprenticeship training agency type services). The shared skills service would focus on the high impact roles that will drive growth and innovation overall for the sector.



Engage with national developments aimed at creating a new **Digital Partnership** to raise the profile of New Anglia Digital Tech jobs with older, skilled, talent from other parts of the UK and build on local and regional activity, such as the *East* prospectus;

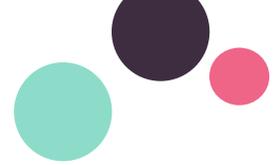


**OBJECTIVE - To improve the aspiration of younger people to access careers within the Digital Tech sector across New Anglia and increase their employability.**

## ACTION



Build **connectivity with FE and Schools** to increase the number of 16-18 year old career entrants, with a focus on the emerging strategy for developing technical and coding skills within classrooms. Engage with the Careers Enterprise Company via its devolved LEP-wide activities to ensure coordinated, employer-sponsored, Digital Enterprise initiatives are effectively delivered across secondary and further education. Explore the potential to build on work already being undertaken such as the local [icanbea...](#) platform.



## Priority 2 : New and Broader Talent Pipelines : Implementation Plan

How we stand	Action (Short / Medium term)	Align	Outputs	Added Value	Goal
Heavy reliance on new and recent graduate recruitment	<b>Survey of the TechEast network</b>	NASM	Further quantitative research on the skills sets that matter to employers	Evidence will move from being anecdotal to directional	Sector has access to sufficient, diverse talent to fulfil employer business growth aspirations; and raising the bar to attract talent from elsewhere as well as providing exciting opportunities for residents
	Establish a shared portal that can build on existing activity, which promotes the Digital Tech sector, its opportunities / vacancies, challenging stereotypes and inspires potential career entrants		Coordinated, inspiring sector careers and skills showcase for employers, current and future workers, education, careers, other stakeholders	Increase in numbers of local people inspired by a career / job in New Anglia Digital Tech and the diversity of that talent	
Skills shortages in higher technical and management skills	Develop and optimise undergraduate connections with the New Anglia Digital Tech sector e.g. placements and innovative curriculum developments such as Computing Modules for non-Digital Tech courses	NASD	Significant increase in number and diversity of local Under/Graduate programmes and support	Undergraduates inspired by local exciting Digital Tech opportunities	
Lack of alternative supply to graduate entrants	Digital Tech Graduate Internship programmes	A		Increased depth and breadth of local graduate talent pool	
Evidence of age and gender stereotyping in some Digital Tech occupations	Extended Apprenticeship provision especially new pathways through to Degree/Post-graduate Level in areas such as Big Data Analytics	I	Significant increase in availability and take-up of Digital Tech Apprenticeships from Level 3 through to Level 7	New talent pipelines established	
Slow progress with new apprenticeship models	Attraction of older skilled people from other parts of UK	EL	Innovative employer-led careers and job campaigns including demystification of apprenticeships to attract widest talent pool	Broader source of applicants for hard to fill vacancies	
	<b>Build connectivity with FE and Schools for 18-year-old career entrants</b>			New Anglia Digital Tech opportunities understood / valued locally and beyond	

Key: NASB: New Anglia Skills Board, NASM: New Anglia Skills Manifesto, NASD: New Anglia Skills Deal, A: Apprenticeships, I: icanbea..., EL: Emerging Leaders Programme

---

## Priority 3 : In-career Learning and Development

---

### Growing a Digital Economy

Feedback from stakeholders has highlighted that skills needs for the sector are often too specialised and contemporary for the traditional skills funding system, and for the future there needs to be a greater alignment between the skills offer and local skills needs. There are excellent examples of how Digital Tech competency planning and development is being delivered by New Anglia's HEIs, and this provides the opportunity to align undergraduate, postgraduate and professional competency development.

In addition, employers have emphasised the importance of developing competent and enterprising employees that are adaptable and able to apply solutions in a rapidly changing industry. Larger employers and SMEs both value in-career learning and continuing professional development as a route to improving productivity in their workforce and to demonstrate value and attract prospective new talent. There are excellent examples of such initiatives, many of which have the potential to provide shared learning from existing resources, where employers are prepared to collaborate for mutual benefit.

There is little evidence, however, of effective coordination of in-career development across the area. The data analysis shows that businesses are widely spread across the New Anglia, despite the spatial clusters in Norwich and Ipswich, which raises issues about accessibility. A joint approach towards in-career development, bespoke for Digital Tech and promoted broadly, could help increase talent and retain workers. **Such a strategy can play a pivotal role in driving the growth of the overall digital economy across New Anglia's other key sectors.**

**OBJECTIVE - Develop an overarching In-Career Development Framework for the Digital Tech sector, which incorporates employer-defined key competencies to support pre-employment and builds on existing industry best practice CPD systems.**

### ACTIONS



Encourage a New Anglia Digital Tech culture of continuous improvement for in-career development, incorporating local informal learning, professional assessment, CPD and with specialisms in each cluster designed to benefit business across New Anglia



Explore opportunities for sharing learning and models in the untapped potential of current in-career development by employers



Explore the potential for shared public/private investment in a nationally renowned professional development infrastructure, which could include leading initiatives incorporating open-source and other industry sponsored learning resources e.g. MOOCs



Establish connectivity between the local Digital Tech sector and the wider New Anglia and SME community through common development needs



### Priority 3 : In-career Learning and Development : Implementation Plan

How we stand	Action (Short / Medium term)	Align	Outputs	Added Value	Goal
Skills needs often too specialist and contemporary for traditional funded skills system	Establish a New Anglia Digital Tech workplace learning infrastructure for in-career development including informal learning, CPD and professional assessment with specialisms in each cluster to benefit businesses across New Anglia. Explore opportunities for collaboration between larger employers and the broader business community	NASD	Substantial increase in locally-designed, led and delivered CPD and assessment opportunities	Locally-led opportunities increasing accessibility, local relevance, reducing travel time and contributing to a developing reputation as a 'place' for learning and professional development	A dynamic, local learning and enterprise development environment that is part of the New Anglia Digital Offer facilitating high quality continuing technical and general professional development for both clusters; Digital Tech businesses across New Anglia and other non-specialist businesses seeking digital development support
Technical skills assessment and support not locally available					
Businesses are spread evenly across New Anglia despite workforce concentrations in each cluster					
Opportunities to support up-skilling through Apprenticeship Levy / higher and degree apprenticeships	Explore the potential for shared public / private investment in a nationally renowned professional development infrastructure	NASD	Consider a co-investment financing model to attract funding investment which may include Apprenticeship Levy funds	Significant co-investment from private and public sectors	
	<b>Establish the connectivity between local Digital Tech sector expertise (perhaps through the globally-positioned largest businesses initially) and the needs of the wider economy for digital development support</b>	NASD	Pilot of a skills offer targeted at non-Digital Tech sector SMEs seeking business growth through digital development	New, local opportunities for local businesses to develop their digital capacity locally, perhaps through a digital competency approach	

Key: NASB: New Anglia Skills Board, NASM: New Anglia Skills Manifesto, NASD: New Anglia Skills Deal

# appendix A

---

## Methodology

---

The Digital Tech sector skills plan has been developed to support the New Anglia Local Enterprise Partnership and its partners in identifying the role that skills can play in developing a competitive and sustainable local economy.

Underpinning the skills plan is an assessment of how skills can help promote economic development for New Anglia and raise competitive advantage for the Digital Tech sector. Therefore, the context for the plan involves understanding how the sector is structured - its spatial and industrial clustering and how its relevant markets are developing.

### Defining skills

- The scope of the plan is on the existing supply of skills within New Anglia and how the supply meets the needs of Digital Tech employers, including the supply of vocational and academic qualifications across secondary, further and higher education and of independently-provided technical and non-technical training.
- Skills are defined in the context of employer demands for access to a competent labour supply. The plan therefore identifies the importance of employability skills, such as aptitude and capability, for enterprises and how these demands can be delivered so that businesses within the sector have an adaptive and competitive workforce.
- In considering skills across the digital economy, the plan recognises the increasing importance played by digitally-capable roles in other traditional employment sectors of importance to New Anglia, such as public services, finance and tourism.
- The skills plan addresses strategic structural skills issues, such that may increase:
  - the effectiveness of those providing skills services;
  - the investment made nationally in building a world-class skills infrastructure;
  - the leadership that employers can develop by articulating and taking ownership of their future skills needs.

### Evidence and intelligence

Throughout, the plan aims to be **evidence-based** and to reflect on existing policy and research. The research methodology involves qualitative analysis, through **employer consultation** focus groups and semi-structured **stakeholder interviews**, together with a detailed quantitative assessment of **labour market and economic data**, contained within a separate Data Pack.

The **Data Pack** has been structured to complement the main stages of defining and evidencing the priorities for the skills plan. It builds on existing intelligence previously commissioned by the New Anglia Local Enterprise Partnership and nationally defined frameworks including the TechNation methodology and the Department for Culture, Media and Sport.

Previous research has included a review of Digital Tech sub-sectors<sup>4</sup>, namely Gaming, Animation and Digital Creative, Smart Energy and Big Data, as well as overall sector mapping work conducted and developed through a Task and Finish Group development plan led by the IP Network and more recently TechEast.

Building on this previous work, the development of the skills plan has involved several key stages:

- An inception meeting with TechEast representatives, New Anglia LEP, Norfolk and Suffolk County Councils and business representatives. Followed with ongoing planning engagement with the TechEast Board and its representatives
- Two task and finish group meetings with business representatives based in Ipswich and Norfolk
- Semi-structured interviews with Further Education, Higher Education and the representative of New Anglia's Independent Learning Provider consortium
- A skills strategy and funding review based on national policy developments, key reports and New Anglia Local Enterprise Partnership's strategic skills activity
- Crosscutting discussions with other stakeholders including rural economy groups, Local Authority Economic Development officers and current ESF skills providers
- Review/approval gateways with the TechEast and New Anglia LEP Skills Boards

---

<sup>4</sup> Mapping the ICT Sector in New Anglia (2015), Regeneris

# appendix B

---

## Employer Consultation

---

An inception meeting and two employer consultation focus groups were held to capture the main views from a range of employers. The focus groups were invited to assess and feedback on the three themes established for the research, in a semi-structured format which also enabled broader employer input.

- **Skills gaps and barriers**
- **Perception of skills supply**
- **Employer leadership**

### Skills Gaps & Barriers

SMEs within the industry often feel they lack the resources to engage with apprenticeships and/or take on Level 3-equivalent qualified staff and develop them to a degree-equivalent level

The migration of graduates out of the area is causing an overreliance on contractors, who are expensive and transitory

Software engineering is increasingly overlooked as a profession, with cloud-based development and transitioning, multiplication software design and AWS capability increasingly suffering from a shortage in skills supply

Software application development for mobile solutions are particularly important for the digital creative industry

Technical design skills with a focus on digital capability (not graphic design) are in high demand for SMEs and larger employers in other sectors reliant on digital channels to drive their product/service offering

Concerns that the quality of skills supply and the migration of talent was wrapped up in a larger issue of whether New Anglia is a desired destination and has a sense of place, and hence whether place-marketing should do more to highlight the depth and quality of careers and lifestyle for the area

### Perception of skills supply

Demand for skills within the industry is predominantly at the graduate +2 years' experience level. There is a degree of reticence to recruit new graduates, particularly for SMEs, due to the concerns of losing staff at the 2-year stage to other employers after investing in them

Interns and work experience placements are highly valued, particularly during the summer and have become an effective source of return to employment once their qualifications are in place in a *try before you buy* approach

Newly graduated IT software engineers often lack key competencies, particularly in applying solutions within an enterprise environment and being able to flexibly transition to other coding languages to achieve new business development goals

The SMEs interviewed registered low levels of engagement with both the FE and independent training sectors, with a lack of understanding of the training offer, coupled with concerns as to the complexity of engaging

Employers that engage in assessment and work-based training support often rely upon London-based providers, believing the training was a better fit for industry needs.

Engagement with schools was high priority but employers find it complex and costly. Employer events across the area, such as Digital City, have developed interaction with Universities but not delivered the same level of engagement with local schools. Employers felt that the start of the talent pipeline must come from better school development of Digital Tech curriculum and employer engagement

## Employer leadership

Employers felt that greater engagement with HEIs was needed to bring current and future industry trends into the classroom, if the quality and relevancy of the graduate offer was to be developed

Those employers clustered around the two most significant spatial concentrations for the industry – in Norwich and Ipswich's Adastral Park - should work together to amplify the significance of the sector and develop shared skills plans. In turn employers felt this would help Digital Tech development spill over into surrounding areas

Existing networks were highly valued as effective channels of support for the sector and SMEs would welcome more engagement with them, seeing them as a route to greater understanding and integration with HE and FE

Skills should become a more visible element of supply chain interaction with the larger employers in the area, with resources being shared and activities co-implemented where they will drive benefit to the primary employer and their suppliers

There is some evidence of using open source competency frameworks to map and develop in-work employability skills (SFIA) for staff, which employers would be keen to share and develop in partnership with education establishments in pursuit of a consistent approach towards key competency and workforce development

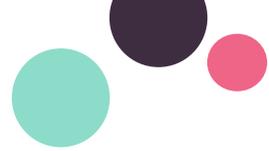


## Education Consultation

Consultation was held in the form of semi-structured interviews with HE, FE and independent training providers. This took place via the lead Principal for the FE consortium, via Norwich University of the Arts and University of East Anglia, and with the group lead for the independent training consortium for New Anglia. Questions were grouped around several key themes:

- **Existing Digital Tech Skills Offer**
- **Current Engagement with Digital Tech Employers**
- **Enhancing the Digital Tech Skills Offer**

Theme	HEI	FE	Independent Providers
Existing Digital Tech Skills Offer	Strong digital creative presence across Norwich with internationally-recognised lead offers on digital design, digital advertising, AI, digital filmmaking and animation, computing, environmental science, life sciences and engineering		
	Business schools proactively develop ongoing business engagement, including intern placements, employability skills development and business support services	FE seeking to be proactive, for example, local initiatives across New Anglia developing Digital Tech specific provision in diverse areas such as electronic/telecommunication and gaming	Focus more on generic business training – such as business administration/ customer service training - than sector specific activity
	Developing digital capability across other faculties, recognising the digital economy transition that many of the larger employers are making		



Theme	HEI	FE	Independent Providers
<p><b>Current Engagement with Digital Tech Employers</b></p>	<p>Emerging national lead on UX design and gaming engine development, with involvement in apprenticeship standard definitions for UX</p> <p>Existing involvement of employers in lecturing and consultation partners on employability/key competency development within curricula</p> <p>Recognise SMEs struggle with resources to take on apprentices</p> <p>A range of annual events and competitions to develop the partnership with employers and foster an ongoing digital education/industry infra-structure</p>	<p>FE needs to be better connected to the sector strategically to improve the skills response</p> <p>Some ongoing work experience placements with Digital Tech employers, but recognise this needs better coordination and development</p> <p>FE provides a natural bridge to engage schools (both primary and secondary) in engagement of young people in tech skills and careers</p>	<p>Some sector specific delivery in Norwich in IT, digital marketing, web design, technical apprenticeships and social media up to Level 4</p>
<p><b>Enhancing the Digital Tech Skills Offer</b></p>	<p>Emerging plans to enhance the accessibility of degree apprenticeship delivery through closer coordination with SMEs</p> <p>There are a number of locally-led innovative curriculum and work-based learning programmes in the pipeline</p> <p>Companies in Digital Tech need to collaborate more to communicate career potential for sector jobs to increase market attraction and to drive the skills offer</p> <p>STEM based engagement with schools does not enthuse young people enough to seek a career in STEM subjects, with no single strategy for engaging schools on the Digital Tech sector</p>	<p>FE group keen to develop a joint Digital Tech prospectus with a coordinated offer to industry, in response to current and future skills demands</p> <p>FE increasingly interested in supporting business start-up activity with their students and would welcome more partnership development with HEIs and business support organisations to create a more seamless offer</p> <p>Recognise the importance of key competency development and would be keen to contribute to the development of a regulated employability framework recognised by schools, FE, HE, independent training providers and employers</p> <p>FE as a group consortium is a key asset for New Anglia and would welcome closer interaction with the LEP and the Skills Board on place-marketing and the overall skills offer</p>	<p>The value of vocational training and apprenticeships needs to be raised, starting with schools and with greater involvement of employers and HEIs</p> <p>Reform of apprenticeships from frameworks to standards may risk the transferability of current vocational skills across sectors</p> <p>Larger employers should work more closely with sector SMEs to share skills development</p>

# appendix C

---

## Digital Tech Sector Evidence Base

---

The following text provides an overview of the Digital Tech Data Pack produced in conjunction with this sector plan.

The Data Pack contains a full breakdown of the major economic, skills and employment factors for the Digital Tech Sector. In particular it builds a complete picture of historic patterns of labour market activity, alongside the size and value of the sector contrasted with a series of economic forecasts. The key elements of the data analysis are presented below- grouped in to three areas- the Value, Performance and Future Forecast- of the Digital Tech sector, with the full referencing captured in the data pack itself.

### Sector Value

As highlighted in the 2016 TechNation Report and summarised in this plan - New Anglia features two nationally significant Digital Tech clusters- at Norwich and Ipswich. The activity focused on digital creative industry and IT and telecommunications, are recognised as the key drivers for employment share, business location, supply chain development and jobs growth. The Location Quotient, which measures the relative concentration of employment compared to national levels, indicates that Suffolk Coastal with a score of 1.6, is the most deeply concentrated geographical location for the sector overall.

The Digital Tech sector contributes approximately 4% to the New Anglia LEP area's overall GVA and has median average earnings that is significantly higher than the average- at £39,130, which is a rate that has increased since 2014- from £37,065. The sectors occupational breakdown highlights a strong representation of Director, Management and other professional roles, with approximately a third of all roles falling within this area. Both the Burning Glass (job marketing data) and Working Futures (labour market modelling analysis) identify a significant demand for higher skilled workers, with around 50% of all jobs advertising activity since 2012 requiring degree level and above qualification achievement.

### Current Sector Performance

The data analysis evidences that the Digital Tech sector for New Anglia has increased in overall size, by employment share- since 2010, with an overall increase of 9%- to 16,600 employees. Both Norwich (3,100) and Suffolk Coastal (3,700) represent the largest spatial concentrations of employment for the area. Comparatively, the business density of the sector is lower than Greater Cambridge and the South East LEP and the Tech Corridor running through these areas- represents both challenges and opportunities for New Anglia.

A greater proportion of overall workers, within the sector (most significantly those that possess higher skills, equivalent to NVQ4 and above), travel to work outside of New Anglia- as opposed to the same comparator areas. In fact, the analysis has identified that around 4,600 of higher skilled



workers will commute daily outside of the area- with Cambridge, Cambridgeshire, Essex and London featuring as the main destinations.

Burning Glass job marketing data identifies there are key demands for competent jobseekers within marketing, sales and customer service type roles. Furthermore, that vacancies are often raised by large outsourced service providers (SERCO) and a crosscutting range of employers from traditionally non-digital areas (National Trust, Virgin Money etc.) demonstrating the importance of digital skills as enabling factors for the broader economy. This represents a challenging 'skills response' to the demands of the sector, with an employer market that requires technically competent, professional and commercially capable employees, which may involve working for primary digital enterprises linked to IT software engineering, telecommunications and digital design but also across finance, manufacturing, public services, tourism and other key sectors.

## Future Sector Forecast

The Strategic Economic Plan (SEP) for the New Anglia LEP includes a key ambition for increasing the overall level of employment and growth of businesses, for the area. Defined as a high impact sector, Digital Tech needs to play a key role of stimulating competitive advantage for the New Anglia economy. Given the market demands already highlighted- skills plays a fundamental role in developing a productive and competitive digital industry. The patterns of commuting and talent 'migration' out of area overall demonstrates a main challenge for the development of a skilled local labour supply, which is accessible to local employers.

The trends highlighted through the analysis of Skills Funding Agency data (SFA Data Cube) within the data pack, shows a relatively flat growth in apprenticeship starts since 2011. The apprenticeship frameworks covering IT Application Specialists qualifications have shown a significant reduction since 2011, reducing from 155 to 60 starts for the 2014/15 academic year. The apprenticeships covered within this SFA framework are mainly non-technical in role- data input, CRM and website content management. In contrast, the number of apprenticeship starts in IT software and professional roles has increased. In addition, social media and digital marketing apprenticeship starts have also become part of mainstream apprenticeship delivery since 2011. This demonstrates a shift in apprenticeship delivery that is more in line with the industry mix locally for the Digital Tech sector and in line with the occupational profiles analysed through Burning Glass job marketing data.

Working Futures have modelled the forecast patterns of employment for the sector until 2024 (for the purposes of the data pack analysis the Digital Tech definition has been approximated to the Working Futures Media and IT sectors). The performance forecast predicts a fairly flat employment projection overall but with an increase in the number of professional, sales/customers service roles and a decrease in administration. This correlates with the Burning Glass existing job market behaviour and also with the shift in apprenticeship starts. Although the employment forecast appears disappointing at a high level, there are several key issues that need to be considered:

- there is a predicted replacement demand of around 4,000 workers between 2017 and 2024 based mainly on estimated retirement levels, particularly within engineering and technology and senior professional roles;
- there is predicted expansion demand (i.e. jobs growth) in the same occupational areas and also predicted across digital roles within public service organisations; and



- the demand in higher skills (degree level and above) is set to increase, with the greatest skills demand for the replacement share also falling down to higher qualified roles;

The Working Futures forecasting methodology harnesses a range of national labour forecasting and economic performance sources alongside the national census. It does not explicitly take into account measures from planned activity, such as the economic development interventions developed by Growth Deals etc. or other sector based intervention.

By grouping the data analysis for the Digital Tech sector into themes exploring the sector's value, its current performance and existing forecast, several key conclusions can be made that allows a relevant context for skills prioritisation to be developed:

- The job 'structure' for the sector in New Anglia is becoming more high skilled, more 'IT technical' and professional overall, creating therefore an even greater demand in degree and above qualifications;
- The demand for competencies across marketing and sales within a Digital Tech environment is also significant and set to increase;
- There is an expanding digital economy across New Anglia- with marketing, finance, public services and tourism- all actively recruiting in digital roles, which is set to accelerate when replacement demands are forecasted. Therefore, the demand for digital workers with digital skills, which are transferable across sectors- will increase;
- The strong clustering that exists spatially and the growing significance of a number of key industries for the sector, demonstrates that a proportion of employers are able to access higher performing workers, from a skilled labour market pool. Talent/worker migration and residency/work placed wage rate data however highlights there are clear weaknesses in the access to higher skilled workers locally. In short, New Anglia loses a disproportionate amount of skilled workers to other areas impacting on the overall potential growth of the sector locally.



REALISING  
COMPETITIVE  
ADVANTAGE, LOCAL  
OPPORTUNITIES AND  
ECONOMIC GROWTH  
THROUGH BEST  
SKILLS INVESTMENT  
FOR DIGITAL TECH IN  
NEW ANGLIA

The SkillsReach New Anglia project team comprised:

- Roy Harper, Managing Director
- Martin & Lynn Collison, New Anglia-based Rural / Economy specialists. Sector Leads – Agri Food Tech; Life Sciences; Ports and Logistics; and Tourism/Culture
- David Kirkham, Sector Lead – Digital Tech; Energy; Advanced Manufacturing and Engineering; Financial and Insurance Services
- Adam Peacock, Data Analyst – Project Data Lead



BG Futures, Bishop Grosseteste University Campus, Longdales Road, Lincoln, LN1 3DY

Tel: 07721 499494

[www.skillsreach.co.uk](http://www.skillsreach.co.uk)