



Department for Culture, Media and Sport

The Government's response to
Next Gen. Transforming the UK
into the world's leading talent hub
for the video games and visual
effects industries



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Olympics, Media and Sport by Command of Her Majesty
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Next Gen. Transforming the UK into the World's leading talent hub for the video games and visual effects companies

Government Response

1. In July 2010 Ian Livingstone OBE, Life President of Eidos, and Alex Hope OBE, Managing Director of Double Negative, began their independent review of skills for the UK's video games and visual effects (VFX) sectors. This work – carried out with the National Endowment for Science, Technology and the Arts (NESTA) and the sector skills councils Skillset and e-skills UK – involved the largest ever survey of games and VFX companies as well as educators, parents and children. The resulting analysis and action plan, "*Next Gen*", was published in February 2011 and was welcomed by Government as an important contribution to the evidence base for the skills needs of the UK's video games and VFX industries. This document represents the Government's response.

Video Games and VFX

2. The Government's economic policy objective is to achieve strong, sustainable and balanced growth that is more evenly shared across the country and between industries. Our ambition is to make the next decade the most dynamic and entrepreneurial we have ever seen in Britain. The first phase of the Plan for Growth, published alongside the Budget 2011, looked specifically at the digital and creative industries and concluded these sectors have the potential to drive significant growth in the UK.

3. The economic and cultural value of the UK's video games and VFX sectors is clear and the long-term potential of their global markets present a great opportunity for UK-based businesses. PwC suggests that the global market for video games, for example, will grow from \$56bn in 2010 to \$82bn in 2015¹. VFX have enjoyed strong growth and now constitute a major part of production budgets. Their impact can be seen in the films, television and advertising we see across the globe.

4. Video games and VFX businesses are typically knowledge-intensive, high value and offer high quality jobs. They are a good fit for our aims to rebalance the economy. The UK games industry has an excellent reputation for creativity and innovation. Our talent has produced ground-breaking games titles such as *Little Big Planet*, *Moshi Monsters* and *Batman: Arkham Asylum* and some great advances in video games technology have come out of the UK. This includes recently, for example, a core part of the Xbox 360 Kinect's human motion capture capability which was developed by engineers at Microsoft Research in Cambridge. Likewise in the VFX sector the UK leads the way. Some of the most important studios in the world are based here and their success has earned the UK recent

¹ PwC Global Entertainment and Media Outlook: 2011-2015

Oscar wins for *Inception* and *The Golden Compass*.

5. We are acutely aware that skills development is a crucial issue for the sectors if we are to build on their reputation and exploit the growing market opportunities. *Next Gen* sets out some compelling ideas for how the UK can be transformed into a world leader in video games and VFX.

6. Government also recognises that the key themes of *Next Gen* resonate far beyond video games and VFX : many of the skills demanded by employers are equally desired in the much wider economy, from business software, telecoms and social media to financial services, fighting cyber-crime and designing the next advances in aviation. By ensuring the UK has a strong supply of the skills described in *Next Gen* we will be better able to realise the full potential of these industries.

Industry follow-up to Next Gen

7. The Government welcomes the industry's creation of a Steering Committee which is meeting regularly to respond to the report's recommendations. It is notable that the majority of the proposed actions are for industry itself to take forward with educators. The Government hopes that it can help facilitate this by ensuring that the policy environment is without barriers to the success of the UK's VFX and video games industries, starting with the provision of skills. We look forward to continuing to work with industry to this end.

STEM skills

8. We note that the industry has additionally created a *Next Gen* Skills coalition bringing together a wider group of businesses to pursue a shared agenda on skills for the digital economy. This step is a testament to the way in which the *Next Gen* report has helped to demonstrate the importance of ICT, Science, Technology Engineering and Maths (STEM) subjects and computer science to the wider business community.

9. The Government has always recognised, and continues to recognise, the importance of STEM subjects in supporting a broad spread of digital, creative, high tech, manufacturing and other industries as well as their fundamental importance as part of a child's core education. Similarly, the Government appreciates the value of computer science and the important contribution the knowledge underpinning this subject makes to supporting economically important sectors of the economy such as video games and VFX. The Government looks forward to working with *Next Gen* Skills, educators and others to develop an attractive computer science offering for schools, so that students are able to develop the rigorous skills needed – not only to support these industries but also to ensure a digitally literate citizenry.

10. Stimulating demand is central to the *Next Gen*'s recommendations: encouraging young people to pursue a career in video games and VFX, by engaging them and advising them on the skills needed to pursue these careers.

Industry is already acting on the report's suggestions in this regard – for example by launching the new Video Games Ambassadors scheme with STEMNET, providing a route for industry professionals to go into schools and encourage young people to study science subjects.

Government Policy

11. *Next Gen* listed 20 recommendations for action. Our specific response to each of these is as follows:

Recommendation 1: Bring computer science into the National Curriculum as an essential discipline.

12. As outlined within the *Next Gen* report, ICT is currently part of the National Curriculum at all four key stages (ages 5 – 16) and allows for the teaching of some of the skills associated with computer science. However, the Government recognises that learning the skills to use ICT effectively and acquiring the knowledge of the underpinning computer science are two different (albeit complementary) subjects. Furthermore, the Government recognises that the current ICT programme is insufficiently rigorous and in need of reform.

13. The Government is committed to introducing a slimmed down, more focused, and more rigorous curriculum. As part of this commitment, a review of the National Curriculum was launched on 20 January 2011. The review aims to develop a new National Curriculum which clearly sets out the core knowledge that all children should acquire, while giving teachers more freedom to decide how to teach and design a wider school curriculum that best meets the needs of their pupils.

14. Department for Education Ministers announced at the outset of the National Curriculum review that English, maths, science and physical education would remain as subjects within the National Curriculum in all four school Key Stages. They are currently considering the place of all the other subjects that currently feature within the National Curriculum, including ICT, and will bring forward proposals shortly. If ICT were to be included as a discrete subject within the new National Curriculum, then work on a new Programme of Study would begin next year. As part of that process the review will consider the teaching of computer science within ICT. The Government recognises that, in the event of ICT not remaining part of the National Curriculum, attention would still need to be given to ensure children could acquire computer science skills. The Government would work with the sector to find the best way to achieve this.

15. The Government recognises that the IT GCSE is in need of reform, and will be looking at ways to improve the course. The Government welcomes e-skills UK's "Behind the Screens" project which aims to trial a possible reformed IT GCSE curriculum. e-Skills UK are aiming to establish a new way of delivering IT in secondary schools, initially concentrating around Key Stage 4 and bringing in employers to provide a bank of resources as stimulus materials for the projects.

The Government supports the alignment of industry interest in computing curriculum around this pilot activity.

16. In addition to the curriculum review and the pilot IT GCSE the Government recognises the potential developments such as the Raspberry Pi computer project have for stimulating and motivating children to understand basic computer science in schools. Much as the BBC Micro inspired a generation of computer programmers in the early 1980's the Raspberry Pi could provide the platform for teachers and pupils to gain hands on programming experience. Raspberry Pi is an example of how games developers are finding innovative and affordable solutions to tackle the perceived issues highlighted in the *Next Gen* Report.

Recommendation 2: Sign up the best teachers to teach computer science through Initial Teacher Training bursaries and 'Golden Hellos'.

17. The Government recognises the need for more high quality computer science teaching and will, over the next few months, be looking at the best ways to achieve this.

Recommendation 3: Use video games and visual effects at school to draw greater numbers of young people into STEM and computer science.

18. We believe that teachers are best placed to decide how to teach and what resources to use. However, more could be done to make teachers aware of the different resources available, and to encourage their use. In his speech at the Royal Society on 29 June, the Secretary of State for Education said that "we need to look at the way the very technological innovations we are racing to keep up with can help us along the way". He paid tribute to innovations such as iTunesU and the Khan Academy that are putting high quality lessons on the web, and computer games developed by Marcus Du Sautoy that are enabling children to engage with complex mathematical problems. The Department for Education is keen to engage with the sector to develop ways of encouraging the use of these, and other, exciting innovations.

19. The Department for Education is also working with the Li Ka Shing Foundation and the Stanford Research Institute on a pilot programme to use computer programmes to teach mathematics. Stanford say it is one of the most successful educational projects they have seen.

20. e-skills UK have made progress through Computer Clubs for Girls (CC4G) which has engaged 135,000 girls in 3,800 schools, bringing IT to life in a context to which girls can readily relate. CC4G could be further enhanced by developing a partnership with the video games industry which would introduce girls to the principles of video games, and the exciting potential of a career in the industry through fun activities and offline learning challenges.

Recommendation 4: Set up a one-stop online repository and community site for teachers for video games and visual effects educational resources.

21. Government welcomes industry's commitment, through the *Next Gen Skills* Steering Group, to look at delivering an appropriate web resource for teachers and students, providing educational resources and careers advice to those wishing to pursue a career in the video games and VFX industries. This would undoubtedly be of value.

Recommendation 5: Include art and computer science in the English Baccalaureate.

22. The English Baccalaureate is designed to recognise the achievement of students in a core of academic subjects. The "omission" of art and ICT from the suite of subjects within the English Baccalaureate does not mean the Government views either subject as unimportant. The Government expects all students to study subjects which are outside the English Baccalaureate; and fully recognises the value that such study will bring. The coverage of the English Baccalaureate has been kept small enough to ensure that other subjects can be studied alongside it.

23. The English Baccalaureate will be only one measure of performance, and should not be the limit of schools' ambitions for their pupils. Schools will retain the freedom to innovate and offer the GCSEs, iGCSEs and other qualifications which best meet the needs of their pupils.

24. Pupils will also be able to achieve vocational qualifications alongside the English Baccalaureate. With the proper structures in place through the reform of the National Curriculum, the introduction of the English Baccalaureate and changes to school performance tables to focus on the most valuable vocational qualifications, schools will have the freedom and the incentives to provide a rigorous and broad education for all.

25. The Department for Education will monitor the progress of the English Baccalaureate. The Department does not rule out entirely the future inclusion of other GCSEs in the EBacc, should they be of sufficiently high standard and form part of a core education.

Recommendation 6: Encourage art-tech crossover and work-based learning through school clubs.

26. The Department for Education already helps to support a network of after-school STEM Clubs in England and there are around 2,000 such clubs across the UK. STEM Clubs allow young people to explore, investigate and discover STEM subjects in a stimulating learning environment, away from the constraints of the school timetable or a prescribed curriculum. They allow pupils and their club leaders to work together and explore many different ideas and activities. They can motivate and build confidence in young people who struggle with STEM subjects,

and provide an extra outlet for pupils who already show aptitude and are interested in furthering their learning. They can encourage a crossover between art and technology but the focus of clubs varies according to locally determined priorities.

27. It is clear that STEM club activity is already supporting extra-curricular engagement with a broad range of activities associated with computer science. Whilst schools are free to do what they want in their clubs, advice is structured enabling them to diversify and make cross curricular links, particularly with non-STEM subjects such as the arts. Examples include animation techniques, graphics and image editing.

28. Since the inception of the network, many clubs have included computer science related activities in their portfolio. In particular, there are a number of schools using different forms of logic control such as PICAXE and several have taken this a step further to investigate different applications of robotics.

29. Several clubs have taken part in the recent STEM Challenges, inspired by London 2012 and managed by STEMNET. One particular challenge was to design a mobile phone app for London 2012 and another asked pupils to build a website for Rachel Morris, ahead of her competing in 2012. Students had to think about end-user experiences, graphics and functionality for each.

30. However, the Department for Education is keen to encourage even more such clubs and looks forward to working with the sector to develop ways of achieving this.

Recommendation 7: Build a network of STEMNET and Teach First video games and visual effects Ambassadors.

31. The Government fully endorses this recommendation as highlighted in the Plan for Growth. The effective follow up of this can make an important contribution to the aim of improving the supply of STEM graduates. The VFX and video games sectors are engaging with the STEM Ambassadors programme. Government welcomes this development and would encourage further engagement with STEMNET from businesses and individuals across the sector.

32. Since the launch of *Next Gen* there has been a strong response. When the review was published in February 2011, there were 38 STEM Ambassadors stating they had worked or were working in the video games sector and just one in the VFX sector. There are now 70 STEM Ambassadors from the video games and VFX sectors.

33. STEMNET has achieved this by close collaboration with both the video games and VFX sectors. On VFX this has included working with companies such as Double Negative, Framestore and The Mill to recruit STEM Ambassadors and support them in making links and volunteering with local schools. There are now 27

STEM Ambassadors registered from the VFX sector and more are expected to join the Programme over the coming months.

34. STEMNET now has a partnership agreement in place with the UK trade association for Interactive Entertainment (UKIE) which supports their Video Games Ambassadors scheme (a sub set of the STEM Ambassadors Programme). There are now 25 STEM Ambassadors who are part of this scheme (some of which were STEM Ambassadors before the review was published) and in total 43 STEM Ambassadors now state that they are working or have worked in the video games sector.

35. The report also highlights the role the UK's VFX and video games industry professionals have in supporting Teach First participants as coaches. The coaching initiative comprises an aspect of the two-year Leadership Development Programme, which all participants undertake in schools facing challenging circumstances. It is part of the offer to those corporates, trusts and foundations, which provide both funding and in kind support to Teach First. The charity Teach First will therefore look to explore brokering new relationships with organisations in the VFX and video games sectors who may be interested in becoming official supporters.

Recommendation 8: Introduce a new National Video Games Development and Animation Schools Competition

36. The Government welcomes schools competitions as an important way of inspiring young people. The Department for Education is already committed to introducing two new engineering prizes, as set out in the White Paper, "The Importance of Teaching", published in November 2010.

37. We are pleased to see there are already a number of industry-sponsored initiatives in this area. For example, the BAFTA National Young Games Designers Competition, sponsored by BAFTA, NESTA, EA and Dare to be Digital at Abertay University. NESTA is also sponsoring the Animation 12 competition. It will report back to government and industry with evaluation data on the effectiveness of these competitions.

38. Likewise, The British Informatics Olympiad, sponsored by Lionhead Studios, an annual competition in computer programming for secondary schools and sixth form colleges continues to challenge students offering them opportunity to represent their country at the International Informatics Olympiad.

39. Bournemouth University is organising a new VFX competition supported by Skillset and UK Screen. This will develop into an annual event hosted by the National Centre for Computer Animation (NCCA) that celebrates maths, science and art as the core VFX and Animation skill set.

Recommendation 9: Design and implement a Next Generation Video Games and Visual Effects Talent Careers Strategy.

40. We want to continue to use technology to improve careers guidance services for young people, to help them tackle the barriers they face to progress in work and learning. We are working to align young people's online provision with the adult provision as the National Careers Service develops.

41. We do not however believe that central provision and promotion of specialist websites is an effective use of public funds and we have adhered to the Varney Report's recommendations to reduce the overall number of government websites and to provide citizens with a single point of information and online transactions through Directgov.

42. Schools will be placed under a duty from September 2012 (subject to the passage of the Education Bill) to secure independent, impartial careers guidance for their pupils and will be free to make decisions about the kind of support that meets the needs of their pupils, engaging as appropriate in partnership with external, expert providers.

43. All the international evidence is clear that, in order to raise standards, we need to trust head teachers and teachers to make decisions in the interests of their pupils. They know their pupils best and are best placed to decide what form of careers guidance is most appropriate for them.

44. The Government will not prescribe what schools should do. As part of providing independent, impartial advice about options, schools may choose to bring in external careers professionals either for particular pupils or at particular stages, but this should be for the school to decide. We will trust schools to make a professional judgement of how best to meet their duty, including determining the balance between web-based and telephone services and face-to-face support.

Recommendation 10: Provide online careers-related resources for teachers, careers advisers and young people.

45. The Government welcomes the industry's engagement with this recommendation and encourage further partnering to take this forward. For example, working with STEMNET to share new resources produced for schools by the video games and VFX sectors with teachers to increase awareness and use of these resources in schools.

46. There are already many excellent sector specific careers portals with useful information which can be easily accessed through the internet. e-skills UK's BigAmbition website for example features a variety of video games content which gives students a full and realistic picture of what it is like to work in the industry.

BigAmbition has over 7000 registered users and 300 registered teachers who can access over 240 hours of online teaching resources for 14-19 learners, mapped to a range of Key Stage 4 and 5 qualifications, plus accompanying downloadable support material.

47. The Government looks to industry to work with careers advisers and teachers to help young people make the best use of these resources but are not convinced that further resources are needed.

Recommendation 11: Develop kite marking schemes, building on Skillset accreditation, which allow the best specialist HE courses to differentiate themselves from less industry-relevant courses.

48. The Government agrees that graduates are more likely to be equipped with the skills that employers want if there is genuine collaboration between institutions and employers in the design and delivery of courses. All institutions should be involved in some form of collaborative partnership with employers. The Government has asked Professor Tim Wilson, until recently the Vice Chancellor of the University of Hertfordshire, to look into how the benefits of joint working between business and higher education (HE) can be maximised in support of the enhancement of graduates' employability. His response is expected early in 2012.

49. The Government are encouraging universities to work even more closely with employers to co-design, accredit or "kite mark" courses. It has been shown that kite marking of courses, where schemes have benefitted from real backing from industry, can lead to much better employability outcomes for graduates – this is a win-win for both employers and graduates, and helps promote universities' understanding of exactly what employers are looking for in all future recruits.

50. We recognise the success of the Skillset programme for accrediting computer games courses, whose students were almost three times more likely to be employed in this sector than graduates from other computer games courses. Given the value of this data to potential students, it would be interesting to know the destination of all the students involved to see where these industry valued skills have taken them. Abertay University is continuing to collect and review data which can support any future metrics used to support kite-marking and we look forward to seeing the results of this analysis.

51. Skillset have also received funds from the Growth and Innovation Fund and Employer Investment Fund that are enabling them to pilot 'Extending the Tick' extending their accreditation and benchmarking work to benefit the wider 'feeder' courses for the industry. It also allows them to look at addressing Further Education (FE) courses as 'feeders' for HE .

52. Skillset has also received other Employer Investment Funds to address key

skills issues across the Creative industries enabling them to prepare co-investment bids for the new Growth and Innovation Fund on behalf of the VFX and Computer Games sectors.

53. e-skills UK will be developing a kite marking scheme for software development degrees, and already have in place a software development apprenticeship. Both of these will improve the pipeline of software engineering talent into the gaming environment.

Recommendation 12: The Higher Education Funding Council England (HEFCE) should include industry-accredited specialist courses in their list of 'Strategically Important and Vulnerable' subjects (SIVs) that merit targeted funding. Industry commits to these courses through industrial scholarships and support for CPD for lecturers.

54. In the new funding system from August 2012, those subjects which are the most expensive to teach (such as medicine, science and engineering) will remain a priority for HEFCE funding. In addition, through the grant letter to HEFCE and more recently through the White Paper, The Department for Business, Innovation and Skills (BIS) has charged HEFCE with identifying those subjects which may be strategically important and vulnerable in the future, and with determining what further support is required for such subjects to avoid undesirable reductions in the scale of provision. HEFCE's concern will be to identify the minority of areas in which there is robust evidence that the public interest in relation to subject provision may not be achieved through the student-led funding system alone. Industry accreditation of courses will not provide evidence that a subject area is vulnerable. It will however, be an important part of the information provided to inform student choice in the new funding system, and will be included in the Key Information Set.

55. HEFCE is running a two stage consultation on the arrangements for teaching funding for 2012-13 and beyond. The first stage of this consultation, which closed at the start of September 2011, outlined broad plans for supporting high-cost subjects and for developing a new approach to SIVS. A subsequent consultation early in 2012 will cover the funding arrangements for 2013-14 and beyond. Against this background, HEFCE has already begun discussions with key umbrella stakeholders about the future risks to subject provision, and how these could be monitored and addressed, with a view to determining a future approach to SIVS. HEFCE's Chief Executive has already met with Skillset to discuss course accreditation. HEFCE would welcome further dialogue with Skillset regarding the future risks in this area of provision.

56. However, as previously stated, the Government welcomes industry's endeavours in promoting the types of provision they want and support. What we would like is much more contact between employers and the HE sector to ensure skill needs are addressed. We are already seeing great examples of the large employers such as Blitz Games, BabyCow and IBM, backing specific courses or direct engagement through academy sponsorship, internship programmes and apprenticeships.

Recommendation 13: Raise awareness of the video games and visual effects industries in the eyes of STEM and arts graduates.

57. Schemes such as the STEMNET ambassador programme provide a direct link between industry and education, exposing learners to industry and vice versa. Likewise, greater collaboration between industry and universities will raise awareness amongst under graduates and those aspiring to continue their learning about opportunities the digital and creative industries provide.

58. Greater awareness will come from encouraging further collaboration between industry and universities in the courses provided and the information available. Encouraging greater and closer collaboration will align the supply with the demand as demonstrated by the Information Technology Management for Business (ITMB) degree. ITMB ensures students graduate with a mixture of technical, business, and interpersonal skills that are valued by employers.

59. ITMB is a sector-supported honours degree programme developed in response to demand from employers for IT graduates with both a solid grasp of technology and the business-related and interpersonal skills to work effectively in project teams and client-facing roles. Employers collaborated with universities to develop a curriculum based on equal contribution of technical, business, project and interpersonal skills content.

60. The ITMB degree is supported by over 60 employers and is being delivered to over 850 students in 14 universities in England and Wales. 32% of students on the degree are female – more than double the proportion of female applicants to all IT-related degree courses and in a recent survey 90% of ITMB students were reported as feeling that they are either 'well prepared' for employment or already 'work ready'.

Recommendation 14: Give prospective university applicants access to meaningful information about employment prospects for different courses

61. Linked to recommendations 9, 10 and 17, the Government welcomes proposals to provide clarity of information for those wishing to pursue a career in the games and VFX industries and would encourage employers and universities to work closely to achieve this.

62. The HE White Paper announced plans for each university to provide a standard set of comparable information items for each course, on university websites, by September 2012. This is known as the Key Information Set (KIS). The Key Information Set will provide comparable information, at course level, on student satisfaction levels, progression rates, employment prospects and salaries.

63. All accredited universities offering video games courses are members of UKIE. Employers on the UK Screen and the Skillset Computer Games Skills

Council are also working with Skillset to enhance and expand the accreditation process to more courses and universities.

64. Another trade body for games, Tiga, highlights information about video game courses in its publication on careers in the video games industry and on the Tiga website, in order to give students meaningful information about courses in general. Tiga hope to gather valid employment data on graduates from relevant university courses and publish it in the future.

65. Tiga will also be introducing a new service connecting university and colleges with guest lecturers from the UK games industry. The pool of industry practitioners will intensify industry-academia links, promote knowledge transfer and enhance the quality of higher education provision, ultimately benefiting students and the wider games industry. Some universities and colleges do not currently have strong connections with the games industry. This new service will help to address this problem.

Recommendation 15: Develop a template for introducing workplace simulation into industry-accredited video games and visual effects courses, based on Abertay University's Dare to be Digital competition.

66. Government welcomes this recommendation and recognises the activity already in evidence, particularly with regards to Abertay University and the Dare to be Digital competition.

67. NESTA has supported Swedish Digital Media trainer Hyper Island <http://www.hyperisland.se/> to import their new entrant training programme to the UK. The programme launched in Manchester in May, enrolling 16 British students aged between 18-25. NESTA is keen to understand how the programme may provide lessons for Higher Education Institutes (HEIs) to understand the potential for industry-led education.

68. Staff from Abertay University's Business Support team are engaging in outreach activities to promote workplace simulation through the Dare to be Digital model and using graduates placed on prototype grant funded projects. This includes the provision of prototype funding for universities to work with SMEs across UK to establish real world work opportunities. A particular feature of the prototype fund is the development of a graduate Talent Pool for those seeking real world work experience on the prototype fund, thus increasing the availability of industry relevant work experience

Recommendation 16: Leading universities and Further Education (FE) colleges sponsor a high-tech creative industries University Technical College (UTC), with clear progression routes into HE.

69. We welcome *Next Gen's* acknowledgement of the importance of UTCs. The

Department for Education plans to establish at least 24 UTCs by 2014. UTCs have a 14-19 age range and are sponsored by local University and industry partners. As the Government response to Alison Wolf's review into vocational education made clear, they are an important part of how we are reforming the schools system. Their unique partnership between university and industry will give young people the opportunity to develop technical expertise that will set them in good stead for their future careers and deliver the skills that our employers need.

70. The Government encourages an application by industry to establish a high-tech-creative-industries UTC in the next round of UTC applications. UKIE is advising Hackney UTC on the development of their digital media curriculum. As *Next Gen Skills* continues to make progress UKIE will ensure any activity it undertakes with the UTC is joined up with the wider skills coalition and activity.

Recommendation 17: Kite mark FE courses that offer students the best foundation in skills and knowledge to progress into Higher Education.

71. BIS is seeking closer employment engagement with the FE sector across a range of issues and this would fit into this pattern. It is essential learners know the value of the course they are undertaking and engagement by employers, learned societies or sector bodies, who are aware of the best opportunities for them to achieve success, are a key component. As FE institutions can't award their own qualification it will be for employers and their representative bodies to engage with the relevant 'awarding bodies' to take this approach forward.

72. The FE STEM Data report has mapped the availability of courses in STEM subjects across colleges and we would be delighted for employer bodies to engage and make use of this material to promote excellence in their sector.

73. Tiga publishes information about its FE college members on the Tiga website and in relevant press releases, in part to provide useful information to prospective students.

Recommendation 18: Skillset Creative Media Academies and e-skills UK's National Skills Academy for IT to work with industry to develop specialist CPD training for video games and visual effects industries.

74. The Government welcomes proposals for Skillset and the National Skills Academy for IT to work with Industry to develop Continuing Professional Development (CPD) training for video games and VFX sectors. The Skills Academy has strong backing from IT employers and is well placed to engage with them.

75. Any new areas of work would need to fit with existing commitments in its 3 year business plan, agreed with the Skills Funding Agency.

Recommendation 19: Support better research-oriented university-industry collaborations in video games and visual effects.

76. The Government welcomes the connection between the video games and VFX industries and universities and hopes they can work positively together within the agreed remit of the Technology Strategy Board (TSB) business plan. The TSB is committed through its digital team, which covers the creative industries, to assisting in increasing the collaboration between technology teams of all kinds and creative industries companies including video games and visual effects businesses. The TSB's remit is to encourage the commercialisation of technology and as such is already wedded to the same vision that the *Next Gen* report has portrayed. The TSB continues to work with academic and other research partners to strengthen the transfer of knowledge into the commercial world.

77. Providing the funding for collaborative R&D projects, feasibility studies, and large scale consortium projects will continue to be part of the TSB remit. The organisation is committed to strengthening technical knowledge and creativity in the creative industries and increasingly to seeing that value applied across many other areas of the economy.

78. Over the last four years, of all the creative industries projects funded by the TSB some 40 (21%) have been games-related, equalling over £3m in collaborative R&D grants and fast track feasibility studies.

79. Collaboration with IC Tomorrow and the TSB to produce the Future Games Contest using the prototype fund – means that graduates will work on “gamification” projects with the TSB's digital test bed project.

Recommendation 20: Continue to treat the 18 visual effects occupations on the Government's shortage list as shortage occupations.

80. The Migration Advisory Committee (MAC) provides expert independent advice to Government on migration issues, including the regular review of the shortage occupation list (SOL) to ensure it is up to date and reflects current labour market needs.

81. There is one main SOL covering the whole of the UK and a supplementary list of additional shortage occupations in Scotland. The lists include jobs which the MAC has identified as suffering from labour shortages and that it is sensible to (a least partly) address those shortages through migration. All jobs are graduate level or above. Inclusion on the SOL means that an employer wishing to sponsor a non-EEA migrant through Tier 2 does not need to carry out a Resident Labour Market Test as by definition there will be no displacement of UK labour. In addition, if the Tier 2 limit were over-subscribed, jobs on the SOL would be given priority. Employers can still sponsor Tier 2 migrants for jobs which are not in the SOL,

provided they first carry out a Resident Labour Market Test and the job is in a graduate occupation.

82. The MAC has recently performed a review of the entire SOL and, in line with evidence from the VFX and video games sectors, recommended that the following job titles within visual effects and 2D/3D computer animation for film, television or video games be retained on the shortage occupation list; animator; compositing artist; computer graphics supervisor; matte painter; modeller; producer; production manager; rigger; systems engineer; technical director; texture artist; and visual effects supervisor.

83. The report also recommended that the following job titles within visual effects and 2D/3D computer animation for film, television and video games be included on the shortage occupation list: 2D supervisor; 3D supervisor; software developer; shader writer and stereo artist.

84. Finally, they recommended that the following job titles be removed from the shortage occupation list; animation supervisor; editor; R&D tools; R&D software; rigging supervisor and software engineer.

85. The Government has accepted the MAC's recommendations and the revised list came into force on 14 November 2011.



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