Manchester City Council
Report for Resolution

Report to: Economy Scrutiny Committee – 22 October 2014

Subject: Digital Skills update

Report of: John Edwards – Director of Skills and Education

Summary

This report responds to the request for an update on the progress being made on digital skills since the Committee last considered it in March 2014, including, code clubs, education, post 16, employer provision; as well as an update on Sharp Futures.

Recommendations

1.   To note the report and progress made to date.

Wards Affected:

All

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Background documents (available for public inspection):

The following documents disclose important facts on which the report is based and have been relied upon in preparing the report. Copies of the background documents are available up to 4 years after the date of the meeting. If you would like a copy please contact one of the contact officers above.

1.0   Introduction

1.1   The purpose of this paper is to update the Economy Scrutiny Committee on progress on digital skills in the city across education, business and the community sector and outline next steps.

1.2   There are three core elements to the Digital Skills strategy for the city. These are: businesses, community & informal learning and schools and education. There has been some substantial progress with each element, which is summarised in the relevant sections below however, we need to continue to focus on this area ensure that there is ongoing investment and development of digital education & skills supporting growth in the city.

2.0   Background

2.1   Manchester City Council's Digital City Strategy outlines the city's commitment to be a leading digital city by 2020 and digital skills at, all levels and across all sectors, are a core requirement for a digital city.

2.2   The creative and digital industries in Greater Manchester forecast GVA growth of over 70% by 2025 and employment by 16%[1]. The supply of skills, however, is one of the obstacles affecting growth in the industry, with around a third of businesses (28%) feeling that the supply of skills isn't sufficient or not appropriately aligned with industry demand. In 2011, 5% of jobs within the creative digital sector were unfilled; the highest of any sector. Across the entire economy more than a fifth of skills shortage vacancies (21%) were lacking advanced IT or software skills[2], reflecting the importance of digital skills across all sectors.

2.3   Despite these challenges the sector has proved to be resilient and continued to grow its employment throughout the recession. There are 7,500-8,000 digital and creative businesses, employing over 45,000 people within Greater Manchester. However, it is important to note that at least another 45,000 are employed in digital roles outside the sector. The businesses generate £2bn in economic output, making Greater Manchester home to the largest digital and creative cluster outside London.

2.4   In 2013, to address the skills gap a digital skills strategic framework was developed for the city. Whilst not providing detailed solutions, the framework defined the challenge, the industry needs and the skills gap, proposing 3 strategic elements for skills:

- Education
- Business
- Community and Informal education

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[1] From the Greater Manchester Forecasting Model (GMFM) produced by Oxford Economics on behalf of GM.
[2] From the Digital & creative sector in Greater Manchester - overview of skills issues. New Economy

2.5   Each year, Manchester Digital holds a Digital Skills Festival and Talent Day and conducts an audit of their members. The 2014 audit showed that over the past year developers (61%) were the most difficult role to fill, followed by project managers (17%) and sales (11%), with developers predicted to be the most in demand skill in the next two years. This is having an impact on salaries, with members reporting a salary increase for developers of 36%[3].

3.0   Digital skills pathways - Education

3.1   Young people need STEM qualifications and skills at a high level to access many of the career opportunities in the digital sector. The latest skills analysis for the city shows that science and maths are the most popular broad academic subject areas at level 3, for 16 to 18 year olds and that creative and digital at level 3 are popular vocational options, often a mix of BTEC and A/AS levels. In addition, young people need to understand what the opportunities in the sector are and have some exposure to them. One of the ways is through Sharp Futures Creative Digital experience days, which has provided that experience for over 330 young people from 20 high schools in the city.

3.2   There are good examples of a quality digital education offer across education settings with many schools in the city providing an enriched digital curriculum along with planned developments to add to the offer. One of these, is the Manchester Enterprise Academy's plan to create a digital campus, adjacent to its school site. This would provide a range of informal learning opportunities for children and families, digital education pre & post-16 and apprenticeships. There is interest from the sector, potential investors and partners. The development of the digital campus would create a hub for digital education in Wythenshawe.

3.3   The introduction of coding to the primary school curriculum and computer science as a core subject in secondary schools will further strengthen the digital education offer. However, to create the step-change required, there is a need to go further. The Manchester School Alliance has developed its initial thinking around five strands for a digital curriculum: immersive, technical, stem, creative & entrepreneurial. The strands can be summarised as follows:

- **The Immersive Strand** – the broad digital skills curriculum that all children in Manchester are entitled to. This recognises that not all students will want to be, nor can be coding experts but that all young people will need to be digitally savvy and confident. This strand might simply be building a curriculum which includes elements of the 4 strands below.
- **The Technical Strand** – this focuses on young people who are educated in computer science or similar pathways and have a predilection for higher level computing skills that could take them to academic Level 3 digital course and onto either university/higher level apprenticeships in the programming sphere.

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[3] From Manchester Digital Skills Festival 2014 – Skills Audit report.

- **The STEM Strand** – whether it is alongside higher level, 'technical' digital skills, it is essential that Manchester's children excel in Science, Technology, Engineering and Maths as high achievement in these subjects is a vital enabler for surviving in a digital economy.
- **The Creative Strand** – Manchester has an impressive history and reputation in leading in creative industries, these skills are still much sought after and important and can now be allied to broader digital skills which will allow young people to develop and sell creative product far more easily and independently.
- **The Entrepreneurial Strand** – the need for Manchester's young people to be resilient, have grit and to be able to independently motivate themselves to seek out opportunities and take control over their own economic futures. The 'start-up' mind-set will be increasingly important for economic survival.

3.4   Support is now being sought from the Manchester Schools' Alliance, teaching schools and those with responsibility for the digital curriculum offer in individual schools & colleges for leadership to create the system change needed to deliver the model. This will ensure that every Manchester child and young person has the opportunity to become digitally confident and that the pathways needed for those young people who wish to pursue either technical or academic routes into the digital & creative sector are there.

4.0   The Manchester College

4.1   The Manchester College (TMC) has a current and longstanding partnership delivering a range of curriculum in creative, digital and ICT. This includes provision of apprenticeships to BBC North at MediaCityUK, partnerships with Cisco, Oracle and Microsoft and recent partnerships with IPA members to pilot Creative Pioneers Apprenticeships in the North West. TMC also supports Playground Squad and Sharp Futures.

4.2   TMC undertook a thorough review to understand demand for digital skills and the variety of businesses with a digital skills requirement. The College brought together research, effectively using Labour Market Intelligence, blended with locally sourced data and intelligence. Key recommendation themes were tested with stakeholders in the city and within the college to bring recommendations to TMC's Board to enable them to help close the digital skills gap.

4.3   One of the recommendations is the creation of a centre for the development and delivery of qualifications for digital and media industries with the maximum amount of employer ownership and input to development. The centre will develop and support best practice in cross-sector digital skills including the developing needs in digital literacy and numeracy to enhance employability.

4.4   The following summarises the other recommendations, which are currently in progress:
- Merger of computing and creative curriculum

- Actively support/lead the development of a creative & digital skills Group Training Association (GTA) in partnership with key GM stakeholders, to offer bespoke training to the sector for both existing staff and new entrants, developing skills for both in demand and emerging technologies and skills
- Development of specialist capacity to drive forward digital literacy as part of employability, creative & entrepreneurial skills development across TMC
- Development of Manchester Centre of Excellence in Digital Skills including national centre for the collaborative development of Level 3/4 and above apprenticeships for the creative and digital industries.

5.0 MAES

5.1 MAES supports residents to develop ICT and digital skills, from those who are digitally excluded to those who need to improve their skill levels and qualifications to find work. Digital learning activities are offered in learning centres and community venues across the city.

5.2 The resident telephone survey results, received in February 2014, showed that around 15% of residents do not have access to the internet at home. This is a reduction of 5% from the 2011/12 survey. Whilst this is a positive reduction there is still access, as well as skill barriers, which can have an impact on residents' ability to look for work, access benefits and information about services and support. DWP reports barriers in relation to digital skills for some job-seekers who are speakers of other languages.

5.3 MAES has combined the management of the ICT/digital team and the Employability team to enable the Service to develop even more relevant and responsive programmes for unemployed residents whose lack of digital skills is a barrier to them finding and sustaining work.

5.4 In addition to its well-established city-wide Work Club offer, MAES has devised new activity to:
- offer specialist support to those unemployed residents who are speakers of other languages in areas of the city where there are high levels of need
- support job-seekers who have no ICT/digital skills at all and so cannot benefit fully from work club provision and other support until this barrier is overcome

5.5 MAES has continued to build on existing partnerships with Libraries, Surestart, registered providers and voluntary and community organisations. These activities ensure partnership programmes are accessible and capacity is built within organisations. To underpin this work, MAES:

- is actively involved with the Go-ON Manchester campaign in providing short taster training opportunities for potential digital champions and MAES

- delivers accredited Digital Mentor training and identifies appropriate placements to ensure that residents benefit from volunteers who can offer high quality peer support.

6.0   Business - digital apprenticeships and industry activity

6.1   Historically, the digital sector had a strong preference for graduates but over the last two years has increasingly looked to apprenticeships as a part of digital business talent development programmes. This has been demonstrated through a number of schemes where businesses have worked directly with training providers to develop a programme that responds to their specific needs.

6.2   The Greater Manchester Chamber secured an Employer Ownership of Skills (EOS) pilot in 2012. One of its priority sectors, for which it set up an Employer Skills Group, was creative digital. EOS funding has supported over 100 creative digital apprenticeships starts in the past 12 months and over 165 in total. This has opened a number of opportunities with a range of providers including new ones to the city such Playground Squad and Hyper Island. The Chamber is also funding Manchester Digital, the regional industry trade association, for 2 years to embed the EOS offer into their current membership. This will enable them to work more closely together and gain a greater understanding of the skills needs of the sector. Appendix one includes two short case studies of creative digital apprenticeships in the city.

6.3   Two examples of EOS supported activity are PlaygroundSquad and Hyper Island. Together with The Manchester College and MCC, the Chamber supported PlaygroundSquad, a leading education institution for digital games development in Sweden to set up a Manchester base in The Sharp Project. The model was adapted from the Swedish Government funded higher education model to an apprenticeship model, building on PlaygroundSquad's links to the games industry and access to the latest technology and developments. At the end of the apprenticeship, students are invited to apply for internships at selected studios. From previous cohorts, over 85% of the students have secured jobs in the gaming industry within 6 months of graduation. PlaygroundSquad's target is to employ 60 apprentices in total. To date they have 52 apprentices, 35% of whom are Manchester residents.

6.4   The City Council alongside other 9 local digital businesses such as Degree 53, Magnetic North, Late Rooms, Amaze and CodeComputerlove have worked with Hyper Island to develop a Higher Level (level 4) Digital Apprenticeship programme. Fifteen apprentices started the fifteen-month programme in July. The programme in Interactive Design and Development mixes mentoring by the employers with time spent at Hyper Island. The City Council has recruited 3 apprentices through this programme; an interactive user experience designer and two junior developers. The apprentices are supporting the City Council's programme of digital transformation and reform. Hyper Island is an industry leading training provider. The programme is due to run again in September 2015.

6.5   SharpFutures

6.5.1 SharpFutures is a creative digital agency that supports young people into employment, to seed, nurture and grow talent and skills for the creative digital sector. They have been supported by an ERF grant to develop a Talent Development Programme with 5 apprentices in its first year. The programme has also:

- Engaged and educated over 300 students about the sector
- Over 80 volunteers have signed up to the SharpFutures volunteer programme and 3 have gone on to secure employment with SharpFutures or other Sharp Project based businesses
- Explored the sustainability of a work experience delivery for local schools and colleges
- Supported people wishing to enter into self employment within the Creative Digital Sector
- Delivered 10 sector awareness sessions to local partners for example; local schools; the Connexions Service and Jobcentre Plus staff.

6.5.2 The Manchester incentive offer has supported the recruitment of a further 9 apprentices at SharpFutures in 2014/15.   The Sharp Project has expanded and developed new production facilities at Space, Wenlock Way, West Gorton, which is providing new employment and training opportunities.

7.0   Community and informal education

7.1.1 Code Clubs

7.1.2 In March 2013, Economy Scrutiny accepted the challenge set by the person leading the development of Code Clubs to have a Code Club in 25% of all primary schools in the city. Today there are over 30 clubs in primary schools, supported by over 60 volunteers.

7.1.3 Based on the success of the approach to Code Clubs, a formal Code Club partnership was agreed and Code Clubs have recently appointed a regional coordinator. The partners include MCC, The Manchester Schools Alliance, Manchester Digital, Manchester Metropolitan University and local volunteers such as Steven Flower. Businesses such UK Fast, CTI Digital and Swinton have been incredibly supportive of the partnership.

7.1.4 The partnership has brought a number of valuable opportunities to the city. Firstly, Code Clubs, sponsored by Samsung, have chosen the Factory Youth Zone (FYZ) as one of five Code Club Regional Hubs across the UK. The FYZ have been given kit by Samsung and will hold a regular Code Club, host training sessions and other Code Club events. FYZ has been working with UK Fast and ANS to secure volunteers and the launch is due to take place in October.

7.1.5 A further opportunity brought to Manchester as a result of the partnership is the offer from Google to fund Code Club Pro training for teachers in the city.

Code Club Pro, part of the Code Club family, is a not for profit organisation offering computing training and resources for teachers of the computing curriculum. Google are national sponsors and supporters of Code Club and wish to support activity in Manchester. Google have offered to fund 50% of the city's primary schools, with approximately 15 teachers per school, which means that over 1000 teachers will be trained by Code Club Pro. Primary schools are welcome to invite appropriate teachers from high schools to the training to ensure consistency of learning opportunities in Years 7 and 8. Google have also offered to fund training for over 60 volunteers to further support the Code Club model.

7.1.6   Further recruitment activity for both volunteers and schools continues. On 23 October there is a match-making event for Manchester Metropolitan University students and primary schools in Longsight, Ardwick, Rusholme, Moss Side and Hulme, hosted by UKFast. Manchester University are in the process of adding Code Club to their Manchester Leadership Programme as an accredited volunteer opportunity for its students. Finally, potential volunteers are also being sought from a variety of events and opportunities in the city, from STEM networking to direct recruitment with businesses such as Autotrader, with its large group of young developers, and the graduate intake from CodeComputerLove.

7.2   Coder Dojo

7.2.1   Manchester Coder Dojo has established a vibrant and engaged community of young people, parents/carers and volunteers, that meet monthly to hack, code, make and play with technology. Manchester Coder Dojo is a part of the international network of Coder Dojo franchises. Many of the volunteers also contribute to national initiatives for informal learning such as Young Rewired State and Code Club.

7.2.2   Manchester's Coder Dojo started in Madlabs in December 2012 with around 50 people. It soon grew out of their space and now meets at The Sharp Project, with around 150 people attending each event. The sessions are entirely free and volunteer coordinated, led by Steven Flower. Tickets – distributed on a 'first come-first served' basis and go within hours of being offered on line.

7.2.3   Given the success of the model, Steven and his team of volunteers are now working with three Youth Hubs across the city including the Powerhouse, FYZ and Lifestyle Centre to develop the youth digital offer and create a replicable model across the city. This proposal includes smaller more regular coding club provision that aim to complement and progress the local primary school's coding activities.

7.2.4   To support the development of this offer, the City Council is supporting a delegation of volunteers from Coder Dojo, FYZ and the Woodhouse Park Lifestyle centre to attend and participate in the Mozilla Festival in October 2014. The delegation will explore the Mozilla Hive model with a view to developing an options appraisal for a similar approach in Manchester.

7.2.5 Mozilla Hive Learning Networks are federations of educators that engage young people around innovation, digital media, and web-making. A Hive community will unite libraries, museums, schools, after school programmes, non-profit start-ups, artists, technologists and others to re-imagine education in the information age. This model also has the potential to prepare young people to thrive in school, work, and civic life by fostering digital literacy skills that empowering them to discover and shape the city and beyond.

7.3 **Digital Teapot**

7.3.1 Recognising the importance of female role models to encourage engagement in the sector, SharpFutures hosted their second Digital Teapot event, supported by Cisco, Manchester City Council and Oldham Council amongst others. The event celebrated women in the digital age and was made up of panels, presentations and skills workshops. Over 150 women attended the event last March.

7.4 **The Tutor Trust**

7.4.1 The Tutor Trust is an educational charity that provides tuition to pupils in schools in disadvantaged areas of Manchester on a not-for-profit basis. In spring 2014 the Trust delivered a 6-week pilot programme to teach coding to Year 5 pupils in 3 primary schools in Manchester. Unlike code clubs this programme was delivered during curriculum time by paid tutors recruited and trained by the trust. The pilot was grant aided by Manchester City Council with schools paying a small fee towards the tuition. The project was well received and the trust is currently gauging demand for a further roll out of coding tuition using this particular model.

7.5 **Go ON Manchester**

7.5.1 Manchester is delivering a Go ON Manchester campaign (a local version of the national Go On initiative), supporting digital literacy and inclusion and encouraging residents and businesses to make the most from life online. To date we have 2,643 Digital Champions, willing to support those Manchester residents that need help with basic online skills. This is an increase of over 500 champions since the report to Economy Scrutiny last year but does fall slightly short of the target of 3,000 champions.

7.5.2 There are also 36 business partners ranging from UKFast and Manchester City Football Club to People's Voice Media and Midshire Business Systems (an independent supplier of IT kit and software solutions). Business partners have helped MCC to recruit more digital champions, supported residents with basic online skills, offered incentives and prizes for Digital Champions and donated kit for residents to use. Business partners have also supported other businesses with workshops such as 'using social media' and 'digital marketing'.

7.5.3   Since the last paper to Economy Scrutiny, the focus of Go ON has been on ensuring that those that need help with basic on line skills have been able to access support, rather than ongoing recruitment of more champions and business partners. To support this approach an audit of all locations where digital support can be found has been completed. The audit has identified over 100 locations across the city where residents can access computers or basic support to get online. The locations included in the audit do not include Job Centre Plus or formal learning opportunities such as MAES centres.

7.5.4   Digital champions have supported existing sessions in libraries, work clubs and other community based activities in the North and East SRF and there is now a working mechanism to link champions and volunteer opportunities in localities. Further work now needs to be undertaken to replicate this across the city.

7.5.5   The national Go On campaign was launched for the region in June. Go On North West identified that 18% of adults in the North West don't have basic on line skills and within 12 months their aim is to boost skills by 25%. Manchester replicated the national Go On campaign model of digital champions supporting those that would like help and so we are working closely with them to understand if there are further opportunities the City can exploit from Go-On's national partners.

8.0   Conclusion

8.1   There is a wide range of both formal and informal digital education & skills training across the City. Much of it has gathered considerable momentum in the past twelve months with for example, the introduction of new digital apprenticeships via PlaygroundSquad and Hyper Island, the expansion of the Sharp Project, considerable growth in Code Clubs and the number of digital champions supporting residents with basic skills to go on-line. Digital businesses are more actively engaged in the skills system with more businesses directly providing apprenticeship opportunities & training and contributing resources and staff time to support many of the City's digital initiatives.

8.2   However, there are still significant skill shortages for key roles such as programmers that are needed to support the growth of the sector. This report sets out major plans by some of the City's schools and colleges to transform their digital skills offer and the offer by Google to train primary school teachers across the City in coding, which will achieve a step change that will address some of the technical gaps in the medium term. Officers from the City Council will continue to work with stakeholders & businesses that are prepared to engage and co-invest in the skills that the sector needs both over the short and longer term. There is also more substantive work to do with the Manchester Schools Alliance and the teaching schools, to ensure that the five strands of the digital curriculum are fully embedded throughout the City.

9.0   Appendix 1 – Digital Apprentice case studies

Name: Danny Goodwin
Apprenticeship: Higher Level, Interactive Design and Development
Company: CodeComputerLove

After finishing a BTEC Level 3 Diploma in Software Development, Danny was unsure what his next step should be to get into the digital industry. He investigated Hyper Island's Digital Apprenticeship in Interactive Design & Development and knew it was the right solution for him.

Apprentices are placed on a fifteen-month programme that mixes mentoring by full-time employers, with time spent at Hyper Island, exploring personal development and monitoring their placement progress.

Employers signed up to this Digital Apprenticeship range from growing local start-ups such Degree 53 and established digital agencies, like Magnetic North and Amaze.

Danny is working with CodeComputerlove. Code is one of the biggest and most respected digital agencies in the UK and Danny is getting invaluable experience as a front-end developer. This means working on anything visual that's part of a website, including the website's look, structure, visuals, coding and maintenance.

Danny tells us that he has learnt so much already, 'One of the key lessons has been understanding the importance of feedback in a team environment. Many young developers are very independent and not always the best at taking feedback. Hyper Island's program has been great at opening our minds to this critical way of thinking'.

Name: Tom Britten
Apprenticeship: Advanced Apprenticeship in Social Media & Digital Marketing
Company: Bamboo, Manchester

Tom Britten is on an Advanced Apprenticeship in Social Media and Digital Marketing and works as a Marketing Assistant at Bamboo in Manchester. Bamboo is a small digital agency established in 2010 specialising in website design and development, graphic design, digital publishing and social media marketing.

The apprenticeship involves a mix of off-the-job learning, and experience gained in the workplace; working towards the City and Guilds Level 3 Diploma in Social Media for Business which includes a number of mandatory and optional units.

In his day to day work, Tom is responsible for the company's own social media activity and he is involved in creating web content, blogs and e letters, and e marketing. He also has a role in client liaison, and is responsible for the social media output of a number of client companies. Tom attends Churchgate Academy one day a week for the off-the-job element of the Apprenticeship.

When he completes his Level 3 Apprenticeship, Tom is considering progressing to a Level 4 Apprenticeship, and possibly on to a Foundation Degree in Business Management. Tom said: "In the future I'd like to get more involved in search engine

optimisation and pay-per-click advertising, and there's so much scope to learn and develop within this company. I definitely feel I made the right choice and I would recommend this Apprenticeship to anyone interested in a career in Social Media and Digital Marketing."